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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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Volume 23

No. 1

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 23 No. 1

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

JANUARY 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Bitter cold prevailed over the northern Great Plains and the Great Lakes Region.
2. Heavy snow fell in the northern Rocky Mountains and over the western edge of the northern Great Plains.
3. Parts of the Southwest received no rain--the first such occurrence in many years.
4. Heavy rains in the Deep South caused flash flooding along some streams.

TEMPERATURE -- January was named for the ancient Roman god, Janus, who had two faces. A happy face looked one direction; a sad face looked the opposite direction. Weatherwise, January 1972 was as two-faced as Janus. A massive outbreak of cold arctic air pushed into the northern Rocky Mountains and northern Great Plains about the middle of the first week of January and advanced steadily southward. By the morning of January 4, subzero weather had reached the Texas Panhandle. By the 6th, almost the entire nation was in the "deep freeze." The temperature at Brownsville, Tex., tumbled to 35° and New Orleans Moisant Airport registered 31°. Mild weather continued only in the Deep South and in Florida. Montgomery, Ala., recorded 78° and Ft. Myers, Fla., 85° on January 4. A brief mild spell came to the northern Great Plains during the second weekend of January. Maximum temperatures on Saturday, January 8, climbed to above freezing over most of North Dakota and Minnesota. At midmonth, moist southerly winds warmed the eastern half of the nation. Southern Florida was especially balmy with nighttime temperatures in the seventies. Southerly winds continued to warm the Gulf States and Atlantic Coastal States. Meanwhile, a storm moved into the Pacific Northwest, across the Rocky Mountains, the adjoining Great Plains, and the Great Lakes Region. Subzero weather pushed far southward behind the storm. On the 13th, a large High extended from Alaska to the central Great Plains. This brought intense cold to the Rocky Mountains and the Great Plains. In contrast to the recordbreaking mild temperatures in advance of the storm, subzero weather pushed far southward behind the storm. Parts of Montana, Wyoming, North Dakota, South Dakota, and Minnesota remained below zero all day on the 13th, when Rochester, N. Y., and Pittsburgh, Pa., registered their warmest temperatures for the month on the 13th, 67° and 68°, respectively. Casper, Wyo., recorded 34° below zero on the morning of January 14 and, on the 15th, the mercury at Moose Lake, Minn., plunged to 53° below zero, the coldest temperature in the State in 35 years.

A few days after midmonth, two large polar Highs--one over the Great Basin, the other in the East--caused clear, sunny weather over much of the nation. Brisk southerly winds behind the eastern High warmed the central and southern Great Plains. Ardmore, Okla., registered 76° on the afternoon of January 18. Brisk northerly winds held the temperatures down over the northern Great Plains. Stations near the Canadian border from Cut Bank, Mont., to Duluth, Minn., remained below zero all day on the 19th. In contrast, Tampa, Fla., registered 78° on that date. A front stretched from the central Great Plains to Virginia. Northerly winds cooled the area north of the front. Southerly breezes warmed the Southland. Temperatures reached the eighties over much of Texas on January 23 when Cotulla, Tex., recorded 91°.

A bitter cold airmass plunged southward over mid-America in the last week of January. Most northern states from Montana to Wisconsin and south as far as Nebraska remained below zero all day on January 27.

Monthly mean temperatures were above normal from southeastern Washington to the Lower Rio Grande Valley and from the Lower Valley to New England and southeastward to the Gulf of Mexico and the Atlantic Ocean. Below-normal temperatures predominated in California, along the Canadian border from northern Washington to the Great Lakes, and over the Great Plains from the Dakotas to Waco, Tex. Most of the northern Great Plains averaged 6° to 10° colder than normal.

PRECIPITATION -- The weather was comparatively tranquil on New Year's Day but two storms got underway on January 2. One of these brought heavy snow to the Northwest, especially to southeastern Idaho, western Montana, and the Big Horn River Valley in Wyoming. The second storm spread wet weather over the eastern third of the country. Snow fell from northern Illinois to northern New England. Freezing rain iced an area south of the snow belt and thunderstorms dotted the land from the Ohio River Valley to the Gulf of Mexico. About the middle of the first week of January, snow fell in the central Rocky Mountains and spread across the nearby Great Plains. The storm intensified and spread southward to the southern Great Plains. By January 4, snow or sleet was falling over a belt extending from New Mexico to New York and Pennsylvania. Moist tropical air, overriding cold arctic air, released snow, sleet, and freezing rain along an arctic front which marked the advance of the cold air. Deep drifts, icy roads, and strong winds hampered automobile travel. At midmonth, moist southerly winds brought clouds and rain to a large area from the southern Great Plains to New England. A few tornadoes occurred in the South. Blizzards swept across the central Rocky Mountains. Fog, light rain, and drizzle blanketed the middle Atlantic coast and a large and powerful storm gained strength in the Pacific Northwest. High winds in the northern and central Rocky Mountains and along their eastern slopes, gusting in some places to hurricane speeds, damaged power and communication lines, isolating some communities.

Precipitation slackened briefly a day or so after midmonth but near the end of the third week of January, a new outbreak of cold air poured into Montana, bringing heavy snow accompanied by strong winds. The snow area spread eastward across the Great Plains to the Upper Mississippi River Valley. Southerly winds caused cloudy skies, showers, and thunderstorms from the Ohio River to the Gulf of Mexico. Snow, mixed with sleet and freezing rain, slicked the highways and made travel difficult over a narrow strip which separated the snow zone on the north from the showers and thunderstorms on the south. Heavy rains west of the Cascades completed the gloomy picture.

The last week of the month brought more snow to the Rocky Mountains and the nearby Great Plains. Ice again coated wires, trees, pavement, and other outdoor objects south of the snow belt. Heavy rains soaked the Northwest. Blizzards occurred across the central Great Plains and Great Lakes Region and spread eastward to New York and New England. Generous rains fell in parts of the Deep South.

Monthly rainfall totals exceeded the January normals over the northern Rocky Mountains and much of the Deep South. A large area from California to the central Great Plains received less than half their normal January precipitation. Parts of this area received no rain--the first such occurrence in several decades.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	82	13+	Florence	- 3	16	Marion 6 NE	16.43	Fort Morgan	2.22
Alaska	Port Alsworth	47	27+	Prospect Creek Camp	-70	7	Little Port Walter	15.44	Five Mile Camp	T
Arizona	2 Stations	82	25+	Sunrise Mountain	-26	4	Fairbank 1 S	.48	183 Stations	.00
Arkansas	Morobay Lock No 8	85	25	Huntsville	- 6	5	Hamburg	8.52	Mountain Home 1 NNW	.17
California	La Mesa	82	15	Bridgeport	-29	4	Gasquet Ranger Station	25.45	133 Stations	.00
Colorado	La Junta FAA Airport	75	23	Taylor Park	-46	4	Berthoud Pass	4.78	3 Stations	.00
Connecticut	Groton	59	14+	Coventry	- 8	6	Shepaug Dam	2.89	Round Pond	1.56
Delaware	2 Stations	67	14	Bridgeville 1 NW	0	16	Bridgeville 1 NW	3.71	Wilmington Newc WSO AP	2.50
Florida	La Belle	90	14	2 Stations	17	16	Madison	8.15	Archbold Biologic Sta	.25
Georgia	Thomasville 4 SE	86	10	2 Stations	- 2	17+	Atlanta Bolton	16.39	Savannah Beach	2.89
Hawaii	Wailuku 386, Maui	88	3	Mauna Loa Slope Obs,Hawaii	24	8	Pahoa 65, Hawaii	23.71	Kahului WSO 398 AP, Maui	.35
Idaho	Riggins Ranger Station	57	22	Island Park Dam	-43	4	Atlanta	11.19	Arco 3 SW	.11
Illinois	2 Stations	72	24	2 Stations	-24	16	Brookport Dam 52	3.29	Mount Olive 1 E	.37
Indiana	Vevay	75	25	Culver Experiment Farm	-26	17	Seymour 2 N	3.49	Lafayette 5 S	.71
Iowa	Keosauqua	60	18	Sanborn	-33	15	Tipton	2.10	Inwood 2 SW	.08
Kansas	Elkhart	74	23	Syracuse 2 W	-21	15	2 Stations	.88	Tescott	.00
Kentucky	Golden Pond 8 N	80	25	2 Stations	-13	16	Baxter	10.35	Uniontown Dam 49	1.61
Louisiana	Saint Bernard	86	10	Converse	12	16	Covington 4 NNW	11.96	Logansport 4 ENE	5.24
Maine	Augusta FAA Airport	57	19	Squa Pan Dam	-40	2+	Jonesboro	4.73	Harris Station	.80
Maryland	3 Stations	69	13+	McHenry 2 NW	-18	17+	Annapolis USN Academy	5.33	Cumberland Police Brks	1.84
Massachusetts	4 Stations	60	14+	Chester 2	-17	1	Edgartown	3.60	Springfield	1.31
Michigan	Monroe Sewage Plant	54	22	Ironwood	-36	15	Houghton FAA Airport	5.37	Lake City Exp Farm	[illegible]
Minnesota	2 Stations	45	18+	Moose Lake 1 SSE	-53	15	Gunflint Lake 8 WSW	D 2.42	Pipestone	.13
Mississippi	McComb FAA AP	86	27	3 Stations	4	16	Standard	15.32	Lafayette Springs	3.77
Missouri	Doniphan	76	24	2 Stations	-20	15	Caruthersville	3.99	2 Stations	T
Montana	Belfry 4 SSW	57	21	Loma 1 WNW	-54	14	Summit	13.43	Plentywood	.09
Nebraska	2 Stations	66	18+	Agate 3 E	-34	4	2 Stations	.73	6 Stations	.02
Nevada	Hawthorne Babbitt	70	22	Ruth	-30	4	Mountain City RS	2.90	20 Stations	.00
New Hampshire	5 Stations	55	14+	First Conn Lake	-34	1	Mount Washington	7.01	Jefferson 5 SSW	1.05
New Jersey	Plainfield	68	14	High Point Park	- 5	16	Belleplain St Forest	3.66	Bass River St Forest	1.04
New Mexico	3 Stations	83	24+	El Vado Dam	-24	5	Cloudcroft Lodge	3.75	24 Stations	.00
New York	Rochester WSO AP	67	13	4 Stations	-26	6	Boonville 2 SSW	6.17	New Kingston	.48
North Carolina	3 Stations	78	29+	Grandfather Mountain	-18	16	Andrews 2 E	11.28	Roxboro	1.48
North Dakota	Watford City	51	17	Linton	-42	15	Forbes 9 NNW	1.25	2 Stations	T
Ohio	Ironton	73	24+	Bellefontaine Sewage	-22	16	Gallipolis 5 W	4.24	Columbus Sullivant Ave	.68
Oklahoma	2 Stations	77	23+	Hooker 1 N	-17	15	Smithville 3 NNW	2.28	Marshall	.00
Oregon	Bandon 1 E-Bates Bog	65	15	Seneca	-29	29+	Nehalem 9 NE	34.44	Silver Lake Ranger Sta	D .29
Pennsylvania	West Chester 1 W	73	14	Philipsburg FAA AP	-19	16	Port Clinton	4.34	Lakeville 2 NNE	1.05
Puerto Rico	2 Stations	90	8+	Adjuntas Substation, P.R.	46	8	Pico Del Este, P.R.	15.63	Ponce City, P.R.	.89
Rhode Island	Providence WSO AP	58	14	North Scituate 4 W	- 3	17	Kingston	2.94	Providence WSO AP	1.85
South Carolina	4 Stations	81	28+	Caesars Head 1 NE	- 3	16	Clark Hill Dam	9.23	Fort Mill 4 NW	3.65
South Dakota	Rapid City WSO AP	66	16	Usta 8 WNW	-42	28	Mount Coolidge	1.82	Alexandria	.01
Tennessee	4 Stations	79	25+	Mountain City #2	-10	16	Monteagle	10.86	Samburg Wildlife Ref	2.37
Texas	2 Stations	96	23	Stratford	- 8	15	Orange	8.91	16 Stations	.00
Utah	2 Stations	65	23+	2 Stations	-31	4	Alta	8.31	28 Stations	.00
Vermont	Dorset 1 S	59	13	West Burke	-27	17	Dorset 1 S	4.24	Saint Albans Bay	D .67
Virginia	3 Stations	75	25+	Mt Lake Biological Sta	-23	16	Pennington Gap	10.64	Mount Weather	.78
Washington	Ice Harbor	63	21	Mazama	-28	28	Rainier Paradise RS	31.82	Connell 1 W	.04
West Virginia	Logan	76	25	2 Stations	-20	16	Pickens 1	8.40	Berkeley Springs	1.22
Wisconsin	Kenosha	49	10	Minong 5 WSW	-51	15	Bayfield 6 N	2.56	Charmany Univ Farm	.23
Wyoming	Newcastle	58	21	2 Stations	-46	4	South Pass City	7.62	Carpenter 3 E	.06

+ And also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	998.0	1022.8	58	37	47.2	0.7	77	24	7	16	0	13	37	70	9.30	4.27	3.16	16	4	T	T	0.3	16	32	W	13	7	6	18	6.7	44
HUNTSVILLE	624	997.0	1020.6	56	35	45.3	2.4	76	13	4	16	0	14	36	71	7.97	2.75	2.54	15	1	0.3	T	0.7	13	29	31	2	8	5	18	6.8	
MOBILE	211	[illegible]	1017.7	[illegible]	48	58.4	5.4	78	10	21	16	0	6	50	77	5.94	1.30	1.45	15	4	0.0	0	1.2	8	29	34	25	6	6	19	7.1	
MONTGOMERY	184	[illegible]	1020.8	64	41	52.6	4.5	79	24	13	16	0	9	43	75	6.35	2.29	1.74	13	6	0.0	0	0.7	1	26	N	25	6	7	18	6.6	47
ALASKA												R															B					
ANCHORAGE	114	1009.5	1014.7	13	[illegible]	6.4	- 5.7	37	28	-28	11	0	31	1	74	0.56	- 0.24	0.21	9	0	9.6	14	3.1	1	35	35	16+	13	1	17	5.7	56
ANNETTE	110	1009.5	1013.7	31	22	26.7	- 7.7	43	15+	7	12	0	27	17	68	8.20	- 3.16	3.42	15	0	14.6	16	1.7	6	35	15	8	6	5	20	7.0	
BARROW	31	1021.7	1022.2	-10	-23	-16.2	0.0	17	19	-41	17	0	31			0.05	- 0.13	0.02	3	0	0.6	6	1.8	2	28	29	11	V	V	V		
BARTER ISLAND	39	[illegible]	1021.6	[illegible]	-23	-16.5	0.3	22	29	-40	5	0	31	-24	65	0.33	- 0.07	0.25	4	0	5.1	20	11.6	27	67	28	12	X	X	X		
BETHEL	125	1009.8	1019.7	7	- 3	2.3	- 1.5	37	26+	-30	10	0	31	- 2	81	0.78	- 0.34	0.27	6	0	3.8	6	3.6	7	40	15	30	13	7	11	4.7	
BETTLES	644			-18	-32	-24.8		29	28	-63	10	0	31			1.25		0.50	6	0	20.4	60			17	22	29+	15	6	10	4.5	
BIG DELTA	1268			- 9	-24	-16.5		25	29+	-53	10	0	31			0.24		0.16	6	0	4.4	12			29	11	13	11	6	14	5.6	
COLD BAY	96	1007.8	1011.7	32	22	27.2	0.6	44	24	4	23	0	29	23	82	4.08	1.76	1.85	16	0	15.6	5	2.9	17	46	17	30+	4	4	23	7.9	
FAIRBANKS	436	1003.4	1022.1	- 9	-24	-16.3	- 5.2	27	29	-49	17+	0	31	-25	66	0.73	- 0.16	0.26	9	0	12.6	29	0.5	34	25	22	29	10	4	17	6.1	
GULKANA	1572			- 9	-29	-18.6		31	28	-57	12+	0	31			0.80		0.43	10	0	10.9	42	3.7	36	26	2	18+	14	2	15	5.4	
HOMER	67	1010.8	1014.6	22	9	15.2		40	28	-18	10	0	30	8		0.76	- 1.29	0.20	10	0	15.8	17	2.7	2	29	4	16+	9	7	15	5.9	
JUNEAU	12	1012.9	1014.7	23	9	15.8	- 9.3	37	15+	-22	12	0	30	7	69	3.73	- 0.27	0.94	15	0	45.1	31	7.2	10	33	11	5	10	3	18	6.5	37
KING SALMON	49	1011.9	1013.8	13	0	6.7	- 6.7	39	25	-34	9	0	29	0	73	1.30	0.23	0.32	11	0	11.7	9	3.1	7	46	14	26	9	5	17	6.2	
KOTZEBUE	10	1018.3	1018.9	3	-12	- 4.4	1.3	33	27	-35	13	0	31	-11	74	0.51	0.12	0.12	9	0	13.4	36	9.1	10	46	11	25	14	2	15	5.5	
MC GRATH	344	1006.1	1019.9	- 6	-25	-15.6	- 6.6	38	28+	-59	10	0	30			1.21	- 0.05	0.32	12	0	14.0	38	0.8	24	17	19	26	13	3	15	5.5	
NOME	13	1015.6	1016.3	10	- 4	3.0	- 1.4	33	26+	-32	11+	0	31	- 5	68	0.53	- 0.49	0.20	12	0	10.6	20	7.1	10	44	10	30	13	2	16	5.7	44
ST. PAUL ISLAND	22	1008.5	1009.3	31	21	25.9	[illegible]	38	25+	9	15	0	31	23	87	1.45	- 0.36	0.26	19	0	12.9	10	6.6	11	44	26	30	3	6	22	8.3	
SHEMYA	122	997.3	1000.6	34	28	31.9	- 0.4	37	26+	22	29	0	27	23	73	2.99	0.49	0.84	20	0	16.0	6	4.6	27	85	25	3	0	7	24	8.6	
SUMMIT	2401	925.2	1021.9	- 1	-13	- 7.2		28	28	-36	12+	0	31			1.16		0.73	7	0	29.2	38	12.0	4	33	8	8	9	6	16	6.1	
TALKEETNA	345			12	-12	0.0	- 9.4	33	29+	-48	11+	0	31			1.72	- 0.04	0.90	8	0	27.5	42			38	4	15	12	3	16	5.6	
UNALAKLEET	15			6	- 4	1.0		38	26	-34	14	0	31			0.50		0.21	9	0	5.0	19			40	8	25+	12	4	15	5.5	
YAKUTAT	28	1009.1	1010.4	24	8	15.6	-11.7	37	5	-15	23	0	31	10	79	8.68	- 2.18	2.24	18	0	75.2	83	4.9	9	23	9	16+	10	5	16	6.1	
ARIZONA																																
FLAGSTAFF	7006	787.0	1020.8	43	14	28.4	1.1	55	22	0	5	0	31	8	49	0.00	- 1.83	0.00	0	0	0.0	T	1.9	22	25	5	4	18	5	8	3.5	
PHOENIX	1117	978.0	1017.5	67	36	51.4	1.7	75	15	26	5	0	7	23	38	0.00	- 0.73	0.00	0	0	0.0	0	1.9	11	28Y	ENE	15+	20	3	8	3.1	91
TUCSON	2584	927.5	1016.6	66	35	50.4	0.6	77	25	23	4	0	9	24	42	0.00	- 0.82	0.00	0	0	0.0	0	3.4	15	32	W	3	16	10	5	3.5	90
WINSLOW	4895	852.7	1020.9	51	20	35.4	4.4	70	23	10	31+	0	31	14	48	0.00	- 0.43	0.00	0	0	0.0	0	2.8	22	36	20	26	18	4	9	3.7	
YUMA	194	1010.5	1017.9	67	39	52.9	- 0.5	74	23	32	6	0	1	22	34	0.00	- 0.39	0.00	0	0	0.0	0	5.8	36	36	NW	4	20	5	6	3.0	91
ARKANSAS																																
FORT SMITH	447	1002.7	1019.7	51	27	38.9	- 0.9	75	19	8	5	0	21	28	71	0.68	- 1.98	0.31	5	0	0.3	T	1.3	1	31	W	24	11	6	14	5.8	58
LITTLE ROCK	257	1010.2	1019.8	54	33	43.6	3.0	79	24	13	16+	0	15	33	71	1.71	- 3.51	0.70	11	1	0.1	T	0.7	8	34	SW	24	9	7	15	6.1	48
CALIFORNIA																																
BAKERSFIELD	475	1004.4	1022.5	49	34	41.7	- 5.7	60	23+	24	9	0	10	37	87	T	- 1.17	T	0	0	0.0	0	0.6	2	29	12	4	4	9	18	7.2	
BISHOP	4108	876.1		54	21	37.7	0.9	61	22+	10	4	0	30			T	- 0.99	T	0		T	T						17	5	9	3.9	
BLUE CANYON	5280			43	30	36.2	- 0.9	57	14	16	26	0	18			6.38	- 5.32	2.80	9		21.4	53			33	3	3	10	6	15	5.7	
EUREKA U	43			50	39	44.6	- 2.8	58	19+	29	29	0	6			7.96	1.26	2.60	16		1.6	1			37	N	2	8	4	19	6.6	52
FRESNO	328	1010.8	1022.7	47	34	40.6	- 5.5	57	25+	24	5	0	9	37	90	0.37	- 1.66	0.18	5	0	T	0	1.3	10	23	SE	27	4	5	22	8.0	26
LONG BEACH	25	1017.6	1018.9	65	42	53.5	0.4	80	15	34	5	0	0	38	64	0.00	- 1.99	0.00	0	0	0.0	0	0.4	35	20	7	30	16	7	8	4.4	
LOS ANGELES	97	1014.6	1018.2	63	45	53.9	- 0.5	80	15	37	5	0	0	39	66	0.00	- 2.66	0.00	0	0	0.0	0	0.9	26	25Y	W	26	14	9	8	4.4	
LOS ANGELES U	270			66	45	55.5	- 0.3	81	15	39	9+	0	0			0.00	- 3.07	0.00	0		0.0	0			19	SW	26	16	11	4	3.2	
MT SHASTA R	3544	894.7	1022.0	40	23	31.6	- 1.7	52	16	4	26	0	25	23	73	2.44	- 3.92	0.95	10		18.8	18	1.6	34								
OAKLAND	6	1022.0	1022.3	53	40	46.4	- 1.6	62	14	34	31+	0	0	38	76	1.04	- 2.79	0.38	6	0	0.0	0	0.9	9	25	15	26+	13	6	12	4.9	
RED BLUFF	342	1008.8	1021.8	53	33	43.1	- 2.4	68	14	25	31	0	19	32	72	1.44	- 2.85	0.54	7	0	4.9	2	0.9	35	40	S	22	10	8	13	5.7	66
SACRAMENTO	17	1021.7	1022.4	49	34	41.0	- 4.2	58	22	25	30	0	13	35	82	0.81	- 2.37	0.58	6	0	0.0	0	1.5	17	37	NW	3	6	6	19	7.2	48
SANDBERG R	4517	864.2		47	32	39.8	- 0.1	58	18	14	4	0	15	18	46	T	- 2.55	T	0		0.0	32	7.8	2	47	35	23	20	2	9	3.6	
SAN DIEGO	13	1017.3	1018.3	64	46	54.9	- 0.1	76	15	37	5	0	0	39	60	0.07	- 1.94	0.07	1	0	0.0	0	2.4	31	19	W	28+	12	11	8	4.4	82
SAN FRANCISCO	8	1021.7	1022.2	53	38	45.6	- 3.0	59	21+	32	5+	0	2	38	79	1.09	- 2.92	0.56	7	1	T	0	0.6	18	26	27	25	13	6	12	5.2	
SAN FRANCISCO U	52			54	43	48.5	- 2.2	61	14	38	11	0	0			1.32	- 3.23	0.77	7		0.0	0			34	NE	3					68
SANTA MARIA	236			61	36	48.3	- 1.9	73	15	26	5	0	8			0.16	- 2.68	0.11	2		0.0	0						16	7	8	3.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1972

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1022.4	1023.3	48	34	40.6	- 4.1	58	21	25	5+	0	13	36	88	0.69	- 1.86	0.44	7	0	0.0	0	2.4	16	29	16	27	6	3	22	7.8	
COLORADO																																
ALAMOSA	7536	768.7		35	0	17.4	0.0	50	23	-32	4	0	31			0.24	- 0.02	0.22	3		6.9	6						13	13	5	4.2	
COLORADO SPRINGS	6145	806.3	1015.5	44	16	30.0	1.4	62	23	-11	4	0	27	9	48	0.27	- 0.02	0.15	4	0	5.2	3	1.8	35	39	30	21	12	10	9	5.0	
DENVER	5283	841.0	1013.0	46	15	30.5	2.0	63	23	-16	4	0	28	13	54	0.36	- 0.19	0.19	5	0	10.9	6	3.4	26	42	SW	11+	10	8	13	5.8	65
GRAND JUNCTION	4843	852.7	1022.4	42	18	30.0	4.0	58	26+	- 8	4	0	30	14	57	0.20	- 0.44	0.17	4	0	4.0	3	1.3	9	37	W	27	12	6	13	5.3	68
PUEBLO	4684	852.0	1015.4	48	12	29.8	- 0.2	72	23	-14	4	0	28	12	54	0.35	0.04	0.22	6	0	6.5	3	5.2	30	55	NW	11	10	12	9	5.3	79
CONNECTICUT																																
BRIDGEPORT	7	1019.0	1019.7	41	25	33.0	1.8	54	19	7	17+	0	21	22	65	2.23	- 1.46	0.72	13	0	2.3	1	7.4	29	55	26	25	7	10	14	6.5	
HARTFORD	169	1011.5	1018.3	37	19	27.9	1.9	57	13	- 1	6	0	30	18	67	2.02	- 1.56	0.45	14	0	2.9	2	3.6	28	49	NW	25	6	8	17	6.9	62
DELAWARE																																
WILMINGTON	74	1017.3	1020.2	44	28	36.1	2.7	65	13	5	16	0	20	25	68	2.50	- 0.90	0.69	14	0	2.1	2	2.6	29	37	32	14	5	8	18	6.9	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1008.1	1020.1	45	26	35.8		67	13	- 2	16	0	22	26	70	2.28		0.63	16	2	T	T	1.7	24	33	30	25	8	4	19	6.9	
WASHINGTON NATIONAL	14	1018.9	1020.3	46	31	38.5	1.6	65	19	3	16	0	17	27	66	2.45	- 0.58	0.76	17	2	0.3	T	2.2	28	30	NW	25	8	5	18	6.7	41
FLORIDA																																
APALACHICOLA	13			65	52	58.6	3.5	74	30+	27	16	0	2			8.05	4.91	3.11	12	4	0.0	0			29	N	16	4	12	15	6.8	75
DAYTONA BEACH	31	1019.0	1020.5	75	56	65.5	6.3	83	14+	34	16	0	0	58	81	2.37	0.41	0.80	11	2	0.0	0	1.2	27	26	2	16	4	13	14	7.0	
FORT MYERS	15	1019.3	1019.7	81	61	70.9	7.4	85	24+	44	17	0	0	61	77	0.77	- 0.75	0.72	6	0	0.0	0	2.3	10	29	1	16	8	15	8	5.4	
JACKSONVILLE	26	1020.0	1021.0	71	51	61.4	5.5	83	11	29	17	0	2	54	82	5.77	3.32	2.35	9	5	0.0	0	1.0	34	32	NW	14	4	7	20	7.4	41
KEY WEST	4	1018.0	1018.5	79	71	75.0	5.4	83	3	61	17	0	0	66	76	2.75	1.22	1.40	9	2	0.0	0	7.6	10	40	N	15	14	8	9	5.0	88
LAKELAND	214			77	58	67.4	5.7	83	25+	35	16	0	0			1.22	- 0.83	0.71	8		0.0	0						5	16	10	6.0	52
MIAMI	7	1019.0	1019.3	79	68	73.0	6.1	83	31	56	16	0	0	64	74	1.60	- 0.43	0.97	8	3	0.0	0	5.0	8	25	34	16+	9	11	11	5.7	
ORLANDO	108	1015.9	1020.3	79	59	68.9	8.5	86	14+	38	16	0	0	59	77	0.99	- 1.01	0.47	7	1	0.0	0	0.3	23	25	2	16	6	10	15	6.8	
PENSACOLA	112	1015.6	1019.9	67	50	58.7	5.2	78	4	21	16	0	5	49	75	3.65	- 0.57	0.97	12	3	0.0	0	1.4	8	23	2	16+	4	9	18	7.3	
TALLAHASSEE	55	1018.0	1020.4	70	48	59.0	5.1	82	10	24	7	0	6	51	79	6.52	3.10	1.63	12	4	0.0	0	0.8	12	21	1	16	5	7	19	7.2	
TAMPA	19	1019.6	1019.9	77	57	67.0	5.8	83	26	36	16	0	0	59	79	0.54	- 1.59	0.23	7	1	0.0	0	2.2	11	20	5	16	8	10	13	6.2	60
WEST PALM BEACH	15	1018.6	1019.2	80	64	71.8	4.9	85	31	54	16	0	0	64	76	2.47	- 0.01	1.25	8	5	0.0	0	4.2	11	28	4	16	7	13	11	6.2	
GEORGIA																																
ATHENS	802	993.9	1020.4	57	39	48.1	3.5	69	24	10	16	0	10	38	72	6.46	1.57	2.58	13	4	T	T	1.3	27	20	32	15	8	6	17	6.6	
ATLANTA	1010	982.7	1020.1	57	37	46.8	2.1	70	24	5	16	0	9	36	72	9.26	4.82	3.01	16	4	T	T	1.1	29	32	NW	15	8	4	19	6.9	44
AUGUSTA	146	1015.2	1020.5	63	41	51.8	4.2	75	10	15	17	0	8	43	75	6.08	3.09	2.30	11	3	0.0	0	0.8	27	22	30	2	6	4	21	7.1	
COLUMBUS	385	1006.1		63	43	52.9	5.1	78	10	14	16	0	9	44	74	6.10	2.04	1.39	15	2	0.0	0	1.7	1	25	35	25	7	4	20	7.0	
MACON	354	1008.1	1021.3	63	41	51.9	2.7	75	10	14	16	0	8	43	76	7.46	4.09	2.93	15	3	0.0	0	0.8	31	25	NW	25	4	8	19	7.4	41
ROME	637			57	33	44.9	2.8	75	13	4	16	0	15			7.32	1.81	2.34	18		T	0										
SAVANNAH	46	1019.0	1020.8	68	47	57.5	5.8	81	13+	19	17	0	5	48	76	3.99	1.21	1.26	13	6	0.0	0	0.8	26	26	W	28+	5	6	20	7.4	39
HAWAII																																
HILO	27	1013.2	1014.3	78	63	70.1	- 0.7	83	13	57	11+	0	0	63	84	10.96	- 0.86	4.32	22	1	0.0	0	1.2	15	19	SE	23	0	15	16	7.6	27
HONOLULU	7	1013.2	1013.8	78	63	70.4	- 2.1	82	21+	53	31	0	0	61	75	5.28	1.52	4.78	6	1	0.0	0	4.9	4	32	E	23	8	11	12	6.1	61
KAHULUI	48	1011.6	1013.7	80	59	69.5	- 2.6	84	15+	50	31+	0	0	61	76	0.35	- 2.79	0.21	6	1	0.0	0	5.5	5	29	E	7	11	11	9	5.2	67
LIHUE	103	1009.5	1014.7	77	64	70.4	- 0.5	80	14	56	31	0	0	63	79	6.44	0.93	5.94	10	1	0.0	0	3.0	5	24	NE	7	5	13	13	6.6	47
IDAHO																																
BOISE	2838	917.7	1020.7	38	24	30.9	1.8	49	19+	7	28	0	24	21	68	2.15	0.83	0.50	11	0	5.0	1	0.7	10	33	SW	23+	4	6	21	7.8	36
LEWISTON	1413			39	25	32.3	1.6	54	20	2	28	0	21			1.36	0.26	0.36	14		6.0	2			72Y		11	3	3	25	8.6	
POCATELLO	4454	862.2	1020.1	31	15	22.9	0.6	43	22+	-11	4+	0	27	14	67	1.45	0.24	0.46	13	0	10.6	4	10.0	23	54	W	10	4	12	15	7.3	37
ILLINOIS																																
CAIRO	314			44	28	36.3	- 1.1	71	24	0	16	0	17			2.68	- 1.78	1.69	10		3.2	2			38	SW	24	9	3	19	6.5	41
CHICAGO O'HARE	658	992.6	1018.2	28	11	19.6	- 4.6	47	18	-17	15	0	28	11	69	1.01	- 0.81	0.29	12	0	7.6	3	7.9	25	45	27	25	10	4	17	6.4	
CHICAGO MIDWAY	607	995.3	1018.8	30	15	22.5	- 3.5	50	18	-15	15	0	27	13	65	1.11	- 0.75	0.37	11	0	11.7	4	6.8	24	40	SW	24	10	4	17	6.4	55

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
MOLINE	582	997.3	[illegible]	27	10	18.6	- 4.0	55	18	-15	15	0	31	8	63	1.19	- 0.42	0.42	9	0	11.8	7	5.0	26	44	NW	24	9	5	17	[illegible]	[illegible]
PEORIA	652	994.6	1019.9	29	11	19.7	- 6.0	50	18	-18	15	0	31	12	72	0.81	- 1.07	0.25	10	0	10.2	4	3.2	25	37	W	24	11	3	17	[illegible]	[illegible]
ROCKFORD	724	992.2	1018.5	26	9	17.0	- 5.0	48	18	-19	15	0	31	9	69	0.66	- 1.32	0.19	8	0	5.5	3	[illegible]	27	40	27	24	8	7	16	[illegible]	
SPRINGFIELD	588	[illegible]	[illegible]	33	16	24.4	- 4.0	56	24	-12	15	0	26	17	73	1.03	- 0.86	0.38	8	0	8.1	4	3.4	24	45	W	24	14	2	15	[illegible]	[illegible]
INDIANA																																
EVANSVILLE	381	1006.4	[illegible]	42	23	32.5	- 1.7	71	24	- 7	16	0	22	23	68	1.68	- 2.30	0.69	11	0	2.0	2	0.6	25	47	W	24	9	4	18	6.6	[illegible]
FORT WAYNE	791	988.5	1019.9	33	15	24.0	- 3.0	57	24	-19	16	0	28	16	74	1.22	- 1.45	0.35	11	0	7.9	2	[illegible]	25	53	W	25	7	8	16	[illegible]	[illegible]
INDIANAPOLIS	792	989.8	1020.2	37	17	26.5	- 2.6	64	24	-20	16	0	25	18	73	1.57	- 1.48	0.49	13	1	7.9	4	3.2	24	36	W	24	8	6	17	[illegible]	[illegible]
SOUTH BEND	773	989.2	1018.4	[illegible]	17	23.9	- 1.7	48	24+	-19	16	0	27	17	74	1.82	- 0.38	0.34	17	0	19.2	9	7.5	22	37	25	25+	3	7	21	7.8	
IOWA																																
BURLINGTON	692			29	10	19.5	- 4.9	59	18	-17	15	0	31	11	67	0.71	- 0.93	0.27	9	0	9.4	5	3.6	28	32	30	24	10	5	16	[illegible]	
DES MOINES	938	983.4	1019.9	26	7	16.6	- 3.3	53	18	-18	15	0	31	9	70	0.44	- 0.86	0.30	6	0	5.8	5	4.0	27	41	NW	24	10	7	14	[illegible]	[illegible]
DUBUQUE	1056	977.7		22	5	13.4	- 5.8	49	18	-22	15	0	31			0.47	- 1.36	0.17	7		4.7	3						8	6	17	6.7	
SIOUX CITY	1095	977.7	[illegible]	26	5	15.5	- 3.2	48	17	-18	15	0	31	5	60	0.37	- 0.41	0.29	6	0	5.7	5	2.9	30	42	NW	24	6	11	14	6.7	[illegible]
WATERLOO	868	985.5	1019.4	[illegible]	1	10.2	- 7.7	46	18	-23	15	0	31	4	73	0.26	- 0.89	0.11	5	0	2.9	5	5.1	29	38	31	24	10	4	17	[illegible]	
KANSAS																																
CONCORDIA	1473	963.8	1018.9	36	15	25.2	2.3	55	18	- 8	28	0	31	16	72	0.23	- 0.47	0.23	1	0	2.8	3	1.3	26	39	N	3	10	9	12	[illegible]	[illegible]
DODGE CITY	2582	923.8	1017.7	43	16	29.0	- 2.1	65	12	- 8	15	0	30	15	64	0.17	- 0.40	0.11	7	0	2.2	1	1.4	27	38	N	12+	13	5	13	[illegible]	77
GOODLAND	3654	885.5	1016.5	43	13	28.0	0.6	64	16	-10	14	0	31	14	63	0.32	- 0.07	0.21	6	0	5.5	2	4.0	25	33	31	24	9	12	10	5.5	
TOPEKA	877	986.8	[illegible]	36	15	25.6	- 3.2	60	18	-10	15	0	30	16	69	0.47	- 0.55	0.23	5	0	3.0	1	0.9	29	35	NE	3	10	7	14	5.7	[illegible]
WICHITA	1321	969.2	1018.9	38	16	27.0	- 5.0	57	12	- 7	15	0	30	19	73	0.15	- 0.66	0.07	5	0	1.7	1	0.2	32	34	N	12	12	5	14	5.6	[illegible]
KENTUCKY																																
COVINGTON	869	987.1	[illegible]	40	21	30.2	- 1.4	66	24	-13	16	0	23	20	68	1.96	- 1.60	0.52	15	0	1.6	1	3.7	23	31	28	25+	6	4	21	[illegible]	
LEXINGTON	966	984.1	1020.6	45	26	35.4	0.9	71	24	-11	16	0	21	27	74	4.10	- 0.84	1.13	15	2	1.4	1	3.6	21	27	29	24	7	5	18	[illegible]	
LOUISVILLE	477	1002.0	1020.4	45	26	35.2	0.2	70	24	- 7	16	0	21	25	70	2.87	- 1.23	0.81	13	0	1.6	1	2.3	25	45	SW	24	7	6	18	6.8	47
LOUISIANA																																
ALEXANDRIA	92	1015.6	1019.9	63	41	52.2	1.9	80	24	20	17+	0	8			6.82	1.50	1.59	11	7	0.0	0	0.6	6	24	4	15	8	4	19	6.8	
BATON ROUGE	64	[illegible]	1019.4	67	46	56.6	3.7	81	13	22	16	0	7	48	75	8.25	3.47	1.98	10	5	T	T	2.0	10	23	1	15	7	4	20	[illegible]	
LAKE CHARLES	9	1018.0	1019.0	66	46	55.8	2.1	79	13	25	16	0	7	50	83	7.73	3.29	3.60	10	8	0.0	0	3.3	8	25	7	25+	7	5	19	7.1	
NEW ORLEANS	4	1018.6		69	49	58.6	4.0	82	13	24	16	0	4	51	79	6.98	3.14	2.50	14	3	0.0	0	1.7	7	24	36	15+	4	9	18	7.0	
SHREVEPORT	254	1009.5	1019.1	60	39	49.4	1.9	84	24	17	16	0	11	41	79	5.97	1.17	2.27	9	3	T	T	1.3	14	21	29	4	7	7	17	6.6	[illegible]
MAINE																																
CARIBOU	624	989.8		20	- 4	8.2	- 2.3	46	14	-32	1	0	31			1.32	- 0.79	0.53	17		15.7	22						7	7	17	7.0	
PORTLAND	43	1014.6	1016.8	33	12	22.2	0.4	52	19	- 8	6	0	31	14	69	2.09	- 2.28	0.56	13	0	7.0	6	5.3	29	42	NW	25	10	6	15	[illegible]	[illegible]
MARYLAND																																
BALTIMORE	148	1014.9	1020.8	45	30	37.6	2.8	66	13	5	16	0	19	27	67	2.82	- 0.61	0.70	16	2	1.1	1	3.1	28	38	SW	25	8	5	18	6.8	[illegible]
MASSACHUSETTS																																
BLUE HILL OBS'R	629			37	20	28.6	1.6	55	19+	- 2	17	0	27			2.21	- 2.28	0.66	13		6.2	3			70	WNW	25					50
BOSTON	15	1016.6	1017.6	41	25	33.0	3.1	59	14	5	17+	0	22	21	64	2.05	- 1.89	0.50	14	0	7.8	3	7.5	28	49	W	25	7	10	14	6.4	55
WORCESTER	986	979.3	1017.7	35	18	26.4	2.4	57	14+	- 5	17	0	28	16	67	2.34	- 1.37	0.62	12	0	6.7	5	7.3	27	39	28	25	6	11	14	6.5	
MICHIGAN																																
ALPENA	689	987.8	1014.1	29	8	18.5	- 1.2	45	9	-11	15	0	31	11	71	0.47	- 1.48	0.10	9	0	8.6	11	6.3	24	34	E	24	0	14	17	7.9	43
DETROIT	619			32	19	25.5	- 1.4	50	22	- 8	16	0	29	15	66	1.12	- 0.93	0.23	16	0	10.8		8.2	24	33	27	25					
DETROIT METRO	633	992.6	1017.6	32	16	23.8	- 2.4	53	22	-14	16	0	30	16	72	1.28	- 0.65	0.28	14	0	7.9	3	7.0	25	41	W	25	3	8	20	7.6	44
FLINT	771	987.5	1016.6	30	14	21.8	- 2.7	45	22	-14	16	0	31	13	69	1.21	- 0.49	0.23	11	0	14.6	7	8.4	25	35	29	25	4	9	18	7.5	
GRAND RAPIDS	784	986.5	1017.0	29	13	20.8	- 3.2	44	10	-16	16	0	31	14	72	1.26	- 0.65	0.26	17	0	22.6	6	7.6	23	60	SW	24	1	5	25	8.6	31
HOUGHTON LAKE	1149	971.2	1015.0	26	7	16.3	- 2.9	44	10	-14	15	0	31	11	75	0.82	- 0.67	0.17	15	0	15.0	9	7.6	25	40	26	25+	1	7	23	8.3	
LANSING	841	984.1	1017.2	30	12	21.3	- 3.0	47	22	-17	15	0	31	15	75	1.51	- 0.45	0.27	18	0	16.9	6	7.9	24	43	W	25	2	10	19	7.6	31
MARQUETTE U	677			23	5	13.6	- 5.9	39	9+	-19	15	0	31			1.53	- 0.36	0.81	12		22.6	26			38	SW	16	5	7	19	7.4	48

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	993.0	1017.1	29	15	21.8	- 4.2	43	10	-12	15	0	27	14	72	2.21	0.11	0.38	23	0	39.0	8	6.8	24	38	29	25	0	4	27	9.4	
SAULT STE. MARIE	721	984.1	1012.0	23	5	13.8	- 2.0	36	18+	-23	16	0	31	9	83	4.08	2.01	1.22	26	0	53.2	27	3.9	25	39	W	19	0	5	26	9.2	30
MINNESOTA																																
DULUTH	1428	960.0	1015.0	10	-10	0.2	- 8.5	34	8	-39	15	0	31	- 7	70	2.28	1.13	0.95	15	0	30.9	26	8.1	27	57	NW	24	10	7	14	6.1	41
INTERNATIONAL FALLS	1179	968.8	1015.1	6	-17	- 5.7	- 8.8	36	17	-45	15	0	31	-11	73	0.76	- 0.08	0.26	12	0	13.9	19	5.7	26	28	10	6	10	5	16	6.4	
MINNEAPOLIS	834	985.8	1018.0	15	- 4	5.5	- 6.9	37	8	-29	15	0	31	- 3	64	0.84	0.14	0.39	10	0	12.2	15	5.4	26	39	[illegible]	12	9	9	13	6.2	51
ROCHESTER	1297	967.5	1018.0	16	- 3	5.5	- 7.1	37	18+	-30	15	0	31	1	74	0.71	- 0.20	0.32	10	0	11.0	9	8.0	27	43	30	24	10	7	14	5.9	
ST. CLOUD	1034	977.3	1018.0	13	- 6	3.5	- 6.6	36	8	-31	15	0	31			0.55	- 0.17	0.21	9		8.3	10						8	9	14	6.4	
MISSISSIPPI																																
JACKSON	310	1008.1	1020.0	63	40	51.5	3.6	82	24+	15	16	0	8	44	78	5.94	0.76	1.64	12	4	0.0	0	0.9	17	28	N	24+	8	8	15	6.4	57
MERIDIAN	290	1009.1	1020.5	63	40	51.6	3.5	80	24+	14	16	0	8	43	77	11.02	6.33	4.54	15	4	0.0	0	0.2	27	26	33	25	7	5	19	7.0	
MISSOURI																																
COLUMBIA REGIONAL	887	986.5	1020.1	37	19	28.4	- 0.9	62	18	-10	15	0	24	19	71	0.88	- 0.83	0.44	5	0	4.0	2	1.3	24	34	SW	18	12	2	17	5.7	60
KANSAS CITY	742	991.5	1019.5	37	18	27.3	- 4.4	63	18	- 9	15	0	27	18	69	0.56	- 0.85	0.23	5	0	3.0	1	1.1	29	31		17+	11	7	13	5.5	58
ST. JOSEPH	811			35	14	24.0	- 3.2	57	18	-15	15	0	31	14	67	0.38	- 0.82		5				1.0	27	32	30	24	14	7	10	5.0	
ST. LOUIS	535	999.3	1020.4	40	19	29.9	- 2.0	70	24	- 7	15	0	26	21	74	0.77	- 1.21	0.40	5	0	4.1	2	1.8	23	37	W	24	12	5	14	5.5	64
SPRINGFIELD	1268	972.6	1019.3	44	21	32.9	- 0.7	62	20+	- 3	15	0	23	23	69	0.45	- 1.51	0.22	8	0	0.2	T	2.4	17	30	N	13	10	6	15	6.0	53
MONTANA																																
BILLINGS	3567	887.2	1016.8	23	4	13.[illegible]	-10.0	45	17	-27	27+	0	31	2	63	2.35	1.81	1.41	10	0	27.6	18	7.8	27	49	NW	21	1	9	21	6.0	51
GLASGOW	2284	930.9	1018.4	15	- 6	4.3	- 5.5	44	16	-35	14	0	31	- 5	65	0.55	0.07	0.10	16	0	12.7	9	3.5	32	37	27	9	2	8	21	8.0	
GREAT FALLS	3662	883.8	1017.0	23	3	12.8	- 9.3	46	16	-32	27	0	30	2	65	1.47	0.86	0.40	15	0	18.6	6	11.8	24	47	SW	5	3	7	21	7.8	31
HAVRE	2594	920.8	1018.3	13	- 6	3.5	-10.4	43	15	-36	28+	0	31	- 3	69	0.86	0.37	0.24	12	0	15.0	10	6.1	25	45	SW	15	1	8	22	8.5	41
HELENA	3828	877.1	1018.8	24	1	12.4	- 6.2	46	20	-30	28	0	31	1	62	1.12	0.65	0.20	18	0	14.9	9	6.3	28	50	NW	11	3	6	22	8.1	24
KALISPELL	2965	908.2	1017.5	24	4	13.9	- 5.9	43	16	-26	14	0	30	8	75	1.58	0.21	0.36	18	0	24.5	15	0.3	1	44	1	25	0	6	25	9.1	
MILES CITY	2629	919.7	1017.7	19	0	9.1	- 7.4	42	16	-27	27+	0	30	2	73	1.48	1.04		19	0	14.8		5.7	29								
MISSOULA	3190	901.8	1017.9	29	13	20.6	1.4	48	16	-18	28	0	30	15	78	2.04	1.12	0.40	23	0	22.5	11	1.8	29	48	NW	11	3	1	27	8.7	21
NEBRASKA																																
GRAND ISLAND	1841	949.9	1018.9	33	11	21.8	- 0.8	60	17	-14	28	0	31	10	63	0.19	- 0.44	0.10	4	0	3.5	2	2.8	28	32	32	24	8	9	14	6.2	
LINCOLN	1150			32	13	22.7	- 2.4	50	18+	-10	14	0	29			0.20	- 0.72	0.07	4		2.7	2			34	SW	11	11	7	13	5.6	61
NORFOLK	1544			28	6	17.1	- 2.3	53	17	-22	28	0	31			0.42	- 0.36	0.40	3		4.6	4						8	4	19	6.5	
NORTH PLATTE	2775	916.4	1018.4	35	6	20.7	- 3.3	61	17	-17	14	0	31	9	65	0.16	- 0.27	0.13	4	0	2.6	2	2.0	30	34	SW	11	8	6	17	6.7	53
OMAHA	977	982.4	1019.5	31	9	20.0	- 2.3	51	18	-15	15	0	31	10	66	0.38	- 0.44	0.29	5	0	1.9	1	1.9	33	47	NW	24	9	8	14	6.0	66
SCOTTSBLUFF	3957	875.7	1016.2	40	10	24.9	- 0.4	58	20+	-18	4	0	29	11	61	0.35	0.06	0.12	5	0	4.1	1	6.5	30	48	29	9	7	7	17	7.0	
VALENTINE	2587			31	2	16.5	- 3.5	60	17+	-23	14	0	31			0.41	0.01	0.32	6		5.7	5			64	NW	12	5	8	18	7.5	52
NEVADA																																
ELKO	5050	845.9	1022.5	33	14	23.4	0.8	49	22	-16	4	0	27	13	65	0.39	- 0.77	0.10	11	0	1.1	3	4.1	25	32	25	23	12	3	16	5.8	
ELY	6253	808.7	1021.1	40	9	24.1	1.3	51	22+	-19	4	0	31	11	65	0.17	- 0.61	0.13	5	0	3.3	2	5.2	21	30	S	25+	13	8	10	4.8	84
LAS VEGAS	2162	942.8	1021.1	55	30	42.3	- 0.8	62	13	18	5	0	23	15	36	0.00	- 0.53	0.00	0	0	0.0	0	3.0	27	38	N	23	22	3	6	3.1	92
RENO	4404	868.6	1023.6	37	14	25.5	- 4.9	60	22	- 8	4	0	26	15	67	0.37	- 0.82	0.35	3	0	5.7	7	1.0	23	30	W	23	10	6	15	5.9	42
WINNEMUCCA	4301	870.6	1022.0	40	15	27.6	0.4	58	22	-10	4	0	25	19	71	0.16	- 0.89	0.07	6	0	0.8	3	3.9	22	33	W	23	11	5	15	6.0	55
NEW HAMPSHIRE																																
CONCORD	342	1004.1	1017.3	35	9	22.0	0.8	54	13	-19	6	0	31	11	63	1.44	- 1.79	0.36	10	0	10.8	14	4.6	29	44	NW	19	11	6	14	5.8	54
MT. WASHINGTON OBS.	6262			14	- 3	5.7	- 0.6	37	13	-32	16	0	31			7.01	1.57	1.37	24	1	38.9	18			127Y	W	25	4	6	21	7.8	35
NEW JERSEY																																
ATLANTIC CITY	64	1017.3	1019.7	43	25	33.9	- 0.9	60	13	6	29+	0	22	25	71	2.93	- 0.63	1.07	13	0	2.9	3	4.3	28	37	29	25	6	6	19	7.1	41
ATLANTIC CITY U	11			44	33	38.6	2.6	60	19	11	16	0	13			3.25	- 0.50	1.31	12						46	WNW	25					
NEWARK	7	1018.3	1019.4	44	27	35.4	3.1	65	14	7	16	0	21	25	68	2.26	- 1.07	0.58	11	0	5.1	2	5.0	27	36	24	25	4	10	17	7.1	
TRENTON	56			42	29	35.6	2.5	63	14+	5	16	0	18			2.26	- 0.84	0.55	14		3.5	3			40	NW	25	9	8	14	6.4	[illegible]

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW MEXICO																																
ALBUQUERQUE	5311	837.9	1017.7	51	21	36.1	1.1	68	26+	3	5	0	31	14	45	0.12	- 0.29	0.12	1	0	1.2	1	1.6	34	45	[illegible]	4	15	10	6	3.6	[illegible]
CLAYTON	4969			52	17	34.4	1.2	70	23	- 3	4	0	28			0.06	- 0.29	0.05	2		1.5	1						15	5	11	4.5	
ROSWELL	3612			59	22	40.6	2.7	83	23	- 2	5	0	27			0.20	- 0.28	0.20	2		1.9	2			43	NW	24					[illegible]
NEW YORK																																
ALBANY	275	1007.8	1018.8	34	12	22.9	0.2	52	13	-14	6	0	30	14	69	1.21	- 1.26	0.41	15	0	8.5	6	3.7	26	40	NW	25	5	6	20	7.4	46
BINGHAMTON	1590	957.0	1018.[illegible]	[illegible]	17	24.7	0.9	54	13	- 4	16+	0	29	15	67	1.29	- 1.21	0.24	14	0	11.0	4	6.2	24	41	W	25	0	14	17	7.7	43
BUFFALO	725	990.5	1017.2	34	17	25.5	1.0	60	13	- 3	15	0	30	18	76	2.17	- 0.67	0.30	22	0	27.6	10	10.6	25	51	SW	17	2	5	24	8.5	35
NEW YORK C	132	1015.6	1018.9	42	28	35.1	1.9	62	14+	5	16	0	18	23	66	2.41	- 0.90	0.64	13	0	2.8	2	5.0	26	48	SW	25					50
NEW YORK KENNEDY	13	1018.6	1019.5	43	30	36.4	4.6	58	19	9	16	0	18	26	68	1.74	- 1.49	0.49	11	0	1.7	2	6.2	28	46	26	25	6	8	17	6.8	
NEW YORK LA GUARDIA	11	1018.1	1019.1	41	28	34.2	0.6	62	14	6	16	0	18	21	62	2.02	- 1.29	0.49	13	0	2.2	2	5.8	29	45	W	25	4	12	15	6.7	
ROCHESTER	547	996.3	1017.4	35	17	26.0	0.8	67	13	- 1	16+	0	30	17	69	1.50	- 0.90	0.44	15	0	18.1	8	8.3	24	50	SW	25	2	9	20	7.6	[illegible]
SYRACUSE	410	1002.0	1017.4	35	18	26.4	2.4	58	13	- 3	6	0	28	17	68	1.10	- 2.05	0.28	17	0	18.2	7	5.3	23	52	W	25	5	9	17	7.2	45
NORTH CAROLINA																																
ASHEVILLE	2140	942.8	1020.2	54	30	42.1	4.5	67	21	[illegible]	16	0	19	33	77	3.57	- 0.60	1.11	16	1	T	0	1.8	34	30	34	25	9	6	16	6.5	61
CAPE HATTERAS R	7	1020.0	1020.5	60	45	52.9	6.3	75	4	16	16	0	3	47	81	6.42	2.52	3.05	14	2	T	T	3.3	33	32	20	13+	7	6	18	7.1	31
CHARLOTTE	736	992.6	1020.5	54	35	44.6	1.9	68	19	6	16	0	13	34	71	4.47	0.94	1.77	13	1	0.0	0	1.0	25	21	NW	25	6	8	17	6.9	43
GREENSBORO	897	988.2	1020.5	53	32	42.3	2.6	67	13	- 1	16	0	15	32	71	2.60	- 0.80	0.60	13	1	T	T	1.9	24	33	NW	25	8	8	15	6.8	49
RALEIGH	434	1004.7	1021.1	55	34	44.7	3.1	71	24	4	16	0	15	33	67	1.97	- 1.25	0.85	11	1	0.0	0	1.3	24	22	34	16+	7	8	16	6.7	55
WILMINGTON	28	1019.6	1020.9	62	42	52.0	4.1	77	28+	15	17	0	5	44	80	4.27	1.42	0.96	15	1	0.0	0	1.6	31	32	NW	5	8	6	17	7.0	39
NORTH DAKOTA																																
BISMARCK	1647	953.9	1017.5	15	- 6	4.8	- 5.1	43	16	-35	15	0	31	- 3	65	0.68	0.24	0.15	11	0	13.3	9	6.3	30	37	W	9	4	7	20	7.6	42
FARGO	896	982.4	1017.4	13	- 8	2.7	- 4.6	38	16	-33	15	0	31	- 6	66	0.94	0.41	0.57	10	0	16.5	10	3.7	28	48	NW	24	3	10	18	7.1	54
WILLISTON	1899	944.8	1017.6	14	- 7	3.3	- 5.0	45	17	-32	26	0	31	- 2	77	0.43	- 0.12	0.09	11	0	6.5	7	6.9	29	42	W	8	3	9	19	7.5	45
OHIO																																
AKRON	1208	972.6	1018.9	35	17	25.7	- 2.6	60	24+	-15	16	0	29	18	73	1.33	- 1.53	0.30	11	0	7.5	2	6.1	23	25	28	25+	3	12	16	7.2	
CINCINNATI ABBE OB	761			40	22	31.2	- 2.5	68	24	-13	16	0	20			2.02	- 1.65	0.55	14		1.4	1			26	W	25					35
CLEVELAND	777	988.8	1019.0	36	19	27.3	- 1.1	58	24	-14	16	0	29	19	73	1.95	- 0.72	0.44	16	0	15.0	4	8.0	22	40	W	25	4	6	21	7.7	48
COLUMBUS	812	989.8	1020.1	37	19	28.2	- 1.7	61	13	-12	16	0	25	18	68	1.40	- 1.76	0.35	12	0	5.8	3	3.7	23	38	W	24	5	9	17	6.8	39
DAYTON	1002	982.4	1019.8	37	19	27.5	- 2.1	60	24	-16	16	0	22	19	71	1.47	- 1.71	0.38	13	1	6.6	3	4.9	23	36	W	24	9	8	14	6.3	53
MANSFIELD	1295			37	19	27.9	- 0.9	63	24	-15	16	0	26	20	74	0.95	- 2.27	0.21	11	1	7.1	3	8.3	22	35	26	25	4	10	17	7.2	
TOLEDO	669	992.2	1018.4	32	14	23.4	- 2.9	55	22	-17	16	0	30	14	68	1.42	- 0.91	0.26	12	1	10.1	3	6.6	24	47	W	24	4	10	17	7.5	43
YOUNGSTOWN	1178	974.6	1018.8	35	18	26.5	- 0.8	62	13	-11	16	0	31	18	73	1.35	- 1.81	0.24	15	0	9.0	2	6.3	23	42	25	25	4	7	20	7.6	
OKLAHOMA																																
OKLAHOMA CITY	1285	971.2	1019.1	46	24	34.9	- 2.1	68	19+	1	15	0	21	25	71	0.21	- 1.10	0.07	4	0	0.8	1	0.5	14	34	N	3	12	8	11	5.2	62
TULSA	650	994.2	1019.3	45	25	34.8	- 1 4	72	19	2	15	0	21	24	70	0.17	- 1.54	0.06	5	0	0.8	1	0.2	16	32	SW	18	7	11	13	6.1	50
OREGON																																
ASTORIA	8	1018.0	1018.9	45	35	40.0	- 0.7	53	20	19	29+	0	12	36	85	10.62	- 1.09	2.11	23	0	1.7	1	5.1	22	33	29	23	4	4	23	8.3	
BURNS U	4151	873.4	1020.7	33	13	23.4	- 1.4	47	19	-11	29	0	28	17	75	2.07	0.45	1.06	9		11.7	10	4.2	25				7	5	19	6.9	
EUGENE	359	1007.5	1021.4	44	31	37.9	- 1.2	54	19	15	29	0	18	33	84	12.48	6.15	4.26	18	1	1.2	1	5.3	19	35	22	23	3	5	23	8.0	
MEACHAM	4050	874.7	1019.1	31	18	24.2	- 1.8	44	20+	-11	27	0	29			3.68	- 0.52	0.63	20		28.8	44			44	25	11					
MEDFORD	1298	973.6	1022.6	43	30	36.0	0.6	56	20	19	3	0	22	29	80	3.55	0.41	1.89	12	0	0.3	T	0.6	31	20	23	23+	4	4	23	7.7	
PENDLETON	1482	963.8	1018.7	41	27	34.0	1.8	59	20+	- 6	27	0	15	24	68	0.96	- 0.46	0.33	11	0	3.6	2	6.7	25	46	26	11	2	3	26	8.7	
PORTLAND	21	1018.6	1019.9	45	34	39.2	0.8	58	18	18	29+	0	13	32	76	5.71	0.34	1.75	19	0	0.4	T	5.3	18	34	E	27+	4	2	25	8.1	24
SALEM	196	1013.2	1020.5	45	32	38.3	- 0.2	55	18	13	28	0	14	33	81	7.98	1.28	3.07	17	0	0.4	T	6.2	20	30	18	25	4	2	25	8.1	
SEXTON SUMMIT R	3836	885.5	1021.4	37	27	32.3	- 1.8	51	1	15	29	0	22			10.02	4.43	3.48	17		22.0	24			47	23	20					
PACIFIC AREA																																
GUAM TAGUAC R	361	997.6	1010.2	84	70	76.7	- 1.5	85	27+	61	14+	0	0	71	84	4.86	0.23	2.07	19	0	0.0	0	9.7	8	24	ESE	6					78
JOHNSTON	7	1010.5	1011.2	79	74	76.6	- 0.5	82	12	68	28	0	0	69	78	3.29	- 0.60	2.00	9	0	0.0	0	12.6	9	46	NE	28	8	10	13	6.0	64
KOROR R	94	1004.4	1008.1	87	75	80.8	0.5	90	18	72	30+	1	0	75	86	10.78	- 0.95	1.72	25	1	0.0	0	2.8	8	23	SE	26	0	1	30	9.8	39
KWAJALEIN	8	1007.5	1008.2	85	77	80.8	0.7	86	30+	73	1	0	0	73	80	10.02	6.41	4.00	13	0	0.0	0	11.9	7	25	11	12	3	6	22	8.1	
MAJURO	10	1008.1	1008.4	84	76	80.2	0.0	85	31+	72	12+	0	0	73	79	9.58	2.60	3.18	18	0	0.0	0	9.8	7	27	E	28+	2	5	24	8.8	60

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
PAGO PAGO	12	1007.8	1008.1	85	74	79.2		87	26+	69	29+	0	0	73	82	17.77		3.96	28	2	0.0	0	3.9	1	27	NW	20+	1	7	23	8.5	[illegible]
PONAPE R	123	1002.0	1007.1	86	75	80.6	0.1	88	26+	70	13	0	0	73	81	10.52	- 0.55	3.43	20	1	0.0	0	6.1	10	20	NE	1	[illegible]	5	26	9.0	46
TRUK MOEN ISLAND	5	1007.8	1008.1	85	77	80.9	0.2	88	20+	73	14+	0	0	73	78	9.83	1.43	3.86	16	2	0.0	0	9.6	6	23	NE	19	0	2	29	9.1	70
WAKE	11	1012.9	1013.1	79	70	74.5	- 2.9	82	9	68	31+	0	0	63	70	1.75	0.61	0.66	13	0	0.0	0	14.7	5	32	NE	25+	13	12	6	4.7	66
YAP	44			86	74	80.2	- 0.3	88	14	71	11	0	0			6.03	- 1.84	1.97	17	1	0.0	0			23	[illegible]	5	0	9	22	3.5	72
PENNSYLVANIA																																
ALLENTOWN	387	1005.1	1019.7	38	22	30.4	1.4	62	13	2	16	0	25	22	74	2.79	- 0.38	0.91	15	0	4.5	3	4.9	28	35	28	25	7	8	16	6.8	
ERIE	731	992.5	1018.3	34	20	26.9	1.5	60	13	- 2	15	0	31	19	74	1.94	- 0.73	0.46	21	0	27.3	6	8.4	23	35	26	25	1	9	21	8.2	
HARRISBURG	338	1006.8	1019.8	41	28	34.5	3.2	66	13	8	16	0	22			2.65	- 0.11	0.95	15	0	2.6	2	2.5	29	42	W	25	7	11	13	6.6	46
PHILADELPHIA	5	1019.0	1020.0	43	28	35.1	2.8	63	13	6	16	0	21	25	69	2.34	- 0.98	0.57	13	0	3.2	3	3.6	28	42	W	25	6	6	19	7.0	55
PITTSBURGH	1137	973.9	1019.3	39	20	29.6	0.7	68	13	-10	16	0	25			1.84	- 1.13	0.36	13	0	4.9	2	5.6	26	35	26	25	5	7	19	7.3	50
SCRANTON	930	983.1	1018.6	35	20	27.6	- 0.1	60	13	- 1	16	0	28	21	74	2.05	- 0.24	0.47	15	0	5.9	2	3.7	25	36	SW	25	1	10	20	7.9	52
WILLIAMSPORT	524	999.7	1019.3	36	21	28.6	- 0.2	55	13	0	16	0	28	20	69	2.49	- 0.18	0.53	16	0	6.0	2	1.8	29	38	27	25	[illegible]	6	22	7.8	
RHODE ISLAND																																
BLOCK ISLAND	110			40	27	33.7	1.6	54	25+	6	17+	0	19			2.18	- 1.66	0.93	11		2.2	1										
PROVIDENCE	51	1015.9	1018.4	41	21	30.8	1.6	58	14	0	17	0	27	21	68	1.85	- 1.96	0.66	11	0	2.2	1	5.3	30	40	29	25	10	4	17	6.5	[illegible]
SOUTH CAROLINA																																
CHARLESTON	40	1018.6	1020.7	65	45	54.8	5.0	79	28	17	17	0	5	48	81	4.13	1.59	2.21	13	3	0.0	0	1.2	31	37Y	NW	5	7	6	18	7.0	56
CHARLESTON C	9			63	48	55.5	4.0	77	28	20	17+	0	2			4.10	1.70	2.05	10		0.0	0			32	N	16					
COLUMBIA	213	1012.5	1020.7	62	40	50.9	4.0	73	28+	12	17	0	10	42	77	7.62	4.60	2.47	13	4	0.0	0	0.7	30	28	31	10	5	8	18	7.0	51
GRNVLLE-SPRTNBRG	957	985.1	1020.4	55	35	44.6	0.9	70	19	7	16	0	15	35	72	6.14	1.86	2.20	13	1	0.0	0	1.2	29	26		13+	8	5	18	6.6	40
SOUTH DAKOTA																																
ABERDEEN	1296	968.2	1018.0	17	- 5	6.3	- 4.5	42	16	-35	15	0	31	- 2	64	0.39	- 0.27	0.18	8	0	8.2	9	4.6	28	33	34	24	7	5	19	6.8	
HURON	1281	969.2	1018.3	21	- 2	9.6	- 2.9	41	16	-29	15	0	31	1	66	0.43	- 0.05	0.18	8	0	5.3	8	3.7	28	45	NW	12	4	7	20	7.4	78
RAPID CITY	3162	900.8	1016.4	30	4	17.3	- 4.7	66	16	-23	28+	0	31	4	60	0.22	- 0.14	0.07	11	0	4.6	1	6.0	33	45	NW	8	4	6	21	7.6	44
SIOUX FALLS	1418	965.1	1019.5	21	- 3	8.9	- 6.3	40	8	-32	15	0	31	2	72	0.18	- 0.44	0.14	3	0	1.8	7	5.2	28	37	32	24+	7	11	13	6.5	
TENNESSEE																																
BRISTOL	1507	964.8	1020.1	52	30	40.8	2.5	76	24	- 2	16	0	19	31	72	4.87	1.18	0.82	19	1	T	T	1.7	29	25	29	25	7	5	17	6.4	
CHATTANOOGA	665	995.3	1020.5	54	33	43.4	1.7	72	24	2	16	0	16	34	74	8.64	3.03	2.51	17	1	T	T	0.6	25	36	NW	25	9	3	19	6.7	[illegible]
KNOXVILLE	980	984.8	1020.7	52	33	42.5	1.1	72	24	1	16	0	15	32	71	7.35	2.47	1.58	17	1	0.4	T	2.6	31	35	W	13	6	7	18	6.9	[illegible]
MEMPHIS	258	1009.8	1020.4	52	33	42.3	0.8	78	24	6	16	0	17	31	66	4.73	- 1.34	1.04	11	4	0.3	T	1.0	15	31	33	24	10	4	17	6.5	53
NASHVILLE	590	998.0	1020.4	53	31	41.8	1.9	78	24	- 1	16	0	22	31	70	5.15	- 0.34	1.35	13	1	0.4	T	2.5	22	38	SW	24	7	9	15	6.6	48
OAK RIDGE R	905			51	31	40.6	0.7	71	24	- 2	16	0	18			7.32	1.38	1.77	17		0.4	T			31Y		25+	9	3	19	5.8	
TEXAS																																
ABILENE	1784	951.9	1018.1	57	31	43.7	- 0.9	82	23	8	15	0	17	27	60	0.29	- 0.59	0.20	5	0	1.0	1	2.9	21	34	[illegible]	17	14	7	10	4.8	64
AMARILLO	3604	889.3	1015.5	53	17	35.7	- 1.0	77	23	1	15+	0	28	14	50	0.21	- 0.44	0.11	4	0	1.6	1	[illegible]	24	40	W	12	17	6	8	4.4	70
AUSTIN	597	995.9	1018.4	62	40	51.0	0.6	88	23	18	5	0	7	41	73	1.48	- 0.87	1.02	9	1	T	T	2.0	3	30	N	24	12	3	16	5.9	52
BROWNSVILLE	19	1016.3	1017.0	75	57	66.0	4.6	87	22	35	6	0	0	57	77	1.30	- 0.05	0.76	8	0	0.0	0	2.4	16	34	[illegible]	9	4	7	20	7.8	36
CORPUS CHRISTI	41	1015.9	1017.5	73	51	61.6	4.2	90	23	29	5	1	4	54	82	1.23	- 0.40	0.71	6	1	0.0	0	3.8	8	38	N	25	5	9	17	7.2	45
DALLAS	481	1001.4	1018.9	57	36	46.3	0.4	83	20	15	15	0	11	33	65	1.13	- 1.19	0.49	6	0	0.5	T	[illegible]	15	31		12	12	6	13	5.4	54
DEL RIO	1026	981.0	1017.6	67	40	53.6	2.3	89	23	17	5	0	7	35	58	0.63	- 0.26	0.41	8	1	T	T	1.9	6	31	33	4	12	8	11	5.5	
EL PASO	3918	882.8	1016.7	60	31	45.2	2.3	75	26	10	5	0	16	21	44	0.44	- 0.02	0.22	4	1	2.5	T	[illegible]	26	36	W	27	15	9	7	4.1	80
FORT WORTH	537	998.3	1019.2	57	33	45.0	- 0.5	82	20	15	5	0	12	35	72	1.09	- 0.95	0.50	6	0	T	T	0.8	25	25	34	4	11	7	13	5.6	
GALVESTON	7			65	53	59.0	4.1	74	24+	29	5	0	3			3.68	0.22	1.30	9		0.0	0			37	NE	15					44
HOUSTON INTERCON	96	1015.2	1018.9	67	46	56.5	5.2	83	27+	22	16+	0	8	47	76	3.30	- 0.63	1.80	10	4	T	T	1.1	11	24	6	25	7	6	18	7.0	44
LUBBOCK	3254	[illegible]	1015.9	58	24	41.3	2.1	83	23	3	5	0	24	18	47	0.16	- 0.52	0.10	3	1	2.2	1	3.6	25	36	27	12	13	9	9	4.6	
MIDLAND	2851	916.7	1016.4	60	28	44.2	0.2	80	23	3	5	0	18	22	50	0.37	- 0.43	0.25	3	0	2.4	1	3.3	22	30	24	12	18	2	11	4.0	
PORT ARTHUR	16	1018.3		65	46	55.3	1.7	77	27+	21	6	0	8	49	84	8.33	4.10	2.85	10	5	0.0	0	2.9	9	31	NE	25	6	6	19	7.1	45
SAN ANGELO	1903	949.9	1017.7	63	32	47.4	0.5	86	23	12	15	0	16	29	56	0.48	- 0.49	0.25	6	0	3.2	1	2.5	24	30	21	17	14	6	11	4.7	
SAN ANTONIO	788	989.8	1018.1	65	40	52.8	0.8	88	23	17	5	0	6	40	70	1.35	- 0.39	0.73	8	0	T	T	2.9	2	29	N	4	8	10	13	6.3	[illegible]
VICTORIA	104	1014.9	1018.1	69	47	57.9	2.5	85	22	24	5	0	5	49	77	1.74	- 0.60	1.45	7	1	0.0	0	1.8	6	39Y	N	4	5	10	16	7.0	
WACO	501	1000.3	1018.8	58	37	47.3	- 0.7	85	23	18	5	0	11	38	76	2.54	0.27	1.05	7	2	T	0	0.9	33	25	35	14	10	6	15	6.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							%
TEXA																																
WICHITA FALLS	994	980.7	1018.3	52	27	39.4	- 3.4	78	12	7	15	0	22	30	75	0.17	- 0.95	0.08	5	0	0.4	T	0.5	3	35	35	4	13	6	12	5.0	
UTAH																																
MILFORD	5028	847.3		42	16	29.1	4.5	57	22	- 9	4	0	30			0.05	- 0.52	0.04	3		1.0	2						15	2	14	5.2	
SALT LAKE CITY	4220	873.0	1021.0	39	21	29.8	2.6	57	23	3	4	0	25	19	66	1.22	- 0.13	0.31	10	0	10.5	5	3.1	18	44	W	23	7	10	14	6.5	56
WENDOVER	4237	872.0	1020.8	39	20	29.2	2.2	60	22	2	4	0	26	18	63	0.21	- 0.11	0.12	4		2.8	2						14	5	12	5.2	
VERMONT																																
BURLINGTON	332	1003.7	1016.9	31	11	21.1	4.9	49	11	-13	6	0	29	9	59	0.93	- 1.02	0.22	14	0	14.3	9	4.0	22	49	SW	25	3	12	16	7.2	49
VIRGINIA																																
LYNCHBURG	916			49	29	39.1	1.5	70	24	- 4	16	0	17			3.25	- 0.04	0.86	15		T	T			28	W	25	8	5	18	6.5	48
NORFOLK	24	1019.3	1020.4	54	39	46.4	5.2	69	20	8	16	0	9	35	66	2.94	- 0.39	1.07	14	1	0.0	0	1.6	30	33	[illegible]	25+	7	8	16	6.8	55
RICHMOND	164	1014.2	1020.8	50	31	40.7	2.0	70	13	3	16	0	18	31	71	1.43	- 2.03	0.27	17	0	T	T	0.8	24	26	NW	25+	8	5	18	6.5	46
ROANOKE	1149	977.0	1019.9	50	29	39.6	1.5	71	24	- 4	16	0	18	27	65	2.49	- 0.63	0.63	13	0	T	0	2.2	29	32	30	7	8	8	15	6.2	
WALLOPS ISLAND	9			48	34	40.9		65	19	8	16	0	15			3.04		1.42	14		T	T			44Y	SE	4					
WASHINGTON																																
OLYMPIA	195	1012.5	1018.0	41	27	34.0	- 4.1	52	20	- 7	27	0	16	32	92	12.43	4.58	3.32	23	0	29.2	20	6.5	21	32	25	23+	3	4	24	8.3	
QUILLAYUTE	179	1009.1	1016.8	41	30	35.7	- 2.9	49	20	11	28	0	17	32	85	12.92	- 2.35	2.92	25	1	13.7	8	1.8	24	28	W	9	2	4	25	8.5	17
SEATTLE-TACOMA	400	1000.3	1017.0	42	32	37.0	- 1.3	53	20	12	27	0	13	29	74	7.24	1.51	2.02	19	0	14.0	11	5.4	19	36	SW	11	3	4	24	8.3	23
SPOKANE	2356	929.6	1016.1	29	16	22.6	- 2.7	47	20	-10	28+	0	29	15	71	1.74	- 0.70	0.59	14	0	17.2	9	7.2	22	59	SW	9	5	8	18	7.5	35
STAMPEDE PASS R	3958	874.7		27	18	22.4	- 1.1	38	15	- 4	27	0	31			27.18	15.15	3.97	25		230.1	201						3	2	26	8.9	
WALLA WALLA U	949			40	28	34.2	1.0	61	20	1	27	0	16			1.20	- 0.69	0.47	11		8.9	6			42	SW	11	1	4	26	8.9	16
YAKIMA	1052	978.3	1018.1	40	19	29.4	1.9	58	20	- 9	28	0	28	19	66	0.88	- 0.31	0.38	10	0	10.1	6	3.7	27	36	30	11	5	9	17	7.1	
WEST INDIES																																
SAN JUAN P.R.	13	1014.9	1017.7	82	73	77.7	3.3	84	31+	70	15+	0	0	64	65	2.76	- 1.94	0.67	22	1	0.0	0	10.4	9	29	E	12	6	23	2	4.8	71
WEST VIRGINIA																																
BECKLEY	2504	928.9	1020.2	45	25	35.3	1.7	67	24	-15	16	0	21	27	75	5.45	1.19	1.05	18	2	2.4	1	4.6	22	29	29	25	7	4	20	6.9	
CHARLESTON	939	984.8	1019.9	48	29	38.7	2.1	74	24	- 5	16	0	18	27	67	5.47	1.15	1.12	19	1	4.0	3	2.7	24	23	24	25	4	7	20	7.5	
ELKINS	1948	946.8		45	23	33.8	1.3	69	13	-12	16	0	23			5.46	1.84	1.03	16		4.1	3						5	8	18	7.3	
HUNTINGTON	827	989.2	1020.3	45	26	35.8	- 0.8	72	24+	- 9	16	0	20	26	71	4.79	1.14	0.89	18	1	6.0	3	2.1	23	23	18	24+	7	4	20	7.2	
PARKERSBURG U	615			44	25	34.4	- 0.2	70	25+	- 6	16	0	21			2.67	- 0.67	0.72	17		5.4	2			37	W	25					46
WISCONSIN																																
GREEN BAY	682	989.5	1016.5	20	1	10.2	- 6.6	40	9+	-28	15	0	31	1	65	0.65	- 0.50	0.21	8	0	8.2	7	9.5	25	42	W	25	9	7	15	6.2	58
LA CROSSE	651	993.2	1019.1	21	1	11.1	- 5.4	45	18	-24	15	0	31	2	66	0.62	- 0.57		8	0	10.2		2.7	26								
MADISON	858	984.4	1017.5	23	3	12.7	- 4.8	45	18	-24	15	0	31	6	71	0.40	- 1.00	0.13	8	0	3.6	5	6.8	25	33	W	24	8	6	17	6.6	47
MILWAUKEE	672	991.2	1017.8	24	8	15.9	- 4.7	45	18	-22	15	0	31	7	65	0.75	- 1.08	0.42	7	0	6.8	3	10.4	26	45	W	24	7	8	16	6.4	50
WYOMING																																
CASPER	5338	831.7	1015.6	29	7	17.7	- 5.7	45	19	-40	14+	0	28	10	70	0.99	0.43	0.53	7	0	19.2	11	14.1	22	51	27	11	6	8	17	6.6	
CHEYENNE	6126	805.6	1014.1	37	14	25.3	- 0.1	52	23	-19	4	0	26	7	48	0.36	- 0.16	0.19	4	0	7.4	4	13.9	28	61	W	11	8	8	15	6.4	58
LANDER	5563	822.9	1015.3	31	8	19.6	0.3	50	19	-21	4	0	29	6	58	1.08	0.62	0.74	6	0	18.7	11	4.0	27	72	SW	11	6	14	11	6.3	69
SHERIDAN	3964	873.7	1016.8	27	1	14.0	- 7.3	56	21	-30	4	0	31	3	61	1.79	1.15	1.01	14	0	25.1	19	5.2	30	43	NW	21	4	9	18	7.4	40

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.
V Sun below horizon January 1-23, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1972

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ALABAMA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
BIRMINGHAM	189	998.0	1020.8	14.4	2.8	8.4	0.4	25.0	24	-13.9	16	0	13	2.8	70	236	108	80	16	4	T	T	0.1	16	14.3	W	13	7	6	18	6.7	44
HUNTSVILLE	190	997.0	1020.6	13.3	1.7	7.4	1.3	24.4	13	-15.6	16	0	14	2.2	71	202	70	65	15	1	8	T	0.3	13	13.0	31	2	8	5	18	6.8	
MOBILE	64	1011.9	1019.7	20.6	8.9	14.7	3.0	25.6	10	- 6.1	16	0	6	10.0	77	151	33	37	15	4	0	0	0.5	8	13.0	34	25	6	6	19	7.1	
MONTGOMERY	56	1013.2	1020.8	17.8	5.0	11.4	2.5	26.1	24	-10.6	16	0	9	6.1	75	161	58	44	13	6	0	0	0.3	1	11.6	N	25	6	7	18	6.6	47
ALASKA												8															8					
ANCHORAGE	35	1009.5	1014.7	-10.6	-18.3	-14.2	- 3.2	2.8	28	-33.3	11	0	31	-17.2	74	14	- 6	5	9	0	244	356	1.4	1	15.6	35	16+	13	1	17	5.7	56
ANNETTE	34	1009.5	1013.7	- 0.6	- 5.6	- 2.9	- 4.3	6.1	15+	-13.9	12	0	27	- 8.3	68	208	- 80	87	15	0	979	406	0.8	6	15.6	15	8	6	5	20	7.0	
BARROW	9	1021.7	1022.2	-23.3	-30.6	-26.8	0.0	- 8.3	19	-40.6	17	0	31			1	- 3	1	3	0	15	152	0.8	2	12.5	29	11	V	V	V		
BARTER ISLAND	12	1019.6	1021.6	-23.3	-30.6	-26.9	0.2	- 5.6	29	-40.0	5	0	31	-31.1	65	8	- 2	6	4	0	130	508	5.2	27	30.0	28	12	X	X	X		
BETHEL	38	1009.8	1015.7	-13.9	-19.4	-16.5	- 0.7	2.8	26+	-34.4	10	0	31	-18.9	81	20	- 9	7	6	0	97	152	1.6	7	17.9	15	30	13	7	11	4.7	
BETTLES	196			-27.8	-35.6	-31.6		- 1.7	28	-52.8	10	0	31			32		13	6	0	518	1524			7.6	22	29+	15	6	10	4.5	
BIG DELTA	386			-22.8	-31.1	-26.9		- 3.9	29+	-47.2	10	0	31			6		4	6	0	112	305			13.0	11	13	11	6	14	5.6	
COLD BAY	29	1007.8	1011.7	0.0	- 5.6	- 2.7	- 0.3	6.7	24	-15.6	23	0	29	- 5.0	82	104	45	47	16	0	396	127	1.3	17	20.6	17	30+	4	4	23	7.9	
FAIRBANKS	133	1003.4	1022.1	-22.8	-31.1	-26.8	- 2.9	- 2.8	29	-45.0	17+	0	31	-31.7	66	19	- 4	7	9	0	320	737	0.2	34	11.2	22	29	10	4	17	6.1	
GULKANA	479			-22.8	-33.9	-28.1		- 0.6	28	-49.4	12+	0	31			20		11	10	0	277	1067	1.7	36	11.6	2	18+	14	2	15	5.4	
HOMER	20	1010.8	1014.6	- 5.6	-12.8	- 9.3		4.4	28	-27.8	10	0	30	-13.3		19	- 33	5	10	0	401	432	1.2	2	13.0	4	16+	9	7	15	5.9	
JUNEAU	4	1012.9	1013.7	- 5.0	-12.8	- 9.0	- 5.2	2.8	15+	-30.0	12	0	30	-13.9	69	95	- 7	24	15	0	1146	787	3.2	10	14.8	11	5	10	3	18	6.5	37
KING SALMON	15	1011.9	1013.8	-10.6	-17.8	-14.1	- 3.7	3.9	25	-36.7	9	0	29	-17.8	73	33	6	8	11	0	297	229	1.4	7	20.6	14	26	9	5	17	6.2	
KOTZEBUE	3	1018.3	1018.9	-16.1	-24.4	-20.2	0.7	0.6	27	-37.2	13	0	31	-23.9	74	13	3	3	9	0	340	914	4.1	10	20.6	11	25	14	2	15	5.5	
MC GRATH	105	1006.1	1019.9	-21.1	-31.7	-26.4	- 3.7	3.3	28+	-50.6	10	0	30			31	- 1	8	12	0	356	965	0.4	24	7.6	19	26	13	3	15	5.5	
NOME	4	1015.6	1016.3	-12.2	-20.0	-16.1	- 0.8	0.6	26+	-35.6	11+	0	31	-20.6	68	13	- 12	5	12	0	269	508	3.2	10	19.7	10	31	13	2	16	5.7	44
ST. PAUL ISLAND	7	1008.5	1009.3	- 0.6	- 6.1	- 3.4	0.3	3.3	25+	-12.8	15	0	31	- 5.0	87	37	- 9	7	19	0	328	254	3.0	11	19.7	26	30	3	6	22	9.3	
SHEMYA	37	997.3	1000.6	1.1	- 2.2	- 0.6	- 0.2	2.8	26+	- 5.6	29	0	27	- 5.0	73	76	12	21	20	0	406	152	2.1	27	38.0	25	3	0	7	24	8.6	
SUMMIT	732	925.2	1021.9	-18.3	-25.0	-21.8		- 2.2	28	-37.8	12+	0	31			29		19	7	0	742	965	5.4	4	14.8	8	8	9	6	16	6.1	
TALKEETNA	105			-11.1	-24.4	-17.8	- 5.2	0.6	29+	-44.4	11+	0	31			44	- 1	23	8	0	699	1067			17.0	4	15	12	3	16	5.6	
UNALAKLEET	5			-14.4	-20.0	-17.2		3.3	26	-36.7	14	0	31			13		5	9	0	127	453			17.9	8	25+	12	4	15	5.5	
YAKUTAT	9	1009.1	1010.4	- 4.4	-13.3	- 9.1	- 6.5	2.8	5	-26.1	23	0	31	-12.2	79	220	- 55	57	18	0	1910	2108	2.2	9	10.3	9	16+	10	5	16	6.1	
ARIZONA																																
FLAGSTAFF	2135	787.0	1020.8	6.1	-10.0	- 2.0	0.6	12.8	22	-17.8	5	0	31	-13.3	49	0	- 46	0	0	0	0	T	0.8	22	11.2	S	4	18	5	8	3.5	
PHOENIX	340	978.0	1017.5	19.4	2.2	10.8	0.9	23.9	15	- 3.3	5	0	7	- 5.0	38	0	- 19	0	0	0	0	0	0.8	11	12.5Y	ENE	15+	20	3	8	3.1	91
TUCSON	788	927.5	1016.6	18.9	1.7	10.2	0.3	25.0	25	- 5.0	4	0	9	- 4.4	42	0	- 21	0	0	0	0	0	1.5	15	14.3	W	2	16	10	5	3.5	90
WINSLOW	1492	852.7	1020.9	10.6	- 6.7	1.9	2.4	21.1	23	-12.2	31+	0	31	-10.0	48	0	- 11	0	0	0	0	0	1.3	22	16.1	20	26	18	4	9	3.7	
YUMA	59	1010.5	1017.9	19.4	3.9	11.6	- 0.3	23.3	23	0.0	6	0	1	- 5.6	34	0	- 10	0	0	0	0	0	2.6	36	16.1	NW	4	20	5	6	3.0	91
ARKANSAS																																
FORT SMITH	136	1002.7	1019.7	10.6	- 2.8	3.8	- 0.5	23.9	19	-13.3	5	0	21	- 2.2	71	17	- 50	8	5	0	8	T	0.6	1	13.9	W	24	11	6	14	5.8	58
LITTLE ROCK	78	1010.2	1019.8	12.2	0.6	6.4	1.7	26.1	24	-10.6	16+	0	15	0.6	71	43	- 89	18	11	1	T	T	0.3	8	15.2	SW	24	9	7	15	6.1	48
CALIFORNIA																																
BAKERSFIELD	145	1004.4	1022.5	9.4	1.1	5.4	- 3.2	15.6	23+	- 4.4	9	0	10	2.8	87	T	- 30	T	0	0	0	0	0.3	2	13.0	12	4	4	9	18	7.2	
BISHOP	1252	876.1		12.2	- 6.1	3.2	0.5	16.1	22+	-12.2	4	0	30			T	- 25	T	0		T	T						17	5	9	3.9	
BLUE CANYON	1609			6.1	- 1.1	2.3	- 0.5	13.9	14	- 8.9	26	0	18			162	-135	71	9		544	1346			14.8	3	3	10	6	15	5.7	
EUREKA U	13			10.0	3.9	7.0	- 1.6	14.4	19+	- 1.7	29	0	6			202	32	66	16		41	25			16.5	N	2	8	4	19	6.6	52
FRESNO	100	1010.8	1022.7	8.3	1.1	4.8	- 3.1	13.9	25+	- 4.4	5	0	9	2.8	90	9	- 42	5	5	0	T	0	0.6	10	10.3	SE	27	4	5	22	8.0	26
LONG BEACH	8	1017.6	1018.9	18.3	5.6	11.9	0.2	26.7	15	1.1	5	0	0	3.3	64	0	- 51	0	0	0	0	0	0.2	35	8.9	7	30	16	7	8	4.4	
LOS ANGELES	30	1014.6	1018.2	17.2	7.2	12.2	- 0.3	26.7	15	2.8	5	0	0	3.9	66	0	- 68	0	0	0	0	0	0.4	26	11.2Y	W	26	14	9	8	4.4	
LOS ANGELES U	82			18.9	7.2	13.1	- 0.2	27.2	15	3.9	9+	0	0			0	- 78	0	0		0	0			8.5	SW	26	16	11	4	3.2	
MT SHASTA R	1080	894.7	1022.0	4.4	- 5.0	- 0.2	- 0.9	11.1	16	-15.6	26	0	25	- 5.0	73	62	-100	24	10		478	457	0.7	34								
OAKLAND	2	1022.0	1022.3	11.7	4.4	8.0	- 0.9	16.7	14	1.1	31+	0	0	3.3	76	26	- 71	10	6	0	0	0	0.4	9	11.2	15	26+	13	6	12	4.9	
RED BLUFF	104	1008.8	1021.8	11.7	0.6	6.2	- 1.3	20.0	14	- 3.9	31	0	19	0.0	72	37	- 72	14	7	0	124	51	0.4	35	17.9	S	22	10	8	13	5.7	66
SACRAMENTO	5	1021.7	1022.4	9.4	1.1	5.0	- 2.3	14.4	22	- 3.9	30	0	13	1.7	82	21	- 60	15	6	0	0	0	0.7	17	16.5	NW	3	6	6	19	7.2	49
SANDBERG R	1377	864.2		8.3	0.0	4.3	- 0.1	14.4	18	-10.0	4	0	15	- 7.8	46	T	- 65	T	0		0	913	3.5	7	21.0	35	23	20	2	9	3.6	
SAN DIEGO	4	1017.3	1018.3	17.8	7.8	12.7	- 0.1	24.4	15	2.8	5	0	0	3.9	60	2	- 49	2	1	0	0	0	1.1	31	9.5	W	28+	12	11	8	4.4	82
SAN FRANCISCO	2	1021.7	1022.2	11.7	3.3	7.6	- 1.7	15.0	21+	0.0	5+	0	2	3.3	79	28	- 74	14	7	1	T	0	0.3	19	11.6	27	25	13	6	12	5.2	
SAN FRANCISCO U	16			12.2	6.1	9.2	- 1.2	16.1	14	3.3	11	0	0			34	- 82	20	7		0	0			15.2	NE	3					68
SANTA MARIA	72			16.1	2.2	9.1	- 1.1	22.8	15	- 3.3	5	0	8			4	- 68	3	2		0	0						16	7	8	3.7	
STOCKTON	7	1022.4	1023.3	8.9	1.1	4.8	- 2.3	14.4	21	- 3.9	5+	0	13	2.2	88	18	- 47	11	7	0	0	0	1.1	16	13.0	16	27	6	3	22	7.8	
COLORADO																																
ALAMOSA	2297	768.7		1.7	-17.8	- 8.1	0.0	10.0	23	-35.6	4	0	31			6	- 1	6	3		175	152						13	13	5	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C	C.	C.	C	C		C				C.	%	Mm	Mm	Mm			Mm	Mm	M p.s.		M p.s							
COLORADO																																
COLORADO SPRINGS	1873	806.3	1015.5	6.7	- 8.9	- 1.1	0.8	16.7	23	-23.9	4	0	27	-12.8	48	7	- 1	4	4	0	132	76	0.8	35	17.4	30	21	12	10	9	5.0	
DENVER	1610	831.0	1012.0	7.8	- 9.4	- 0.8	1.1	17.2	23	-26.7	4	0	28	-10.6	54	9	- 5	5	5	0	277	152	1.5	26	18.8	SW	11+	10	8	13	5.8	65
GRAND JUNCTION	1476	852.7	1020.4	5.6	- 7.8	- 1.1	2.2	14.4	26+	-22.2	4	0	30	-10.0	57	5	- 11	4	4	0	102	76	0.6	2	16.5	W	27	12	6	13	5.3	68
PUEBLO	1428	852.0	1015.4	8.9	-11.1	- 1.2	- 0.1	22.2	23	-25.6	4	0	28	-11.1	54	9	1	6	6	0	165	76	2.3	30	24.6	NW	11	10	12	9	5.2	79
CONNECTICUT																																
BRIDGEPORT	2	1019.0	1019.7	5.0	- 3.9	0.6	1.6	12.2	19	-13.9	17+	0	21	- 5.6	65	57	- 37	18	13	0	58	25	2.3	29	24.6	26	25	7	10	14	6.5	
HARTFORD	52	1011.5	1018.3	2.9	- 7.2	- 2.3	1.1	13.9	13	-18.3	6	0	30	- 7.8	67	51	- 40	11	14	0	74	51	1.6	28	21.9	NW	25	6	8	17	6.9	62
DELAWARE																																
WILMINGTON	23	1017.3	1020.2	6.7	- 2.2	2.3	1.5	18.3	13	-15.0	16	0	20	- 3.2	68	64	- 23	18	14	0	53	51	1.2	29	16.5	32	14	5	8	18	6.9	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1008.1	1020.1	7.2	- 3.3	2.1		19.4	13	-18.9	16	0	22	- 3.3	70	58		16	16	2	T	T	0.8	24	14.9	30	25	8	4	19	6.9	
WASHINGTON NATIONAL	3	1018.0	1020.3	7.8	- 0.6	3.6	0.9	18.3	19	-16.1	16	0	17	- 2.8	66	62	- 15	19	17	2	8	T	1.0	28	13.4	NW	25	8	5	18	6.7	41
FLORIDA																																
APALACHICOLA U	4			18.3	11.1	14.8	1.9	23.3	30+	- 2.8	16	0	2			204	125	79	12	4	0	0			13.0	N	16	4	12	15	6.8	75
DAYTONA BEACH	9	1019.0	1020.5	23.9	13.3	18.6	3.5	28.3	14+	1.1	16	0	0	14.4	81	60	10	20	11	2	0	0	0.5	27	11.6	2	16	4	13	14	7.0	
FORT MYERS	5	1019.3	1019.7	27.2	16.1	21.6	4.1	29.4	24+	6.7	17	0	0	16.1	77	20	- 19	18	6	0	0	0	1.0	10	13.0	1	16	8	15	8	5.4	
JACKSONVILLE	8	1020.0	1021.0	21.7	10.6	16.3	3.1	28.3	11	- 1.7	17	0	2	12.2	82	147	84	60	9	5	0	0	0.4	34	14.3	NW	14	4	7	20	7.4	41
KEY WEST	1	1018.0	1018.5	26.1	21.7	23.9	3.0	28.3	3	16.1	17	0	0	18.9	76	70	31	36	9	2	0	0	3.4	10	17.9	N	15	14	8	9	5.0	88
LAKELAND U	65			25.0	14.4	19.7	3.2	28.3	25+	1.7	16	0	0			31	- 21	18	9		0	0						5	16	10	6.0	62
MIAMI	2	1019.0	1019.3	26.1	20.0	22.8	3.4	28.3	31	13.3	16	0	0	17.8	74	41	- 11	25	8	3	0	0	2.2	8	11.2	34	16+	9	11	11	5.7	
ORLANDO	33	1015.9	1020.3	26.1	15.0	20.5	4.7	30.0	14+	3.3	16	0	0	15.0	77	25	- 26	12	7	1	0	0	0.1	23	11.2	2	16	6	10	15	6.8	
PENSACOLA	34	1015.6	1019.9	19.4	10.0	14.8	2.9	25.6	4	- 6.1	16	0	5	9.4	75	93	- 14	25	12	3	0	0	0.6	8	10.3	2	16+	4	9	18	7.3	
TALLAHASSEE	17	1018.0	1020.4	21.1	8.9	15.0	2.8	27.8	10	- 4.4	7	0	6	10.6	79	166	79	41	12	4	0	0	0.4	12	9.4	1	16	5	7	19	7.2	
TAMPA	6	1019.6	1019.9	25.0	13.9	19.4	3.2	28.3	26	2.2	16	0	0	15.0	79	14	- 40	6	7	1	0	0	1.0	11	8.9	5	16	8	10	13	6.2	60
WEST PALM BEACH	5	1018.6	1019.2	26.7	17.8	22.1	2.7	29.4	31	12.2	16	0	0	17.8	76	63	T	32	8	5	0	0	1.9	11	12.5	4	16	7	13	11	6.2	
GEORGIA																																
ATHENS	244	990.9	1020.4	13.9	3.9	8.9	1.9	20.6	24	-12.2	16	0	10	3.3	72	164	40	66	13	4	T	T	0.6	27	8.9	32	15	8	6	17	6.6	
ATLANTA	308	982.7	1020.1	13.9	2.8	8.2	1.2	21.1	24	-15.0	16	0	9	2.2	72	235	122	76	16	4	T	T	0.5	29	14.3	NW	15	8	4	19	6.9	44
AUGUSTA	41	1015.2	1020.5	17.2	5.0	11.0	2.3	23.9	10	- 9.4	17	0	8	6.1	75	154	78	58	11	3	0	0	0.4	27	9.8	30	2	6	4	21	7.1	
COLUMBUS	117	1006.1		17.2	6.1	11.6	2.8	25.6	10	-10.0	16	0	9	6.7	74	155	52	35	15	2	0	0	0.8	1	11.2	35	25	7	4	20	7.0	
MACON	108	1008.1	1021.3	17.2	5.0	11.1	1.5	23.9	10	-10.0	16	0	8	6.1	76	189	104	74	15	3	0	0	0.4	31	11.2	NW	25	4	8	19	7.4	41
ROME	194			13.9	0.6	7.2	1.6	23.9	13	-15.6	16	0	15			186	46	59	18		T	0										
SAVANNAH	14	1019.0	1020.8	20.0	8.3	14.2	3.2	27.2	13+	- 7.2	17	0	5	8.9	76	101	31	32	13	6	0	0	0.4	26	11.6	W	28+	5	6	20	7.4	39
HAWAII																																
HILO	8	1013.2	1014.3	25.6	17.2	21.2	- 0.4	28.3	13	13.9	11+	0	0	17.2	84	278	- 22	110	22	1	0	0	0.5	15	8.5	SE	23	0	15	16	7.6	27
HONOLULU	2	1013.2	1013.8	25.6	17.2	21.3	- 1.2	27.8	21+	11.7	31	0	0	16.1	75	134	39	121	6	1	0	0	2.2	4	14.3	E	23	8	11	12	6.1	61
KAHULUI	15	1011.5	1013.7	26.7	15.0	20.8	- 1.4	28.9	15+	10.0	31+	0	0	16.1	76	9	- 71	5	6	1	0	0	2.5	5	13.0	E	7	11	11	9	5.2	67
LIHUE	31	1009.5	1014.7	25.0	17.8	21.3	- 0.3	26.7	14	13.3	31	0	0	17.2	79	164	24	151	10	1	0	0	1.3	5	10.7	NE	7	5	13	13	6.6	47
IDAHO																																
BOISE	865	917.7	1020.7	3.3	- 4.4	- 0.6	1.0	9.4	19+	-13.9	28	0	24	- 6.1	69	55	21	13	11	0	127	25	0.3	10	14.8	SW	23+	4	6	21	7.8	36
LEWISTON	431			3.9	- 3.9	0.2	0.9	12.2	20	-16.7	29	0	21			35	7	9	14		152	51			32.2Y		11	3	3	25	8.6	
POCATELLO	1358	862.2	1020.1	- 0.6	- 9.4	- 5.1	0.3	6.1	22+	-23.9	4+	0	27	-10.0	67	37	6	12	13	0	269	102	4.5	23	24.1	W	10	4	12	15	7.3	37
ILLINOIS																																
CAIRO U	96			6.7	- 2.2	2.4	- 0.6	21.7	24	-17.8	16	0	17			68	- 45	43	10		81	51			17.0	SW	24	9	3	19	6.5	41
CHICAGO O HARE	201	992.6	1018.2	- 2.2	-11.7	- 6.9	- 2.6	8.3	18	-27.2	15	0	28	-11.7	69	26	- 21	7	12	0	193	76	3.5	25	20.1	27	25	10	4	17	6.4	
CHICAGO MIDWAY	185	995.3	1018.8	- 1.1	- 9.4	- 5.3	- 1.9	10.0	18	-26.1	15	0	27	-10.6	65	28	- 19	9	11	0	297	102	3.0	24	17.9	SW	24	10	4	17	6.4	55
MOLINE	177	997.3	1020.0	- 2.8	-12.2	- 7.4	- 2.2	12.8	18	-26.1	15	0	31	-13.3	63	30	- 11	11	9	0	300	178	2.2	26	19.7	NW	24	9	5	17	6.3	54
PEORIA	199	994.6	1019.9	- 1.7	-11.7	- 6.8	- 3.3	10.0	18	-27.8	15	0	31	-11.1	72	21	- 27	6	10	0	259	102	1.4	25	16.5	W	24	11	3	17	6.1	52
ROCKFORD	221	990.2	1018.5	- 3.3	-13.3	- 8.3	- 2.8	8.9	18	-28.3	15	0	31	-12.8	69	17	- 34	5	8	0	140	76	2.3	27	17.9	27	24	8	7	16	6.5	
SPRINGFIELD	179	997.0	1020.0	0.6	- 8.9	- 4.2	- 2.2	13.3	24	-24.4	15	0	26	- 8.3	73	26	- 22	10	8	0	206	102	1.5	24	20.1	W	24	14	2	15	5.5	56
INDIANA																																
EVANSVILLE	116	1006.4	1021.0	5.6	- 5.0	0.3	- 0.9	21.7	24	-21.7	16	0	22	- 5.0	68	43	- 58	18	11	0	51	51	0.3	25	21.0	W	24	9	4	18	6.6	53

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
INDIANA																																
FORT WAYNE	241	988.5	1019.9	0.6	- 9.4	- 4.4	- 1.7	13.9	24	-28.3	16	0	28	- 8.9	74	31	- 37	9	11	0	201	51	3.2	25	23.7	W	25	7	8	16	6.5	55
INDIANAPOLIS	241	989.8	1020.2	2.8	- 8.3	- 3.1	- 1.4	17.8	24	-28.9	16	0	25	- 7.8	73	40	- 38	12	13	1	201	102	1.4	24	16.1	W	24	8	6	17	6.5	56
SOUTH BEND	236	989.2	1018.4	- 0.6	- 8.3	- 4.5	- 0.9	8.9	24+	-28.3	16	0	27	- 8.3	74	46	- 10	9	17	0	488	229	3.4	22	16.5	25	25+	3	7	21	7.8	
IOWA																																
BURLINGTON	211			- 1.7	-12.2	- 6.9	- 2.7	15.0	18	-27.2	15	0	31	-11.7	67	18	- 24	7	9	0	239	127	1.6	28	14.3	30	24	10	5	16	6.0	
DES MOINES	286	983.4	1019.9	- 3.3	-13.9	- 8.6	- 1.8	11.7	18	-27.8	15	0	31	-12.8	70	11	- 22	8	5	0	147	127	1.8	27	18.3	NW	24	10	7	14	5.9	53
DUBUQUE	322	977.7		- 5.6	-15.0	-10.3	- 3.2	9.4	18	-30.0	15	0	31			12	- 35	4	7		119	76						8	6	17	6.7	
SIOUX CITY	334	977.7	1019.6	- 3.3	-15.0	- 9.2	- 1.8	8.9	17	-27.8	15	0	31	-15.0	60	9	- 10	7	6	0	145	127	1.3	30	18.8	NW	24	6	11	14	6.7	65
WATERLOO	265	985.8	1019.4	- 6.7	-17.2	-12.1	- 4.3	7.8	18	-30.6	15	0	31	-15.6	73	7	- 23	3	5	0	74	127	2.3	29	17.0	31	24	10	4	17	6.3	
KANSAS																																
CONCORDIA	448	963.8	1018.9	2.2	- 9.4	- 3.8	- 1.3	12.8	18	-22.2	28	0	31	- 8.9	72	6	- 12	6	1	0	71	76	0.6	26	17.4	N	3	10	9	12	5.5	67
DODGE CITY	787	923.8	1017.7	6.1	- 8.9	- 1.7	- 1.2	18.3	12	-22.2	15	0	30	- 9.4	64	4	- 10	3	7	0	56	25	0.6	27	17.0	N	12+	13	5	13	5.3	77
GOODLAND	1114	885.5	1016.5	6.1	-10.6	- 2.2	0.3	17.8	16	-23.3	14	0	31	-10.0	63	8	- 2	5	6	0	140	51	1.8	25	14.8	31	24	9	12	10	5.5	
TOPEKA	267	986.8	1020.0	2.2	- 9.4	- 3.6	- 1.8	15.6	18	-23.3	15	0	30	- 8.9	69	12	- 14	6	5	0	76	25	0.4	29	15.6	NE	3	10	7	14	5.7	62
WICHITA	403	969.2	1018.9	3.3	- 8.9	- 2.8	- 2.8	13.9	12	-21.7	15	0	30	- 7.2	73	4	- 17	2	5	0	43	25	0.1	32	15.2	N	12	12	5	14	5.6	69
KENTUCKY																																
COVINGTON	265	987.1	1019.9	4.4	- 6.1	- 1.0	- 0.9	18.9	24	-25.0	16	0	23	- 6.7	68	50	- 41	13	15	0	41	25	1.7	23	13.9	28	25+	6	4	21	7.2	
LEXINGTON	294	984.1	1020.6	7.2	- 3.3	1.9	0.5	21.7	24	-23.9	16	0	21	- 2.8	74	104	- 21	29	15	2	36	25	1.6	21	12.1	29	24	7	6	18	6.9	
LOUISVILLE	145	1002.0	1020.4	7.2	- 3.3	1.8	0.1	21.1	24	-21.7	16	0	21	- 3.9	70	73	- 31	21	13	0	41	25	1.0	25	20.1	SW	24	7	6	18	6.8	47
LOUISIANA																																
ALEXANDRIA	28	1015.6	1019.9	17.2	5.0	11.2	1.1	26.7	24	- 6.7	17+	0	8			173	38	40	11	7	0	0	0.3	6	10.7	4	15	8	4	19	6.8	
BATON ROUGE	20	1016.6	1019.4	19.4	7.8	13.7	2.1	27.2	13	- 5.6	16	0	7	8.9	75	210	88	50	10	5	T	T	0.9	10	10.3	1	15	7	4	20	7.1	
LAKE CHARLES	3	1018.0	1019.0	18.9	7.8	13.2	1.2	26.1	13	- 3.9	16	0	7	10.0	83	196	84	91	10	8	0	0	1.5	8	11.2	7	25+	7	5	19	7.1	
NEW ORLEANS	1	1018.6		20.6	9.4	14.8	2.2	27.8	13	- 4.4	16	0	4	10.6	79	177	80	64	14	3	0	0	0.8	7	10.7	36	15+	4	9	18	7.0	
SHREVEPORT	77	1009.5	1019.1	15.6	3.9	9.7	1.1	28.9	24	- 8.3	16	0	11	5.0	79	152	30	58	9	3	T	T	0.6	14	9.4	29	4	7	7	17	6.6	48
MAINE																																
CARIBOU	190	989.8		- 6.7	-20.0	-13.2	- 1.3	7.8	14	-35.6	1	0	31			34	- 20	13	17		399	559						7	7	17	7.0	
PORTLAND	13	1014.6	1016.8	0.6	-11.1	- 5.4	0.2	11.1	19	-22.2	6	0	31	-10.0	69	53	- 58	14	13	0	178	152	2.4	29	18.8	NW	25	10	6	15	6.1	49
MARYLAND																																
BALTIMORE	45	1014.9	1020.8	7.2	- 1.1	3.1	1.6	18.9	13	-15.0	16	0	19	- 2.8	67	72	- 15	18	16	2	28	25	1.4	28	17.0	SW	25	8	5	18	6.8	52
MASSACHUSETTS																																
BLUE HILL OBS R	192			2.8	- 6.7	- 1.9	0.9	12.8	19+	-18.9	17	0	27			56	- 58	17	13		157	76			31.3	WNW	25					50
BOSTON	5	1016.6	1017.6	5.0	- 3.9	0.6	1.7	15.0	14	-15.0	17+	0	22	- 6.1	64	52	- 48	13	14	0	198	76	3.4	28	21.9	W	25	7	10	14	6.4	55
WORCESTER	301	979.3	1017.7	1.7	- 7.8	- 3.1	1.3	13.9	14+	-20.6	17	0	28	- 8.9	67	59	- 35	16	12	0	170	127	3.3	27	17.4	28	25	6	11	14	6.5	
MICHIGAN																																
ALPENA	210	987.8	1014.1	- 1.7	-13.3	- 7.5	- 0.7	7.2	9	-23.9	15	0	31	-11.7	71	12	- 38	3	9	0	218	279	2.8	24	15.2	E	24	0	14	17	7.9	43
DETROIT	189			0.0	- 7.2	- 3.6	- 0.8	10.0	22	-22.2	16	0	29	- 9.4	66	28	- 24	6	16	0	274		3.7	24	14.8	27	25					
DETROIT METRO	193	992.6	1017.6	0.0	- 8.9	- 4.6	- 1.3	11.7	22	-25.6	16	0	30	- 8.9	72	33	- 17	7	14	0	201	76	3.1	25	18.3	W	25	3	8	20	7.6	44
FLINT	235	987.5	1016.6	- 1.1	-10.0	- 5.7	- 1.5	7.2	22	-25.6	16	0	31	-10.6	69	31	- 12	6	11	0	371	178	3.8	25	15.6	29	25	4	9	18	7.5	
GRAND RAPIDS	239	986.5	1017.0	- 1.7	-10.6	- 6.2	- 1.8	6.7	10	-26.7	16	0	31	-10.0	72	32	- 17	7	17	0	574	152	3.4	23	26.8	SW	24	1	5	25	8.6	31
HOUGHTON LAKE	350	971.2	1015.0	- 3.3	-13.9	- 8.7	- 1.6	6.7	10	-25.6	15	0	31	-11.7	75	21	- 17	4	15	0	381	229	3.4	25	17.9	26	25+	1	7	23	8.3	
LANSING	256	984.1	1017.2	- 1.1	-11.1	- 5.9	- 1.7	8.3	22	-27.2	15	0	31	- 9.4	75	38	- 11	7	18	0	429	152	3.5	24	19.2	W	25	2	10	19	7.6	31
MARQUETTE U	206			- 5.0	-15.0	-10.2	- 3.2	3.9	9+	-28.3	15	0	31			39	- 9	21	12		574	660			17.0	SW	16	5	7	19	7.4	48
MUSKEGON	191	993.2	1017.1	- 1.7	- 9.4	- 5.7	- 2.3	6.1	10	-24.4	15	0	27	-10.0	72	56	3	10	23	0	991	203	3.0	24	17.0	29	25	0	4	27	9.4	
SAULT STE MARIE	220	984.1	1012.0	- 5.0	-15.0	-10.1	- 1.1	2.2	18+	-30.6	16	0	31	-12.8	83	104	51	31	26	0	1351	686	1.7	25	17.4	W	19	0	5	26	9.2	30
MINNESOTA																																
DULUTH	435	960.0	1015.0	-12.2	-23.3	-17.7	- 4.7	1.1	8	-39.4	15	0	31	-21.7	70	58	29	24	15	0	785	660	3.6	27	25.5	NW	24	10	7	14	6.1	43
INTERNATIONAL FALLS	359	968.8	1015.1	-14.4	-27.2	-20.9	- 4.9	2.2	17	-42.8	15	0	31	-23.9	73	19	- 2	7	12	0	353	483	2.5	26	12.5	30	6	10	5	16	6.3	
MINNEAPOLIS	254	985.8	1018.0	- 9.4	-20.0	-14.7	- 3.8	2.8	8	-33.9	15	0	31	-19.4	64	21	4	10	10	0	310	406	2.4	26	17.4	S	12	9	9	13	6.1	61
ROCHESTER	395	967.5	1018.0	- 8.9	-19.4	-14.2	- 3.9	2.8	18+	-34.4	15	0	31	-17.2	74	18	- 5	8	10	0	279	229	3.6	27	19.2	30	24	10	7	14	5.9	
ST CLOUD	315	977.3	1018.0	-10.6	-21.1	-15.8	- 3.7	2.2	8	-35.0	15	0	31			14	- 4	5	9		211	254						8	9	14	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
MISSISSIPPI	M	Mb.	Mb	C.	C	C	C	C		C				C.	%	Mm.	Mm	Mm			Mm	Mm	M p s		M p s							%
JACKSON	94	1008.1	1020.0	17.2	4.4	10.8	2.0	27.8	24+	- 9.4	16	0	8	6.7	78	151	19	42	12	4	0	0	0.4	17	12.5	N	24+	8	8	15	6.4	57
MERIDIAN	88	1009.1	1020.5	17.2	4.4	10.9	1.9	26.7	24+	-10.0	16	0	8	6.1	77	280	161	115	15	4	0	0	0.1	27	11.6	23	25	7	5	19	7.0	
MISSOURI																																
COLUMBIA REGIONAL	270	986.5	1020.1	2.8	- 7.2	- 2.0	- 0.5	16.7	18	-23.3	15	0	24	- 7.2	71	22	- 21	11	5	0	102	51	0.6	24	15.2	SW	18	12	2	17	5.7	60
KANSAS CITY	226	991.5	1019.5	2.8	- 7.8	- 2.6	- 2.4	17.2	18	-22.8	15	0	27	- 7.8	69	14	- 22	6	5	0	76	25	0.5	26	12.9		17+	11	7	13	5.5	58
ST JOSEPH	247			1.7	-10.0	- 4.4	- 1.8	13.9	18	-26.1	15	0	31	-10.0	67	10	- 21		5				0.4	27	14.3	30	24	14	7	10	5.0	
ST LOUIS	163	999.3	1020.4	4.4	- 7.2	- 1.2	- 1.1	21.1	24	-21.7	15	0	26	- 6.1	74	20	- 31	10	5	0	104	51	0.8	23	16.5	W	24	12	5	14	5.5	62
SPRINGFIELD	386	972.6	1019.3	6.7	- 6.1	0.5	- 0.4	16.7	20+	-19.4	15	0	23	- 5.0	69	11	- 38	6	8	0	5	T	1.1	17	13.4	N	13	17	6	15	6.0	53
MONTANA																																
BILLINGS	1087	887.2	1016.8	- 5.0	-15.6	-10.4	- 5.6	7.2	17	-32.8	27+	0	31	-16.7	63	60	46	36	10	0	701	457	3.5	27	21.9	NW	21	1	9	21	8.0	31
GLASGOW	696	930.9	1018.4	- 9.4	-21.1	-15.4	- 3.1	6.7	16	-37.2	14	0	31	-20.6	65	14	2	3	16	0	323	229	1.6	32	16.5	27	9	2	8	21	8.0	
GREAT FALLS	1116	883.8	1017.6	- 5.0	-16.1	-10.7	- 5.2	7.8	16	-35.6	27	0	30	-16.7	65	37	22	10	15	0	472	152	5.3	24	21.0	SW	5	3	7	21	7.8	31
HAVRE	788	920.8	1018.3	-10.6	-21.1	-15.8	- 5.8	6.1	15	-37.8	28+	0	31	-19.4	69	22	9	6	12	0	361	254	2.7	25	20.1	SW	15	1	8	22	8.5	41
HELENA	1167	877.1	1018.8	- 4.4	-17.2	-10.9	- 3.4	7.8	20	-34.4	28	0	31	-17.2	62	28	17	5	18	0	378	229	2.8	28	22.4	NW	11	3	6	22	8.1	24
KALISPELL	904	908.2	1017.5	- 4.4	-15.6	-10.1	- 3.3	6.1	16	-32.2	14	0	30	-13.3	75	40	5	9	18	0	622	381	0.1	1	19.7	1	25	0	6	25	9.1	
MILES CITY	801	919.7	1017.7	- 7.2	-17.8	-12.7	- 4.1	5.6	16	-32.8	27+	0	30	-16.7	73	38	26		19	0	376		2.5	29								
MISSOULA	972	901.8	1017.9	- 1.7	-10.6	- 6.3	0.8	8.9	16	-27.8	28	0	30	- 9.4	78	52	28	10	23	0	572	279	0.8	29	21.5	NW	11	3	1	27	8.7	23
NEBRASKA																																
GRAND ISLAND	561	949.9	1018.9	0.6	-11.7	- 5.7	- 0.4	15.6	17	-25.6	28	0	31	-12.2	63	5	- 11	3	4	0	89	51	1.3	29	13.4	32	24	8	9	14	6.2	
LINCOLN U	351			0.0	-10.6	- 5.2	- 1.3	10.0	18+	-23.3	14	0	29			5	- 18	2	4		69	51			15.2	SW	11	11	7	13	5.6	61
NORFOLK	471			- 2.2	-14.4	- 8.3	- 1.3	11.7	17	-30.0	28	0	31			11	- 9	10	3		117	102						8	4	10	6.5	
NORTH PLATTE	846	916.4	1018.4	1.7	-14.4	- 6.3	- 1.9	16.1	17	-27.2	14	0	31	-12.8	65	4	- 7	3	4	0	66	51	0.9	30	15.2	SW	11	8	6	17	6.7	53
OMAHA	298	982.4	1019.5	- 0.6	-12.8	- 6.7	- 1.3	10.6	18	-26.1	15	0	31	-12.2	66	10	- 11	7	5	0	48	25	0.8	33	21.0	NW	24	9	8	14	6.0	66
SCOTTSBLUFF	1206	875.7	1016.2	4.4	-12.2	- 3.9	- 0.2	14.4	20+	-27.8	4	0	29	-11.7	61	9	2	3	5	0	104	25	2.9	30	21.5	29	9	7	7	17	7.0	
VALENTINE	789			- 0.6	-16.7	- 8.6	- 1.9	15.6	17+	-30.6	14	0	31			10	T	8	6		145	127			20.6	NW	12	5	8	18	7.5	52
NEVADA																																
ELKO	1539	845.9	1022.5	0.6	-10.0	- 4.8	0.4	9.4	22	-26.7	4	0	27	-10.6	65	10	- 20	3	11	0	28	76	1.8	25	14.3	25	23	12	3	16	5.8	
ELY	1906	808.7	1021.1	4.4	-12.8	- 4.4	0.7	10.6	22+	-28.3	4	0	31	-11.7	65	4	- 15	3	5	0	84	51	2.3	21	13.4	S	25+	13	8	10	4.8	84
LAS VEGAS	659	942.8	1021.1	12.8	- 1.1	5.7	- 0.4	16.7	13	- 7.8	5	0	23	- 9.4	36	0	- 13	0	0	0	0	0	1.3	27	17.0	N	23	22	3	6	3.1	92
RENO	1342	868.6	1023.6	2.8	-10.0	- 3.6	- 2.7	15.6	22	-22.2	4	0	26	- 9.4	67	9	- 21	9	3	0	145	178	0.4	23	13.4	W	23	10	6	15	5.9	92
WINNEMUCCA	1311	870.6	1022.0	4.4	- 9.4	- 2.4	0.2	14.4	22	-23.3	4	0	25	- 7.2	71	4	- 23	2	6	0	20	76	1.7	22	14.8	W	23	11	5	15	6.0	55
NEW HAMPSHIRE																																
CONCORD	104	1004.1	1017.3	1.7	-12.8	- 5.6	0.4	12.2	13	-28.3	6	0	31	-11.7	63	37	- 45	9	10	0	274	356	2.1	29	19.7	NW	19	11	6	14	5.8	54
MT WASHINGTON OBS	1909			-10.0	-19.4	-14.6	- 0.3	2.8	13	-35.6	16	0	31			178	40	35	24	1	988	457			56.8Y	W	25	4	6	21	7.8	35
NEW JERSEY																																
ATLANTIC CITY	20	1017.3	1019.7	6.1	- 3.9	1.1	- 0.5	15.6	13	-14.4	29+	0	22	- 3.9	71	74	- 16	27	13	0	74	76	1.9	28	16.5	29	25	6	6	19	7.1	41
ATLANTIC CITY U	3			6.7	0.6	3.7	1.4	15.6	19	-11.7	16	0	13			83	- 13	33	12						20.6	WNW	25					
NEWARK	2	1018.3	1019.4	6.7	- 2.8	1.9	1.7	18.3	14	-13.9	16	0	21	- 3.9	68	57	- 27	15	11	0	79	51	2.2	27	15.6	24	25	4	10	17	7.1	
TRENTON U	17			5.6	- 1.7	2.0	1.4	17.2	14+	-15.0	16	0	18			57	- 21	14	14		89	76			17.9	NW	25	9	8	14	5.9	55
NEW MEXICO																																
ALBUQUERQUE	1619	837.5	1017.7	10.6	- 6.1	2.3	0.6	20.0	26+	-16.1	5	0	31	-10.0	45	3	- 7	3	1	0	30	25	0.7	34	20.1	E	3	15	10	6	3.6	90
CLAYTON	1515			11.1	- 8.3	1.3	0.7	21.1	23	-19.4	4	0	28			2	- 7	1	2		38	25						15	5	11	4.5	
ROSWELL	1101			15.0	- 5.6	4.8	1.5	28.3	23	-18.9	5	0	27			5	- 7	5	2		48	51			14.8	NW	24					85
NEW YORK																																
ALBANY	84	1007.8	1018.8	1.1	-11.1	- 5.1	0.1	11.1	13	-25.6	6	0	30	-10.0	69	31	- 32	10	15	0	216	152	1.7	26	17.9	NW	25	5	6	20	7.4	46
BINGHAMTON	485	957.0	1018.0	0.0	- 8.3	- 4.1	0.5	12.2	13	-20.0	16+	0	29	- 9.4	67	33	- 31	6	14	0	279	102	2.8	24	18.3	W	25	0	14	17	7.7	43
BUFFALO	215	990.5	1017.2	1.1	- 8.3	- 3.6	0.6	15.6	13	-19.4	15	0	30	- 7.8	76	55	- 17	8	22	0	701	254	4.7	25	22.8	SW	17	2	5	24	8.5	35
NEW YORK U	40	1015.6	1018.9	5.6	- 2.2	1.7	1.1	16.7	14+	-15.0	16	0	18	- 5.0	66	61	- 23	16	13	0	71	51	2.2	26	17.0	SW	25					50
NEW YORK KENNEDY	4	1018.6	1019.5	6.1	- 1.1	2.4	2.6	14.4	19	-12.8	16	0	18	- 3.3	68	44	- 38	12	11	0	43	51	2.8	28	20.6	26	25	6	8	17	6.8	
NEW YORK LA GUARDIA	3	1018.0	1019.1	5.0	- 2.2	1.2	0.3	16.7	14	-14.4	16	0	18	- 6.1	62	51	- 33	12	13	0	56	51	2.6	29	20.1	W	25	4	12	15	6.7	
ROCHESTER	167	996.3	1017.4	1.7	- 8.3	- 3.3	0.4	19.4	13	-18.3	16+	0	30	- 8.3	69	38	- 23	11	15	0	460	203	3.7	24	22.4	SW	25	2	9	20	7.6	51
SYRACUSE	125	1002.0	1017.4	1.7	- 7.8	- 3.1	1.3	14.4	13	-19.4	6	0	28	- 8.3	68	28	- 52	7	17	0	462	178	2.4	23	23.2	W	25	5	9	17	7.2	45

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
NORTH CAROLINA																																
ASHEVILLE	652	942.8	1020.2	12.2	- 1.1	5.6	2.5	19.4	21	-17.8	16	0	19	0.6	77	91	- 15	28	16	1	T	0	0.8	34	13.4	34	25	9	6	16	6.5	61
CAPE HATTERAS R	2	1020.0	1020.5	15.6	7.2	11.6	3.5	23.9	4	- 8.9	16	0	3	8.3	81	163	64	77	14	2	T	T	1.5	32	14.3	20	13+	7	6	18	7.1	31
CHARLOTTE	224	992.6	1020.5	12.2	1.7	7.0	1.1	20.0	19	-14.4	16	0	13	1.1	71	114	24	45	13	1	0	0	0.4	25	9.4	NW	25	6	8	17	6.9	43
GREENSBORO	273	988.2	1020.5	11.7	0.0	5.7	1.4	19.4	13	-18.3	16	0	15	0.0	71	66	- 20	15	13	1	T	T	0.8	24	14.8	NW	25	8	8	15	6.8	49
RALEIGH	132	1004.7	1021.1	12.8	1.1	7.1	1.7	21.7	24	-15.6	16	0	15	0.6	67	50	- 32	22	11	1	0	0	0.6	24	9.8	34	16+	7	8	16	6.7	55
WILMINGTON	9	1019.6	1020.9	16.7	5.6	11.1	2.3	25.0	28+	- 9.4	17	0	5	6.7	80	108	36	24	15	1	0	0	0.7	31	14.3	NW	5	8	6	17	7.0	39
NORTH DAKOTA																																
BISMARCK	502	953.9	1017.5	- 9.4	-21.1	-15.1	- 2.8	6.1	16	-37.2	15	0	31	-19.4	65	17	6	4	11	0	338	229	2.8	30	16.5	W	9	4	7	20	7.6	42
FARGO	273	982.4	1017.4	-10.6	-22.2	-16.3	- 2.6	3.3	16	-36.1	15	0	31	-21.1	66	24	10	14	10	0	419	254	1.7	28	21.5	NW	24	3	10	18	7.1	54
WILLISTON	579	944.8	1017.6	-10.0	-21.7	-15.9	- 2.8	7.2	17	-35.6	26	0	31	-18.9	77	11	- 3	2	11	0	165	178	3.1	29	18.8	W	8	3	9	19	7.5	45
OHIO																																
AKRON	368	972.6	1018.9	1.7	- 8.3	- 3.5	- 1.4	15.6	24+	-26.1	16	0	29	- 7.8	73	34	- 39	8	11	0	191	51	2.7	23	11.2	28	25+	3	12	16	7.2	
CINCINNATI ABBE OB	232			4.4	- 5.6	- 0.4	- 1.4	20.0	24	-25.0	16	0	20			51	- 42	14	14		36	25			11.6	W	25					35
CLEVELAND	237	988.8	1019.0	2.2	- 7.2	- 2.6	- 0.6	14.4	24	-25.6	16	0	29	- 7.2	73	50	- 18	11	16	0	381	102	3.6	22	17.9	W	25	4	6	21	7.7	48
COLUMBUS	247	988.8	1020.1	2.8	- 7.2	- 2.1	- 0.9	16.1	13	-24.4	16	0	25	- 7.8	68	36	- 45	9	12	0	147	76	1.7	23	17.0	W	24	5	9	17	6.8	39
DAYTON	305	982.4	1019.8	2.8	- 7.2	- 2.5	- 1.2	15.6	24	-26.7	16	0	22	- 7.2	71	37	- 43	10	13	1	168	76	2.2	23	16.1	W	24	9	8	14	6.3	53
MANSFIELD	395			2.9	- 7.2	- 2.3	- 0.5	17.2	24	-26.1	16	0	26	- 6.7	74	24	- 58	5	11	1	180	76	3.7	22	15.6	26	25	4	10	17	7.2	
TOLEDO	204	992.2	1018.4	0.0	-10.0	- 4.8	- 1.6	12.8	22	-27.2	16	0	30	-10.0	68	36	- 23	7	12	1	257	76	3.0	24	21.0	W	24	4	10	17	7.5	43
YOUNGSTOWN	359	974.6	1018.8	1.7	- 7.8	- 3.1	- 0.4	16.7	13	-23.9	16	0	31	- 7.8	73	34	- 46	6	15	0	229	51	2.8	23	18.8	25	25	4	7	20	7.6	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1019.1	7.8	- 4.4	1.6	- 1.2	20.0	19+	-17.2	15	0	21	- 3.9	71	5	- 28	2	4	0	20	25	0.2	14	15.2	N	3	12	8	11	5.2	62
TULSA	198	994.2	1019.3	7.2	- 3.9	1.6	- 0.8	22.2	19	-16.7	15	0	21	- 4.4	70	4	- 39	2	5	0	20	25	0.1	16	14.3	SW	18	7	11	13	6.1	50
OREGON																																
ASTORIA	2	1018.0	1018.9	7.2	1.7	4.4	- 0.4	11.7	20	- 7.2	29+	0	12	2.2	85	270	- 28	54	23	0	43	25	2.3	22	14.8	29	23	4	4	23	8.3	
BURNS U	1265	873.4	1020.7	0.6	-10.6	- 4.8	- 0.8	8.3	19	-23.9	29	0	28	- 8.3	75	53	11	27	9		297	254	1.9	25				7	5	19	6.9	
EUGENE	109	1007.5	1021.4	6.7	- 0.6	3.3	- 0.7	12.2	19	- 9.4	29	0	18	0.6	84	317	156	108	18	1	30	25	2.4	19	15.6	22	23	3	5	23	8.0	
MEACHAM	1234	874.7	1019.1	- 0.6	- 7.8	- 4.3	- 1.0	6.7	20+	-23.9	27	0	29			93	- 13	16	20		732	1118			19.7	25	11					
MEDFORD	396	973.6	1022.6	6.1	- 1.1	2.2	0.3	13.3	20	- 7.2	3	0	22	- 1.7	80	90	10	48	12	0	8	T	0.3	31	8.9	23	23+	4	4	23	7.7	
PENDLETON	452	963.8	1018.7	5.0	- 2.8	1.1	1.0	15.0	20+	-21.1	27	0	15	- 4.4	68	24	- 12	8	11	0	91	51	3.0	25	20.6	26	11	2	3	26	8.7	
PORTLAND	6	1018.6	1019.9	7.2	1.1	4.0	0.4	14.4	18	- 7.8	29+	0	13	0.0	76	145	9	44	19	0	10	T	2.4	18	15.2	E	27+	4	2	25	8.1	24
SALEM	60	1013.2	1020.5	7.2	0.0	3.5	- 0.1	12.8	18	-10.6	29	0	14	0.6	81	203	33	78	17	0	10	T	2.8	20	13.4	18	25	4	2	25	8.1	
SEXTON SUMMIT R	1169	885.5	1021.4	2.8	- 2.8	0.2	- 1.0	10.6	1	- 9.4	29	0	22			255	113	88	17		559	610			21.0	23	20					
PACIFIC AREA																																
GUAM TAGUAC R	110	997.6	1010.2	28.9	21.1	24.8	- 0.8	29.4	27+	16.1	14+	0	0	21.7	84	123	6	53	19	0	0	0	4.3	8	10.7	ESE	6					78
JOHNSTON	2	1010.5	1011.2	26.1	23.3	24.8	- 0.3	27.8	12	20.0	28	0	0	20.6	78	84	- 15	51	9	0	0	0	5.6	9	20.6	NE	28	8	10	13	6.0	64
KOROR R	29	1004.4	1008.1	30.6	23.9	27.1	0.3	32.2	18	22.2	30+	1	0	22.9	86	274	- 24	44	25	1	0	0	1.3	8	10.3	SE	26	0	1	30	9.8	39
KWAJALEIN	2	1007.5	1008.2	29.4	25.0	27.1	0.4	30.0	30+	22.8	1	0	0	22.8	80	255	163	102	13	0	0	0	5.3	7	11.2	11	12	3	6	22	9.1	
MAJURO	3	1008.1	1008.4	28.9	24.4	26.8	0.0	29.4	31+	22.2	12+	0	0	22.8	79	243	66	81	18	0	0	0	4.4	7	12.1	E	28+	2	5	24	8.8	60
PAGO PAGO	4	1007.8	1008.0	29.4	23.3	26.2		30.6	26+	20.6	29+	0	0	22.8	82	451		101	28	2	0	0	1.7	1	12.1	NW	20+	1	7	23	9.5	35
PONAPE R	37	1002.0	1007.1	30.0	23.9	27.0	0.1	31.1	26+	21.1	13	0	0	22.8	81	267	- 14	87	20	1	0	0	2.7	10	8.9	NE	1	0	5	26	9.0	46
TRUK MOEN ISLAND	2	1007.8	1008.0	29.4	25.0	27.2	0.1	31.1	20+	22.8	14+	0	0	22.8	78	250	36	98	16	2	0	0	4.3	6	10.3	NE	19	0	2	29	9.1	70
WAKE	3	1012.9	1013.1	26.1	21.1	23.6	- 1.6	27.8	9	20.0	31+	0	0	17.2	70	44	15	17	13	0	0	0	6.6	5	14.3	NE	25+	13	12	6	4.7	66
YAP R	13			30.0	23.3	26.8	- 0.2	31.1	14	21.7	11	0	0			153	- 47	50	17	1	0	0			10.3	SE	5	0	9	22	8.5	72
PENNSYLVANIA																																
ALLENTOWN	118	1005.1	1019.7	3.3	- 5.6	- 0.9	0.8	16.7	13	-16.7	16	0	25	- 5.6	74	71	- 10	23	15	0	114	76	2.2	28	15.6	28	25	7	9	16	6.8	
ERIE	223	990.5	1018.3	1.1	- 6.7	- 2.8	0.8	15.6	13	-18.9	15	0	31	- 7.2	74	49	- 19	12	21	0	693	152	3.8	23	15.6	26	25	1	9	21	8.2	
HARRISBURG	103	1006.8	1019.8	5.0	- 2.2	1.4	1.8	18.9	13	-13.3	16	0	22			67	- 3	24	15	0	66	51	1.1	29	18.8	W	25	7	11	13	6.6	46
PHILADELPHIA	2	1019.0	1020.0	6.1	- 2.2	1.7	1.6	17.2	13	-14.4	16	0	21	- 3.9	69	59	- 25	14	13	0	81	76	1.6	28	18.8	W	25	6	6	19	7.0	55
PITTSBURGH	347	973.9	1019.3	3.9	- 6.7	- 1.3	0.4	20.0	13	-23.3	16	0	25			47	- 29	9	13	0	124	51	2.5	26	15.6	26	25	5	7	19	7.3	50
SCRANTON	283	983.1	1018.6	1.7	- 6.7	- 2.4	- 0.1	15.6	13	-18.3	16	0	28	- 6.1	74	52	- 6	12	15	0	150	51	1.7	25	16.1	SW	25	1	10	20	7.9	52
WILLIAMSPORT	160	999.7	1019.3	2.2	- 6.1	- 1.9	- 0.1	12.8	13	-17.8	16	0	29	- 6.7	69	63	- 5	13	16	0	152	51	0.8	29	17.0	27	25	3	6	22	7.8	
RHODE ISLAND																																
BLOCK ISLAND	34			4.4	- 2.8	0.9	0.9	12.2	25+	-14.4	17+	0	19			55	- 42	24	11		56	25										
PROVIDENCE	16	1015.9	1018.4	5.0	- 6.1	- 0.7	0.9	14.4	14	-17.8	17	0	27	- 6.1	68	47	- 50	17	11	0	56	25	2.4	30	17.9	29	25	10	4	17	6.5	51

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No of days: Max 32.2 °C or above	No of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No of days: .25 mm or more	No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb	C.	C	C.	C	C		C				C.	%	Mm	Mm.	Mm			Mm	Mm	M p.s		M p s							%
SOUTH CAROLINA																																
CHARLESTON	12	1018.6	1020.7	18.3	7.2	12.7	2.8	26.1	28	- 8.3	17	0	5	8.9	81	105	40	56	13	2	0	0	0.5	31	16.5Y	NW	5	7	6	18	7.0	58
CHARLESTON U	3			17.2	8.9	13.1	2.2	25.0	28	- 6.7	17+	0	2			104	43	52	10		0	0			14.3	N	16					
COLUMBIA	65	1012.5	1020.7	16.7	4.4	10.5	2.2	22.8	28+	-11.1	17	0	10	5.6	77	194	117	63	13	4	0	0	0.3	30	12.5	31	10	5	8	18	7.0	51
GRNVLLE-SPRTNBRG	292	985.1	1020.4	12.8	1.7	7.0	0.5	21.1	19	-13.9	16	0	15	1.7	72	156	47	56	13	1	0	0	0.5	29	11.6	S	13+	8	5	18	6.6	40
SOUTH DAKOTA																																
ABERDEEN	395	968.2	1018.0	- 8.3	-20.6	-14.3	- 2.5	5.6	16	-37.2	15	0	31	-18.9	64	10	- 7	5	8	0	208	229	2.1	28	14.8	34	24	7	5	19	6.8	
HURON	390	969.2	1018.3	- 6.1	-18.9	-12.4	- 1.6	5.0	16	-33.9	15	0	31	-17.2	66	11	- 1	5	8	0	135	203	1.7	28	20.1	NW	12	4	7	20	7.4	78
RAPID CITY	964	900.8	1016.4	- 1.1	-15.6	- 8.2	- 2.6	18.9	16	-30.6	28+	0	31	-15.6	60	6	- 4	2	11	0	66	25	2.2	33	20.1	NW	8	4	6	21	7.6	44
SIOUX FALLS	432	965.1	1019.5	- 6.1	-19.4	-12.8	- 3.5	4.4	8	-35.6	15	0	31	-16.7	72	5	- 11	4	3	0	46	178	2.3	28	16.5	32	24+	7	11	13	6.5	
TENNESSEE																																
BRISTOL	459	964.8	1020.1	11.1	- 1.1	4.9	1.4	25.6	24	-18.3	16	0	19	- 0.6	72	124	30	21	19	1	T	T	0.8	29	11.2	29	25	9	5	17	6.4	
CHATTANOOGA	203	995.3	1020.5	12.2	0.6	6.3	0.9	22.2	24	-16.7	16	0	16	1.1	74	219	77	64	17	1	T	T	0.3	25	16.1	NW	25	9	3	19	6.7	43
KNOXVILLE	299	984.8	1020.7	11.1	0.6	5.8	0.6	22.2	24	-17.2	16	0	15	0.0	71	187	63	40	17	1	10	T	1.2	31	15.6	W	13	6	7	18	6.9	31
MEMPHIS	79	1009.8	1020.4	11.1	0.6	5.7	0.4	25.6	24	-14.4	16	0	17	- 0.6	66	120	- 34	26	11	4	8	T	0.4	15	13.9	33	24	10	4	17	6.5	53
NASHVILLE	180	998.0	1020.4	11.7	- 0.6	5.4	1.1	25.6	24	-18.3	16	0	22	- 0.6	70	131	- 9	34	13	1	10	T	1.1	22	17.0	SW	24	7	9	15	6.6	49
OAK RIDGE R	276			10.6	- 0.6	4.8	0.4	21.7	24	-18.9	16	0	19			186	35	45	17		10	T			13.9Y		25+	9	3	19	6.8	
TEXAS																																
ABILENE	544	953.9	1018.1	13.9	- 0.6	6.5	- 0.5	27.8	23	-13.3	15	0	17	- 2.8	60	7	- 15	5	5	0	25	25	1.3	21	15.2	S	17	14	7	10	4.8	64
AMARILLO	1098	889.3	1015.5	11.7	- 7.2	2.1	- 0.6	25.0	23	-17.2	15+	0	28	-10.0	50	5	- 11	3	4	0	41	25	1.9	24	17.9	W	12	17	6	8	4.4	70
AUSTIN	182	995.9	1018.4	16.7	4.4	10.6	0.3	31.1	23	- 7.9	5	0	7	5.0	73	38	- 22	26	9	1	T	T	0.9	3	13.4	N	24	12	3	16	5.9	52
BROWNSVILLE	6	1016.3	1017.0	23.9	13.9	18.9	2.6	30.6	22	1.7	6	0	0	13.9	77	33	- 1	19	8	0	0	0	1.1	16	15.2	S	9	4	7	20	7.8	36
CORPUS CHRISTI	12	1015.9	1017.5	22.8	10.6	16.4	2.3	32.2	23	- 1.7	8	1	4	12.2	82	31	- 10	18	6	1	0	0	1.7	8	17.0	N	25	5	9	17	7.2	45
DALLAS	147	1001.4	1018.9	13.9	2.2	7.9	0.2	28.3	20	- 9.4	15	0	11	0.6	65	29	- 30	12	6	0	13	T	0.4	15	13.9	S	12	12	6	13	5.4	54
DEL RIO	313	981.0	1017.6	19.4	4.4	12.0	1.3	31.7	23	- 8.3	5	0	7	1.7	59	16	- 7	10	8	1	T	T	0.8	6	13.9	33	4	12	8	11	5.5	
EL PASO	1194	882.8	1016.7	15.6	- 0.6	7.3	1.3	23.9	26	-12.2	5	0	16	- 6.1	44	11	- 1	6	4	1	64	T	1.0	26	16.1	W	27	15	9	7	4.1	88
FORT WORTH	164	998.3	1019.2	13.9	0.6	7.2	- 0.3	27.8	20	- 9.4	5	0	12	1.7	72	28	- 24	13	6	0	T	T	0.4	25	11.2	34	4	11	7	13	5.6	
GALVESTON U	2			18.3	11.7	15.0	2.3	23.3	24+	- 1.7	5	0	3			93	6	33	9		0	0			16.5	NE	15					44
HOUSTON INTERCON	29	1015.2	1018.9	19.4	7.8	13.6	2.9	28.3	27+	- 5.6	16+	0	8	8.3	76	84	- 16	46	10	4	T	T	0.5	11	10.7	6	25	7	6	18	7.0	44
LUBBOCK	992	902.8	1015.9	14.4	- 4.4	5.2	1.2	28.3	23	-16.1	5	0	24	- 7.8	47	4	- 13	3	3	0	56	25	1.6	25	16.1	27	12	13	9	9	4.6	
MIDLAND	869	916.7	1016.4	15.6	- 2.2	6.8	0.1	26.7	23	-16.1	5	0	18	- 5.6	50	9	- 11	6	3	0	61	25	1.5	22	13.4	24	12	18	2	11	4.0	
PORT ARTHUR	5	1018.3		18.3	7.8	12.9	0.9	25.0	27+	- 6.1	6	0	8	9.4	84	212	104	72	10	5	0	0	1.3	9	13.9	NE	25	6	6	19	7.1	45
SAN ANGELO	580	949.9	1017.7	17.2	0.0	8.6	0.3	30.0	23	-11.1	15	0	16	- 1.7	56	12	- 12	6	6	0	84	76	1.1	24	13.4	21	17	14	6	11	4.7	
SAN ANTONIO	240	989.8	1018.1	18.3	4.4	11.6	0.4	31.1	23	- 8.3	5	0	6	4.4	70	34	- 10	19	8	0	T	T	1.3	2	13.0	N	4	8	10	13	6.2	49
VICTORIA	32	1013.9	1018.1	20.6	8.3	14.4	1.4	29.4	22	- 4.4	5	0	5	9.4	77	44	- 15	37	7	1	0	0	0.8	6	17.4Y	N	4	5	10	16	7.0	
WACO	153	1000.3	1018.8	14.4	2.9	8.5	- 0.4	29.4	23	- 7.8	5	0	11	3.3	76	65	7	27	7	2	T	0	0.4	33	11.2	35	14	10	6	15	6.0	
WICHITA FALLS	303	980.7	1018.3	11.1	- 2.8	4.1	- 1.9	28.6	12	-13.9	15	0	22	- 1.1	75	4	- 24	2	5	0	10	T	0.2	3	15.6	35	4	13	6	12	5.0	
UTAH																																
MILFORD	1533	847.3		5.6	- 8.9	- 1.6	2.5	13.9	22	-22.8	4	0	30			1	- 13	1	3		25	51						15	2	14	5.2	
SALT LAKE CITY	1286	873.0	1021.0	3.9	- 6.1	- 1.2	1.4	13.9	23	-16.1	4	0	25	- 7.2	66	31	- 3	8	10	0	267	127	1.4	18	15.2	W	23	7	10	14	6.5	56
WENDOVER	1291	872.0	1020.8	3.9	- 6.7	- 1.6	1.2	15.6	22	-16.7	4	0	26	- 7.8	63	5	- 3	3	4		71	51						14	5	12	5.2	
VERMONT																																
BURLINGTON	101	1003.7	1016.9	- 0.6	-11.7	- 6.1	2.7	9.4	11	-25.0	6	0	29	-12.8	59	24	- 26	6	14	0	363	229	1.8	22	21.9	SW	25	3	12	16	7.2	45
VIRGINIA																																
LYNCHBURG	279			9.4	- 1.7	3.9	0.9	21.1	24	-20.0	16	0	17			83	- 1	22	15		T	T			12.5	W	25	8	5	18	6.5	48
NORFOLK	7	1019.3	1020.4	12.2	3.9	8.0	2.9	20.6	20	-13.3	16	0	9	1.7	66	75	- 10	27	14	1	0	0	0.7	30	14.8	S	25+	7	8	16	6.8	55
RICHMOND	50	1014.2	1020.8	10.0	- 0.6	4.8	1.1	21.1	13	-16.1	16	0	18	- 0.6	71	36	- 52	7	17	0	T	T	0.4	24	11.6	NW	25+	8	5	18	6.5	46
ROANOKE	350	977.0	1019.9	10.0	- 1.7	4.2	0.8	21.7	24	-20.0	16	0	18	- 2.8	65	63	- 16	16	13	0	T	0	1.0	29	14.3	30	7	8	8	15	6.2	
WALLOPS ISLAND	3			8.9	1.1	4.9		18.3	19	-13.3	16	0	15			77		36	14		T	T			19.7Y	SE	4					
WASHINGTON																																
OLYMPIA	59	1010.5	1018.0	5.0	- 2.8	1.1	- 2.3	11.1	20	-21.7	27	0	16	0.0	92	316	116	84	23	0	742	508	2.9	21	14.3	25	23+	3	4	24	8.3	
QUILLAYUTE	55	1009.1	1016.8	5.0	- 1.1	2.1	- 1.6	9.4	20	-11.7	28	0	17	0.0	85	328	- 60	74	25	1	348	203	0.8	24	12.5	W	9	2	4	25	8.5	17
SEATTLE-TACOMA	122	1000.3	1017.0	5.6	0.0	2.8	- 0.7	11.7	20	-11.1	27	0	13	- 1.7	74	184	38	51	19	0	356	279	2.4	19	16.1	SW	11	3	4	24	8.3	23
SPOKANE	718	929.6	1016.1	- 1.7	- 8.9	- 5.2	- 1.5	8.3	20	-23.3	28+	0	29	- 9.4	71	44	- 18	15	14	0	437	229	3.2	22	26.4	SW	9	5	8	18	7.5	35
STAMPEDE PASS R	1206	874.7		- 2.8	- 7.8	- 5.3	- 0.6	3.3	15	-20.0	27	0	31			690	385	101	25		5845	5105						3	2	26	8.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
WALLA WALLA U	289			4.4	- 2.2	1.2	0.6	16.1	20	-17.2	27	0	16			30	- 18	12	11		226	152			18.8	SW	11	1	4	26	8.9	16
YAKIMA	321	978.3	1018.1	4.4	- 7.2	- 1.4	1.1	14.4	20	-22.8	28	0	28	- 7.2	66	22	- 8	10	10	0	257	152	1.7	27	16.1	30	11	5	9	17	7.1	
WEST INDIES																																
SAN JUAN P.R.	4	1014.9	1017.7	27.8	22.8	25.4	1.8	28.9	31+	21.1	15+	0	0	17.8	65	70	- 49	17	22	1	0	0	4.6	9	13.0	E	12	6	23	2	4.8	71
WEST VIRGINIA																																
BECKLEY	763	928.9	1020.2	7.2	- 3.9	1.8	0.9	19.4	24	-26.1	16	0	21	- 2.8	75	138	30	27	18	2	61	25	2.1	22	13.0	29	25	7	4	20	6.9	
CHARLESTON	286	984.8	1019.9	8.9	- 1.7	3.7	1.2	23.3	24	-20.6	16	0	18	- 2.8	67	139	29	28	19	1	102	76	1.2	24	10.3	24	25	4	7	20	7.5	
ELKINS	594	946.8		7.2	- 5.0	1.0	0.7	20.6	13	-24.4	16	0	23			139	47	26	16		104	76						5	8	18	7.3	
HUNTINGTON	252	989.2	1020.3	7.2	- 3.3	2.1	- 0.4	22.2	24+	-22.8	16	0	20	- 3.3	71	122	29	23	18	1	152	76	0.9	23	10.3	18	24+	7	4	20	7.2	
PARKERSBURG U	187			6.7	- 3.9	1.3	- 0.1	21.1	25+	-21.1	16	0	21			68	- 17	18	17		137	51			16.5	W	25					46
WISCONSIN																																
GREEN BAY	208	989.5	1016.5	- 6.7	-17.2	-12.1	- 3.7	4.4	9+	-33.3	15	0	31	-17.2	65	17	- 13	5	8	0	208	178	4.2	25	18.8	W	25	9	7	15	6.2	58
LA CROSSE	198	993.2	1019.1	- 6.1	-17.2	-11.6	- 3.0	7.2	18	-31.1	15	0	31	-16.7	66	16	- 14		8	0	259		1.2	26								
MADISON	262	984.4	1017.5	- 5.0	-16.1	-10.7	- 2.7	7.2	18	-31.1	15	0	31	-14.4	71	10	- 25	3	8	0	91	127	3.0	25	14.8	W	24	8	6	17	6.6	47
MILWAUKEE	205	991.2	1017.8	- 4.4	-13.3	- 8.9	- 2.6	7.2	18	-30.0	15	0	31	-13.9	65	19	- 27	11	7	0	173	76	4.6	26	20.1	W	24	7	8	16	6.4	50
WYOMING																																
CASPER	1627	831.7	1015.6	- 1.7	-13.9	- 7.9	- 3.2	7.2	19	-40.0	14+	0	28	-12.2	70	25	11	13	7	0	488	279	6.3	22	22.8	27	11	6	8	17	6.6	
CHEYENNE	1867	805.6	1014.1	2.8	-10.0	- 3.7	- 0.1	11.1	23	-28.3	4	0	26	-13.9	48	9	- 4	5	4	0	188	102	6.2	28	27.3	W	11	8	8	15	6.4	58
LANDER	1696	822.9	1015.3	- 0.6	-13.3	- 6.9	0.2	10.0	19	-29.4	4	0	29	-14.4	58	27	16	19	6	0	475	279	1.8	27	32.2	SW	11	6	14	11	6.3	69
SHERIDAN	1208	873.7	1016.8	- 2.8	-17.2	-10.0	- 4.1	13.3	21	-34.4	4	0	31	-16.1	61	45	29	26	14	0	638	483	2.3	30	19.2	NW	21	4	9	18	7.4	40

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.
V Sun below horizon January 1-23, inclusive.
X Sun below horizon January 1-17, inclusive.

HEATING DEGREE DAYS

(Base 65°F.)

JANUARY 1972

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	548	1333	1602
HUNTSVILLE	606	1559	1922
MOBILE	244	592	1007
MONTGOMERY	391	994	1468
ALASKA			
ANCHORAGE	1814	6880	6429
ANNETTE	1181	4371	3930
BARROW	2523	11144	11028
BARTER ISLAND	2529	11121	10796
BETHEL	1947	7501	7570
BETTLES	2785	10096	
BIG DELTA	2530	9066	
COLD BAY	1165	5590	5389
FAIRBANKS	2524	8799	8794
GULKANA	2596	9342	
HOMER	1538	6204	
JUNEAU	1519	5712	5140
KING SALMON	1806	6654	6552
KOTZEBUE	2154	8735	8846
MC GRATH	2500	8699	8680
NOME	1923	7935	7918
ST. PAUL ISLAND	1205	6109	6006
SHEMYA	1052	5398	5300
SUMMIT	2240	9046	
TALKEETNA	2013	7690	6925
UNALAKLEET	1985	7921	
YAKUTAT	1527	6008	5124
ARIZONA			
FLAGSTAFF	1126	4599	3982
PHOENIX	414	1133	1145
TUCSON	444	1361	1133
WINSLOW	911	3003	3024
YUMA	372	1018	830
ARKANSAS			
FORT SMITH	804	1865	2074
LITTLE ROCK	659	1577	2073
CALIFORNIA			
BAKERSFIELD	717	1822	1367
BISHOP	841	2952	2537
BLUE CANYON	889	3435	2761
EUREKA U	624	2834	2573
FRESNO	750	2080	1561
LONG BEACH	354	934	871
LOS ANGELES	339	985	906
LOS ANGELES U	288	904	708
MT SHASTA R	1031	3694	3169
OAKLAND	566	1854	1592
RED BLUFF	672	1974	1531
SACRAMENTO	731	1991	1647
SANDBERG R	773	2799	2181
SAN DIEGO	310	874	745
SAN FRANCISCO	594	1975	1638
SAN FRANCISCO U	506	1930	1648
SANTA MARIA	510	2036	1554
STOCKTON	751	2001	1658
COLORADO			
ALAMOSA	1467	5259	5043
COLORADO SPRINGS	1080	3757	3607
DENVER	1063	3629	3546
GRAND JUNCTION	1076	3595	3451
PUEBLO	1081	3326	3201
CONNECTICUT			
BRIDGEPORT	983	2620	3053
HARTFORD	1140	3170	3516
DELAWARE			
WILMINGTON	889	2294	2816
DIST.OF COLUMBIA			
WASHINGTON DULLES	901	2408	
WASHINGTON NATIONAL	815	2003	2474
FLORIDA			
APALACHICOLA U	215	447	835
DAYTONA BEACH	85	175	534
FORT MYERS	19	25	279
JACKSONVILLE	159	401	798
KEY WEST	0	0	68
LAKELAND U	71	123	416
MIAMI	2	2	139
ORLANDO	51	86	490
PENSACOLA	234	548	967
TALLAHASSEE	219	587	961
TAMPA	62	116	433
WEST PALM BEACH	4	4	158
GEORGIA			
ATHENS	519	1348	1806
ATLANTA	559	1421	1824
AUGUSTA	406	1080	1512
COLUMBUS	371	947	1515
MACON	403	1021	1375
ROME	616	1585	2070
SAVANNAH	256	689	1167
IDAHO			
BOISE	1047	3587	3469
LEWISTON	1007	3434	3278
POCATELLO	1300	4663	4055
ILLINOIS			
CAIRO U	881	1951	2360
CHICAGO O HARE	1405	3274	3748
CHICAGO MIDWAY	1311	3074	3482
MOLINE	1434	3509	3712
PEORIA	1402	3368	3509
ROCKFORD	1483	3608	3920
SPRINGFIELD	1253	2911	3217
INDIANA			
EVANSVILLE	1000	2380	2743
FORT WAYNE	1269	3165	3588
INDIANAPOLIS	1186	2829	3293
SOUTH BEND	1269	3163	3612
IOWA			
BURLINGTON	1403	3401	3577
DES MOINES	1495	3675	3937
DUBUQUE	1594	4008	4262
SIOUX CITY	1530	4011	4028
WATERLOO	1694	4414	4262
KANSAS			
CONCORDIA	1229	3209	3224
DODGE CITY	1111	3029	2940
GOODLAND	1138	3484	3517
TOPEKA	1216	2939	3101
WICHITA	1171	2942	2808
KENTUCKY			
COVINGTON	1073	2612	3053
LEXINGTON	909	2113	2750
LOUISVILLE	914	2139	2731
LOUISIANA			
ALEXANDRIA	411	995	1231
BATON ROUGE	284	679	1025
LAKE CHARLES	297	650	951
NEW ORLEANS	245	600	896
SHREVEPORT	499	1096	1373
MAINE			
CARIBOU	1759	5556	5480
PORTLAND	1322	3915	4129
MARYLAND			
BALTIMORE	841	2184	2738
MASSACHUSETTS			
BLUE HILL OBS R	1122	3246	3464
BOSTON	985	2726	3059
WORCESTER	1189	3488	3854
MICHIGAN			
ALPENA	1433	4219	4610
DETROIT	1219	3021	3454
DETROIT METRO	1272	3341	3620
FLINT	1328	3528	3806
GRAND RAPIDS	1365	3547	3885
HOUGHTON LAKE	1502	4286	4574
LANSING	1348	3593	3835
MARQUETTE U	1586	4446	4522
MUSKEGON	1333	3584	3619
SAULT STE MARIE	1582	4934	4903
MINNESOTA			
DULUTH	2012	5712	5599
INTERNATIONAL FALLS	2195	6285	6126
MINNEAPOLIS	1844	4859	4846
ROCHESTER	1810	4705	4755
ST CLOUD	1907	5231	5116
MISSISSIPPI			
JACKSON	431	1013	1398
MERIDIAN	418	1038	1481
MISSOURI			
COLUMBIA REGIONAL	1129	2676	2999
KANSAS CITY	1163	2712	2808
ST JOSEPH	1263	3218	3270
ST LOUIS	1081	2550	2900
SPRINGFIELD	988	2413	2718
MONTANA			
BILLINGS	1601	4863	4022
GLASGOW	1883	5461	5237
GREAT FALLS	1616	4918	4321
HAVRE	1906	5665	4998
HELENA	1628	5362	4690
KALISPELL	1581	5353	4785
MILES CITY	1732	5150	4460
MISSOULA	1371	4830	4804
NEBRASKA			
GRAND ISLAND	1335	3582	3815
LINCOLN U	1306	3357	3411
NORFOLK	1481	4052	4038
NORTH PLATTE	1368	4048	3891
OMAHA	1392	3541	3670
SCOTTSBLUFF	1237	3933	3832
VALENTINE	1500	4344	4253
NEVADA			
ELKO	1284	4660	4264
ELY	1257	4813	4328
LAS VEGAS	697	2049	1770
RENO	1216	4093	3724
WINNEMUCCA	1151	4208	3919
NEW HAMPSHIRE			
CONCORD	1327	4118	4158
MT WASHINGTON OBS	1838	7404	7709
NEW JERSEY			
ATLANTIC CITY	958	2523	2655
ATLANTIC CITY U	812	2174	2502
NEWARK	909	2310	2856
TRENTON U	907	2349	2810
NEW MEXICO			
ALBUQUERQUE	889	2940	2681
CLAYTON	946	3089	2966
ROSWELL	750	2253	2439
NEW YORK			
ALBANY	1298	3701	3879
BINGHAMTON	1243	3735	4030
BUFFALO	1218	3289	3826
NEW YORK U	920	2379	2691
NEW YORK KENNEDY	881	2192	2810
NEW YORK LA GUARDIA	945	2451	2638
ROCHESTER	1200	3358	3687
SYRACUSE	1189	3425	3749
NORTH CAROLINA			
ASHEVILLE	704	1945	2670
CAPE HATTERAS R	379	952	1452
CHARLOTTE	625	1635	1950
GREENSBORO	696	1830	2300
RALEIGH	623	1639	2076
WILMINGTON	404	1009	1432
NORTH DAKOTA			
BISMARCK	1868	5534	5115
FARGO	1931	5482	5323
WILLISTON	1913	5693	5329
OHIO			
AKRON	1214	3187	3420
CINCINNATI ABBE OB	1044	2484	2805
CLEVELAND	1160	2945	3397
COLUMBUS	1133	2922	3278
DAYTON	1155	2769	3232
MANSFIELD	1143	2944	3283
TOLEDO	1283	3367	3669
YOUNGSTOWN	1186	3211	3601
OKLAHOMA			
OKLAHOMA CITY	923	2247	2311
TULSA	932	2144	2378
OREGON			
ASTORIA	768	2916	2854
BURNS U	1287	4581	4000
EUGENE	834	3009	2670
MEACHAM	1258	4832	4294
MEDFORD	891	3038	2917
PENDLETON	955	3086	3073
PORTLAND	793	2676	2659
SALEM	821	2900	2662
SEXTON SUMMIT R	1008	3878	3274
PENNSYLVANIA			
ALLENTOWN	1064	2911	3297
ERIE	1172	3256	3733
HARRISBURG	940	2531	3046
PHILADELPHIA	920	2311	2950
PITTSBURGH	1093	2861	3397
SCRANTON	1152	3266	3607
WILLIAMSPORT	1122	3066	3407
RHODE ISLAND			
BLOCK ISLAND	962	2591	2917
PROVIDENCE	1054	2942	3177
SOUTH CAROLINA			
CHARLESTON	317	811	1299
CHARLESTON U	290	711	1112
COLUMBIA	429	1088	1576
GRNVLLE-SPRTNBRG	625	1642	1878
SOUTH DAKOTA			
ABERDEEN	1821	5190	4941
HURON	1714	4875	4768
RAPID CITY	1473	4556	4082
SIOUX FALLS	1737	4779	4551
TENNESSEE			
BRISTOL	743	1927	2516
CHATTANOOGA	661	1680	2049
KNOXVILLE	692	1691	2147
MEMPHIS	698	1587	2022
NASHVILLE	713	1697	2193
OAK RIDGE R	748	1898	2312
TEXAS			
ABILENE	651	1543	1693
AMARILLO	900	2684	2467
AUSTIN	434	892	1112
BROWNSVILLE	112	195	420
CORPUS CHRISTI	188	351	631
DALLAS	577	1239	1508
DEL RIO	350	763	1081
EL PASO	607	1755	1831
FORT WORTH	615	1293	1539
GALVESTON U	210	432	758
HOUSTON INTERCON	315	712	1075
LUBBOCK	728	2012	2249
MIDLAND	639	1639	1711
PORT ARTHUR	317	730	942
SAN ANGELO	539	1334	1489
SAN ANTONIO	382	778	1026
VICTORIA	270	520	770
WACO	543	1144	1305
WICHITA FALLS	787	1791	1810
UTAH			
MILFORD	1107	4071	3802
SALT LAKE CITY	1085	3814	3603
WENDOVER	1103	3859	3511
VERMONT			
BURLINGTON	1357	4085	4592
VIRGINIA			
LYNCHBURG	796	2078	2485
NORFOLK	572	1383	1980
RICHMOND	748	1866	2344
ROANOKE	780	2107	2488
WALLOPS ISLAND	741	1756	
WASHINGTON			
OLYMPIA	954	3432	2982
QUILLAYUTE	903	3521	3158
SEATTLE-TACOMA	863	3018	2882
SPOKANE	1308	4419	3887
STAMPEDE PASS R	1313	5310	5131
WALLA WALLA U	949	2967	2907
YAKIMA	1096	3936	3636
WEST VIRGINIA			
BECKLEY	916	2596	3131
CHARLESTON	809	2022	2653
ELKINS	961	2753	3298
HUNTINGTON	899	2199	2641
PARKERSBURG U	941	2338	2777
WISCONSIN			
GREEN BAY	1694	4450	4487
LA CROSSE	1668	4240	4388
MADISON	1616	4153	4446
MILWAUKEE	1518	3923	4239
WYOMING			
CASPER	1461	4824	4139
CHEYENNE	1226	4256	4056
LANDER	1404	4996	4520
SHERIDAN	1577	5116	4317

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

JANUARY 1972

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	4	4	
HUNTSVILLE	0	0	
MOBILE	47	47	
MONTGOMERY	11	11	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	0	0	
TUCSON	0	0	
WINSLOW	0	0	
YUMA	0	0	
ARKANSAS			
FORT SMITH	0	0	
LITTLE ROCK	2	2	
CALIFORNIA			
BAKERSFIELD	0	0	
BISHOP	0	0	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	0	0	
LONG BEACH	0	0	
LOS ANGELES	0	0	
LOS ANGELES U	0	0	
MT SHASTA R	0	0	
OAKLAND	0	0	
RED BLUFF	0	0	
SACRAMENTO	0	0	
SANDBERG R	0	0	
SAN DIEGO	0	0	
SAN FRANCISCO	0	0	
SAN FRANCISCO U	0	0	
SANTA MARIA	0	0	
STOCKTON	0	0	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	0	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	0	0	
CONNECTICUT			
BRIDGEPORT	0	0	
HARTFORD	0	0	
DELAWARE			
WILMINGTON	0	0	
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	0	
WASHINGTON NATIONAL	0	0	
FLORIDA			
APALACHICOLA U	24	24	
DAYTONA BEACH	107	107	
FORT MYERS	210	210	
JACKSONVILLE	54	54	
KEY WEST	314	314	
LAKELAND U	151	151	
MIAMI	262	262	
ORLANDO	181	181	
PENSACOLA	43	43	
TALLAHASSEE	40	40	
TAMPA	131	131	
WEST PALM BEACH	223	223	
GEORGIA			
ATHENS	0	0	
ATLANTA	0	0	
AUGUSTA	3	3	
COLUMBUS	6	6	
MACON	2	2	
ROME	0	0	
SAVANNAH	28	28	
HAWAII			
HILO	163	163	
HONOLULU	178	178	
KAHULUI	149	149	
LIHUE	174	174	
IDAHO			
BOISE	0	0	
LEWISTON	0	0	
POCATELLO	0	0	
ILLINOIS			
CAIRO U	0	0	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	0	0	
MOLINE	0	0	
PEORIA	0	0	
ROCKFORD	0	0	
SPRINGFIELD	0	0	
INDIANA			
EVANSVILLE	0	0	
FORT WAYNE	0	0	
INDIANAPOLIS	0	0	
SOUTH BEND	0	0	
IOWA			
BURLINGTON	0	0	
DES MOINES	0	0	
DUBUQUE	0	0	
SIOUX CITY	0	0	
WATERLOO	0	0	
KANSAS			
CONCORDIA	0	0	
DODGE CITY	0	0	
GOODLAND	0	0	
TOPEKA	0	0	
WICHITA	0	0	
KENTUCKY			
COVINGTON	0	0	
LEXINGTON	0	0	
LOUISVILLE	0	0	
LOUISIANA			
ALEXANDRIA	21	21	
BATON ROUGE	31	31	
LAKE CHARLES	20	20	
NEW ORLEANS	50	50	
SHREVEPORT	22	22	
MAINE			
CARIBOU	0	0	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	0	0	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	0	0	
DETROIT METRO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	0	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	0	0	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	20	20	
MERIDIAN	8	8	
MISSOURI			
COLUMBIA REGIONAL	0	0	
KANSAS CITY	0	0	
ST JOSEPH	0	0	
ST LOUIS	0	0	
SPRINGFIELD	0	0	
MONTANA			
BILLINGS	0	0	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	0	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	0	0	
NEBRASKA			
GRAND ISLAND	0	0	
LINCOLN U	0	0	
NORFOLK	0	0	
NEBRASKA			
NORTH PLATTE	0	0	
OMAHA	0	0	
SCOTTSBLUFF	0	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	0	0	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	0	0	
NEWARK	0	0	
TRENTON U	0	0	
NEW MEXICO			
ALBUQUERQUE	0	0	
CLAYTON	0	0	
ROSWELL	0	0	
NEW YORK			
ALBANY	0	0	
BINGHAMTON	0	0	
BUFFALO	0	0	
NEW YORK U	0	0	
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	0	0	
SYRACUSE	0	0	
NORTH CAROLINA			
ASHEVILLE	0	0	
CAPE HATTERAS R	7	7	
CHARLOTTE	0	0	
GREENSBORO	0	0	
RALEIGH	0	0	
WILMINGTON	5	5	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI ABBE OB	0	0	
CLEVELAND	0	0	
COLUMBUS	0	0	
DAYTON	0	0	
MANSFIELD	0	0	
TOLEDO	0	0	
YOUNGSTOWN	0	0	
OKLAHOMA			
OKLAHOMA CITY	0	0	
TULSA	0	0	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	0	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	370	370	
JOHNSTON	366	366	
KOROR R	499	499	
KWAJALEIN	497	497	
MAJURO	480	480	
PAGO PAGO	446	446	
PONAPE R	492	492	
TRUK MOEN ISLAND	500	500	
WAKE	302	302	
YAP R	478	478	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	0	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	0	0	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	0	0	
SOUTH CAROLINA			
CHARLESTON	7	7	
CHARLESTON U	6	6	
COLUMBIA	1	1	
GRNVLLE-SPRTNBRG	0	0	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	0	0	
KNOXVILLE	0	0	
MEMPHIS	0	0	
NASHVILLE	0	0	
OAK RIDGE R	0	0	
TEXAS			
ABILENE	0	0	
AMARILLO	0	0	
AUSTIN	6	6	
BROWNSVILLE	148	148	
CORPUS CHRISTI	93	93	
DALLAS	6	6	
DEL RIO	3	3	
EL PASO	0	0	
FORT WORTH	2	2	
GALVESTON U	30	30	
HOUSTON INTERCON	58	58	
LUBBOCK	0	0	
MIDLAND	0	0	
PORT ARTHUR	21	21	
SAN ANGELO	0	0	
SAN ANTONIO	11	11	
VICTORIA	58	58	
WACO	3	3	
WICHITA FALLS	0	0	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	0	0	
RICHMOND	0	0	
ROANOKE	0	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE-TACOMA	0	0	
SPOKANE	0	0	
STAMPEDE PASS R	0	0	
WALLA WALLA U	0	0	
YAKIMA	0	0	
WEST INDIES			
SAN JUAN P.R.	400	400	
WEST VIRGINIA			
BECKLEY	0	0	
CHARLESTON	0	0	
ELKINS	0	0	
HUNTINGTON	0	0	
PARKERSBURG U	0	0	
WISCONSIN			
GREEN BAY	0	0	
LA CROSSE	0	0	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JANUARY 1972

STATE	TORNADOES					HAIL STORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	4	3	4	90	6							4																4	
Alaska												5								4									
Arizona*																													
Arkansas*																													
California												4	6																
Colorado										1	25+	6																	
Connecticut										1	7	5																	
Delaware												3																	
Florida	3	3		5	4																								
Georgia	15	4	1	35	6			?	?			4				3												5	4
Hawaii*																													
Idaho											5	6								4						2	2	4	
Illinois																							?	4					
Indiana																							?	4					
Iowa												5														2			
Kansas*																													
Kentucky												4				4						?	?	?					
Louisiana											1	4																	
Maine											3	5				2													
Maryland												3														1	1		
Massachusetts											11	5																	
Michigan											3	5											1						
Minnesota																		1	1	4									
Mississippi	7	2		14	6											4												?	
Missouri*																													
Montana												6																	
Nebraska*																													
Nevada*																													
New Hampshire												5				2													
New Jersey										1	1	4																	
New Mexico												3																	
New York										3	?	6																	
North Carolina								2		3	3	5				4								4				5	5
North Dakota																				?									
Ohio											?	4																	
Oklahoma																										1		?	
Oregon											4	5	4													6	2	7	7
Pacific Area																											?	4	?
Pennsylvania											7	5																	
Puerto Rico*																													
Rhode Island												5																	
South Carolina	3	2		3	6																					1			
South Dakota*																													
Tennessee								?																					
Texas	1	1			4																								
Utah												4								?									
Vermont												5																	
U. S. Virgin Is.*																													
Virginia*																													
Washington										2	6	6	4							6	5							6	4
West Virginia												3																	
Wisconsin*																													
Wyoming												6																	

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5 Million
7	$5 Million to $50 Million
8	$50 Million to $500 Million
9	$500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JANUARY 1972

Elmer R. Nelson, Office of Hydrology

The most significant flooding during January occurred in Oregon in the Willamette and Coastal Basins. Maximum record crests were observed in the Oregon Coastal Basins on the Nehalem River. Near record stages were reached on the Trask, Nestucca, Siletz, Alsea, and Siuslaw Rivers. Major flood crests were reached on the uncontrolled tributaries of the Willamette River. Crest stages on some of the streams were greater than those likely to occur on the average of once in 50 years. The total flood losses were estimated at nearly $17 million. At least 6 persons lost their lives.

Record flooding occurred in the Chehalis-Skookumchuck Basin in Washington. The crest at Centralia, Wash., was 1.5 feet higher than the major flood of January 1971. The total damage was estimated at $3.5 million.

HUDSON BAY DRAINAGE

Red River of the North Basin -- Precipitation amounts during January averaged near or a little above normal over the Red River of the North Basin, ranging from 0.15 inch to near 1.50 inches. Above normal amounts occurred in the upper basin and along the Minnesota tributaries of the lower basin. Snow cover at the close of the month ranged from 9 to 19 inches over the upper basin, 10 to 15 inches on the Minnesota side of the lower basin, and 2 to 5 inches on the North Dakota side of the lower basin.

Precipitation was near normal over the Souris Basin. However, above normal amounts were reported along the lower Des Lacs River in the Turtle Mountains. Snow cover at the close of the month ranged from 1 to 17 inches with most measurements in the 3- to 5-inch range. The Turtle Mountain area reported 17 inches. Water content of the snow averaged around 0.50 inch, except in the Turtle Mountains where up to 4 inches was reported.

Although the streams were ice covered, near or slightly above normal flow continued through January.

ST. LAWRENCE DRAINAGE

Lake Erie and Lake Ontario -- High winds on the 25th caused huge waves on the Niagara River and Lake Erie which poured into lakefront roads and homes. A storm surge of 9.2 feet was measured by the U. S. Engineers at 7:45 a.m. on the 25th. This surge produced a rare occurrence of minor flooding from the Niagara River in Cayuga Island area of Niagara Falls, New York.

ATLANTIC SLOPE DRAINAGE

Precipitation continued below normal for January in the Delaware River Basin and over New Jersey. Average precipitation for the Delaware River Valley above Trenton was 2.23 inches or about 70 percent of normal. In the Delaware Valley below Trenton, N. J., January precipitation averaged 2.82 inches or about 88 percent of normal. In New Jersey, except along the coastal section, precipitation during January averaged about 2.5 inches or 73 percent of normal. Lightest precipitation amounts occurred in the extreme upper portion of the Delaware River Basin where quite a few stations reported January precipitation totals of less than 2 inches.

Snow cover in the Delaware River Valley and New Jersey was the lowest for January for many years. Snow depths were around 1 inch or less from the 1st through the 27th. Snow on the ground at the end of January ranged from 1 inch or less in most of north, southeast, and east-central Pennsylvania, to 1 to 3 inches in northeastern Pennsylvania and lower New York State.

The 13 principal water supply reservoirs in New Jersey averaged 95 percent of capacity at the end of January. Storage in New York City's three reservoirs on the upper Delaware increased storage by 27 billion gallons to 77 percent of capacity during January.

Minor overflows occurred on the lower Neuse and lower Cape Fear Rivers in eastern North Carolina between the 14th and 21st. This flooding was due to rain that moved eastward across the State from the 9th to the 14th. Rainfall amounts ranged from 1 inch to 1.5 inches in eastern North Carolina to 3 to 4 inches in the mountains. No damage was reported from the light overflows.

Heavy rain of 3 to 5 inches from the 10th to the 14th caused minor to moderate flooding on streams in the Santee and Pee Dee River Basins in South Carolina. Spillage from Lake Greenwood caused minor flooding downstream on the Saluda River. Inflow of flood waters from the Saluda and Broad Rivers was the main cause of the flooding on the Congaree River. Moderate lowland flooding occurred below Columbia, S. C., from the 11th to the 15th. The Pee Dee River at Cheraw, S. C., rose almost 9 feet in 6 hours during the morning of the 11th to a crest of 2.6 feet above flood stage, or almost 15 feet in 24 hours.

Moderate lowland flooding occurred from Blewett Lake, N. C., downstream to below Pee Dee, S. C. The Lumber River at Lumberton, N. C., crested 3.3 feet above flood stage on the 18th-19th. A rise of another 0.3 of a foot would have made evacuation of some families from the lowest areas necessary. Losses were due mainly to lowland flooding along the lower Broad River, Congaree River, and the Pee Dee River from Blewett Lake, N. C., to below Peedee, S. C. A preliminary estimate of total loss is $5,000.

Heavy rain during the month caused light to moderate flooding in Georgia on portions of the Savannah River, most of the Ogeechee, the Ocmulgee, Oconee, and the Altamaha Rivers. Controlled release of water on the Savannah by the Hartwell and Clark Hill Dams prevented flooding in the Augusta, Ga., area and lowered crests downstream. Gradual reduction of pool levels partially contributed to prolonged high stages on the middle and lower Savannah into February. Damage, if any, was estimated to be light.

EAST GULF OF MEXICO DRAINAGE

Heavy rain from the 9th to the 13th caused flooding on streams in the Apalachicola Basin in Florida and Georgia. Several stations in the upper Chattahoochee Basin reported precipitation amounts of 6 to 7 inches during this period. Peachtree Creek at Atlanta, Ga., rose 3.2 feet above flood stage on the 10th. Crests on the Chattahoochee River ranged from 3 to 4 feet above flood stage. The Flint River at Albany, Ga., was above flood level from the 15th to the 19th. The Apalachicola River at Blountstown, Fla., was out of its banks from the 12th to the 24th and again on the 27th-28th. The higher crest (6.4 feet above flood stage) occurred on the 17th. The Corps of Engineers estimated the flood damages at $468,000.

Moderate flooding occurred on streams in the Alabama Basin due to heavy rain on the 3d-4th and 9th-10th.

Rainfall ranged from 2 to 4 inches on the Etowah, Oostanaula, Coosa, and Cahaba Basins during the first period. Rainfall was more widespread and even heavier on the 9th-10th. Minor flooding began in the headwaters as early as January 5. The Alabama River exceeded flood stage throughout its course. Below Millers Ferry Lock and Dam, the river crested 11.4 feet above flood stage on the 16th. It remained above flood stage at Claiborne, Ala., from the 12th to the 25th. Damages were moderate, averaging about $750,000. Of this amount about 90 percent occurred to pastures and other farmlands.

Heavy rains on the 1st, 3d, and 9th caused moderate flooding on the upper Warrior and upper Tombigbee Rivers in Mississippi. More intensive flooding occurred on the middle and lower Tombigbee. Crests along the upper Tombigbee averaged around 5.5 feet above flood stage and along the lower portion in Alabama, about 12.5 feet above flood stage. The Corps of Engineers estimated the damages at nearly $2 million. Of the total damages, 80 percent of it resulted to agriculture as considerable land used for farming was inundated.

Heavy rain during the first week of January produced heavy lowland flooding along the Pearl River from Edinburg, Miss., downstream. The overflow continued for almost 3 weeks. A crest of 32.6 feet was reached at Jackson, Miss., on the 16th, which was 14.5 feet above flood stage. Low areas in and around the city adjacent to the river were inundated. Nine families in the Town Creek area of the city were evacuated by Civil Defense Units when rising water flooded their homes. Minor overflow occurred on the Chickasawhay River at Enterprise, Miss., and Shubuta, Miss. Flash flooding occurred in northeast Gulfport, Miss., during heavy rains on the 4th and 5th. About 20 people were evacuated from the threatened area by local Civil Defense Units.

MISSISSIPPI SYSTEM

Upper Mississippi Basin -- Precipitation in the Upper Mississippi Basin above Guttenberg, Iowa, during January ranged from much below normal over southeastern Wisconsin to near normal over central and northeastern Minnesota. The greatest amounts occurred along the north shore of Lake Superior with 2.28 inches recorded at Duluth, Minn.

By the end of the month snow depths ranged from near 4 inches in the southern portion of Minnesota and Wisconsin to as much as 26 inches in the north-central portion. The greatest depths were from 20 to 26 inches over the upper St. Croix, much of Chippewa, the northern part of the Black, and over the middle and upper Mississippi River Basins. Water content of the snow on the ground, as reported at first order stations, ranged from about 0.1 inch in the extreme southeast portion of Wisconsin to 2 to 3 inches over the area with the heavier snow cover.

Ice jams on the Wisconsin River at Portage, Wis., gradually eroded and receded from flood stage (17 feet) on January 1 to 13.4 feet by the end of the month.

Missouri Basin -- High water, due to ice jams, occurred on the Missouri River from Craig, Mont., to near Cascade, Mont., during the last weekend of January. Some of the homes and trailers on the Seibold tract near Cascade were threatened by the high water. No noticeable damage resulted as the high water receded by the 30th. Some water backed up on Highway I-15 on the 29th but receded by the 30th.

Precipitation in South Dakota was light during January, with most of the reporting points receiving less than one-half of normal. However, precipitation in the northern portion varied from one-half to near normal. At the end of January, snow depths were 2 to 6 inches in northwest Iowa, about 6 inches in southwest Minnesota, 3 to 6 inches in northeast Nebraska, trace to 5 inches across southern South Dakota, and 8 to 15 inches in northern South Dakota. Snow depth was up to 2 feet in the higher elevations of the Black Hills and in northeastern Wyoming.

There was considerable ice action on the Missouri River during January. At Sioux City, Iowa, the river fluctuated about 4 feet between the 14th and 18th. Several ice jams occurred from Decatur, Nebr., to just south of Nebraska City, Nebr., between the 17th and 22d. The highest stage reached was 12.6 feet at Nebraska City (flood stage, 18 feet) during the evening of the 19th. Rises to about one-half bankfull stage occurred downstream to south of St. Joseph, Mo., after the ice jam broke loose. Low readings prevailed downstream before the ice jam broke, with Kansas City, Mo., reporting a stage of minus 1.16 feet at noon on the 19th.

Later in the month, on the 27th, a heavy flow of ice moved into the reach from Decatur, Nebr., to Glasgow, Mo. As it reached the area from St. Joseph, Mo., to below Kansas City, Mo., the Missouri was nearly full of ice and moving very slowly. Ice jams formed between St. Joseph and Kansas City, Mo., on the 29th and 30th causing rapidly fluctuating stages.

Another ice jam developed in the reach from 4 miles south of St. Joseph to around Atchison, Kans., during the day of the 30th. By evening, the stage at St. Joseph, Mo., was around 15 feet, 2 feet below flood stage. The ice jam held until the evening of the 31st, reaching a stage of 15.8 feet around 6 p.m. During the afternoon of the 31st, another ice jam formed in the vicinity of Waverly, Mo., where it reached a stage of 17.7 feet (flood stage, 18 feet) at 4:30 p.m. on February 1 before it broke loose.

Ohio Basin -- Minor flooding occurred on the Tug Fork of the Big Sandy River at Williamson and Matewan, W. Va., on the 21st. Some flooding occurred in lower Chattaroy, W. Va., a few miles downstream from Williamson, W. Va., as back water from the Tug Fork forced Buffalo Creek over its banks near its junction with the river. A slight overflow of the Levisa Fork at Grundy, Va., occurred during the night of the 20th-21st. This flooding was due to precipitation that ranged from 2.03 inches at Gary, W. Va., in the extreme headwater area to 1.13 inches at Williamson, W. Va. In the Levisa Fork, the precipitation ranged from about 2 inches in the extreme headwaters to about 0.74 inch at Paintsville, Ky. Damages were minor. Secondary roads were blocked in several places. A few businesses in the low lying areas of Matewan were flooded.

Heavy rain on the 27th and 28th over the Green Basin above Calhoun, Ky., caused a rapid rise to above bankfull stage in the upper reaches. The flooding was confined mostly to farmland.

The upper Cumberland River, in southeastern Kentucky, exceeded flood stage by over 1 foot at Barbourville, Ky., on the 21st-22d and 0.5 foot on the 29th. Both overflows were due to rainfall averaging about 2 inches each, on the 20th and 27th. Damage, if any, was very light.

Light flooding occurred on South Chickamauga Creek near Chickamauga, Tenn., on the 4th-8th and on the 10th-12th. The Duck River near Shelbyville, Tenn., rose slightly above flood stage on the 2d. The Tennessee River at Florence, Ala., was slightly out of its banks on the 9th-12th. No damages were reported from the light overflows.

White Basin--Minor flooding occurred on the Cache River at Patterson, Ark., on the 9th-14th. The minor overflow was due to heavy rain on the 4th. No damage resulted from the minor overflow.

Red Basin--A minor overflow occurred on the Sulphur River at Texarkana, Tex., on the 4th. No damage was reported.

Lower Mississippi Basin--Heavy rainfall during the first week of January caused widespread lowland flooding on the Big Black River in Mississippi. Farms and woodlands adjacent to the river were flooded from the 4th to the 24th. Farming and logging operations were at a standstill most of the month.

WEST GULF OF MEXICO DRAINAGE

Heavy rain during the first week of the month caused minor flooding on the Calcasieu River at Hineston, La., beginning on the 5th. Subsequent periods of heavy rains, spaced at 5- to 10-day intervals, caused the river to remain above flood stage through the 28th except for 2 days (19th-20th). Rainfall in the Calcasieu Basin during January was about twice normal.

Major flooding continued on the upper Sabine River in northeast Texas due to 2 to 4 inches of additional rain during the first week of January. The lower Sabine exceeded flood stage at Bon Wier, Tex., on the 5th-6th and at Logansport, La., on the 8th-11th. At Deweyville, Tex., it rose above flood stage on the 6th and continued above flood stage through the 29th. There was very little additional damage during January as the flooding was more or less continuous since early in December.

Minor flooding occurred along the lowlands of the upper Trinity River from Rosser to Long Lake, Tex., during the early part of January. There were brief periods of overflow along Richland and Chambers Creek. Overflow persisted along the East Fork of the Trinity near Crandall, Tex., into the fourth week of the month. The crest on the 4th was approximately 2 feet above flood stage. Below Trinity, Tex., the river continued above flood stage at Moss Bluff, Tex., from November 25 into February. Flood damage was mostly minor except moderate at Liberty, Tex., and below.

Moderate to heavy rainfall during the first part of the month caused flooding on the Navasota River at Easterly, Tex., on the 6th and 7th and near Bryan, Tex., during the first 2 weeks. Flood damage, if any, was minor.

Rainfall of 2 to 3 inches on the 30th caused minor flooding on the lower Lavaca and Navidad Rivers on the 31st. Flooding was restricted to the lowlands. No damage was reported.

Minor flooding occurred on the Nueces River below Wesley Seale Dam to Nueces Bay on the 29th-30th. The overflow was due to strong northerly winds that blew the water over the dam.

PACIFIC SLOPE DRAINAGE

Central Coastal Basins--The highest flooding since December 1964 occurred along the Smith River in Del Norte County, Calif., on the 21st and 22d. There were two rises to above flood stage at Ft. Dick River, Calif. The higher crest occurred on the 22d and was 4.1 feet above flood stage. The crest near Crescent City, Calif., was 8.4 feet above flood stage. This flooding was due to record or near record precipitation during the nights of the 20th-21st and 21st-22d. An average of 12.5 inches of rain occurred during those periods in the upper Smith Basin. The heavy rainfall caused many small streams to overflow their banks. Traffic was interrupted up to 48 hours in some areas. Considerable road damage and extensive agricultural damage resulted from the high water. There were numerous slides.

Heavy rain from the 18th to the 25th in southwestern Oregon caused flooding along the Rogue, Coquille, and Umpqua Rivers. One day rainfall totals ranged from 1 to 7 inches and averaged 3 to 4 inches over a 3-day period. Port Orford measured more than 15 inches of rain in 3 days. Satellite photos showed a surge of subtropical moisture as it moved into the central Pacific and then was carried eastward by the jetstream into southwestern Oregon. Major rivers began reaching flood stage on the 20th and by the 22d, most were either above flood stage or bankfull. The Umpqua River receded within its banks on the 22d, the Rogue on the 23d, and the Coquille on the 24th. One life was lost in the Grants Pass, Oreg., area when a boy fell into a swollen creek and drowned. Only a limited number of evacuations were necessary. Erosion and landslides caused considerable public road damage. The total damages were estimated at $3.7 million. Of this total $2.3 million occurred in the Rogue Basin.

Columbia Basin--There were two periods of flooding in the Columbia Basin during January.

The first overflows were due to heavy rain during the night of the 10th and the morning of the 11th. Nearly 10 inches of rain occurred in about 18 hours at Nehalem and Tillamook, Oreg. Freezing levels, during this heavy rainfall, were about 4,000 to 5,000 feet, subjecting most of the Coast Range snowpack to melting conditions. Runoff from this rain produced near maximum record flows on the coastal Nehalem and Wilson Rivers, and new maxima of record peaks on the Nestucca and Trask Rivers in Oregon. Main damages in all north Oregon coastal basins were in the lower tidal reaches, although there was considerable slide damage in the upper reaches. As this storm moved southeastward across the Willamette Basin, rainfall amounts were generally 2 inches at valley locations and 4 inches in the foothills of the Cascade Range. Of the Coast Range Willamette tributaries, the Marys River near Philomath, Oreg., crested just slightly above flood stage while the Luckiamite, South Yamhill, and upper reaches of the Tualatin experienced major crests. All the Cascade Range Willamette tributaries exceeded bankfull stage except the Santiam River at Jefferson, Oreg., which crested 0.5 foot below flood stage. The main stem of the Willamette River crested generally around bankfull stage.

The second period of flooding was more severe and covered a large area.

Freezing levels rose to 8,000-10,000 feet at midmonth and remained near 7,000 feet during the second January storm. Coast Range and Cascade Range snowpacks were well saturated to produce heavy runoff with the additional heavy rains that followed.

The heaviest rainfall was again centered over the north Oregon coastal areas with Nehalem 9 NE reporting a 4-day (January 18-21) precipitation total of near 14 inches; Tillamook 13 ENE, near 10 inches; and at numerous other coastal stations, 6 to 8 inches. At Willamette Valley locations total storm precipitation for the 18th-21st was about 5 to 6 inches and from 6 to 8 inches at most Cascade Range foothill locations. In the upper Willamette Basin, several stations in the McKenzie and Middle Fork Willamette drainages received 12-inch totals during the 5-day period, January 18-22.

Maxima record peaks were observed in the Oregon Coastal Basins on the Nehalem River near Foss, Oreg., and on the Wilson River near Tillamook, Oreg. Near record stages were reached on the Trask, Nestucca, Siletz, Alsea, and Siuslaw Rivers. More serious flooding occurred during the second rise than during the earlier flood as the crests occurred during the higher tide of the day. Major flood crests were observed on the uncontrolled tributaries, namely, the Luckiamute, South Yamhill, Tualatin, Pudding, Molalla, Clackamas, and Johnson Creeks. The Willamette River crests were generally 1 to 2 feet above flood stage at all points. Even on the McKenzie and Santiam Rivers, where runoff was controlled, crest stages reached major flood magnitude on the 21st. Crest stages on some of the streams were greater than those likely to occur on the average of once in 50 years. The following listing shows the recurrence interval for the observed crest at various locations.

MAGNITUDE OF FLOODS IN WILLAMETTE BASIN

January 1972

Stream & Station (Oregon)	Flood Stage (feet)	Crest (feet)	Date (January)	Recurrence Interval (years)
McKenzie:				
Coburg (regulated)	11	13.1	21	15
Marys:				
Philomath	20	20.6	21	10
Santiam:				
Jefferson (regulated)	15	20.4	21	10
Luckiamute:				
Suver	27	32.7	21	25
South Yamhill:				
Whiteson	38	44.7	21	20
Pudding:				
Aurora	20	28.3	21	30
Molalla:				
Canby	13	15.4	21	50
Tualatin:				
West Linn	12	14.2	23	5
Clackamas:				
Clackamas	13	20.9	21	20
Willamette:				
Albany (regulated)	25	26.7	22	5
Salem (regulated)	28	30.1	22	10

Some flooding occurred on the smaller tributary streams of the Coeur d'Alene and St. Joe Rivers in northeast Washington following a 10-day January thaw. During this period of above normal temperatures, heavy rains occurred in the Coeur d'Alene mountains. The flooding ended with the return to sub-freezing temperatures on the 24th. Damage consisted mainly of road washouts and downed powerlines.

In central and southern Idaho, rising temperatures and rains from the 17th to the 22d dislodged the ice on the Weiser River. Ice jams caused the stream to overflow wherever restrictions occurred. High water lasted for about 48 hours cresting slightly over 1 foot above flood stage near Weiser, Idaho, around noon on the 21st. The ice jams disintegrated during the afternoon. The river receded to within its banks during the night. In the Magic Valley, flooding occurred over some farmland and residential areas where ice and debris plugged natural drains. Many schools were closed as roads were impassable due to standing water and some washouts.

The total preliminary flood damages in the Columbia Basin during January were estimated at nearly $17 million. Of this total $10.1 million occurred in the Willamette Basin and $6.1 million in the Oregon Coastal Basins. At least 6 persons drowned during the high water.

Northern Coastal Basins--Major flooding occurred in the Chehalis-Skookumchuck River Basin in Washington on January 20-24. The flood crest of 71.65 feet on the Chehalis River at Centralia, Wash., on the 21st, was the highest on record and 1.5 feet higher than the major flood of January 1971. According to the Geological Survey the gaging station at Grand Mount, Wash., (6 miles downstream) had the highest peak flow on record (50,300 c.f.s.) during this flood since it was established in 1928. This high water was due to a combination of snowmelt and heavy rain. The precipitation during the 3 days ranged from 2.9 inches at Hoquiam to 8.2 inches at Frances, Wash.

Minor flooding occurred in the Snoqualmie, Snohomish, and Cedar Basins on 1 or 2 days between the 20th and 24th. The minor overflows were due to snowmelt and precipitation that ranged from 3.1 inches at Seattle to 5.9 inches at Snoqualmie Falls, Wash. The maximum temperatures during this period averaged 52°, except 36° at Stampede Pass, Wash.

The total flood losses were estimated at $3.5 million by the Corps of Engineers. Of this total, $3.3 million occurred in the Chehalis Basin.

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

JANUARY 1972

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
ATLANTIC SLOPE DRAINAGE					
Neuse: Goldsboro, N. C.	14	14	20	16.0	16
Kinston, N. C.	14	17	21	14.6	19
Cape Fear: Wm. O. Huske L&D Tarheel (nr), N. C.	42	15	15	42.3	15
Elizabethtown, N. C.	20	14	16	21.2	16
Rocky: Norwood, N. C.	15	11	11	#19.6	11
Lynches: Effingham, S. C.	14	19	19	14.2	19
Lumber: Lumberton, N. C.	9	13	1	12.3 12.0 10 5	18-19 Feb. 9 Feb.20-22
Little Pee Dee:					
Galivants Ferry, S. C.	9	20	27	9.3	20-24
Pee Dee: Cheraw, S. C.	30	12	12	32.6	12
Peedee, S. C.	19	13	24	#22.2	18
Saluda: Chappells, S. C.	14	11	15	#15.0 #17.7	12 14
Broad: Blair, S. C.	14	10	16	#21.9 #19.2	12 14
Congaree: Columbia, S. C.	19	12	12	19.2	12
Wateree: Lake Wateree, S. C.	100	12	15	101.2	14
North Fork Edisto:					
Orangeburg, S. C.	8	14	20	9.4	16
Edisto: Givhans Ferry State Park, S. C.	10	17	Feb. 26	13.2	Feb. 7
Broad: Carlton Bridge, Ga.	15	10	12	#20.6	12
Stevens Creek:					
Modoc, S. C.	18	10	12	#28.0	12
Savannah: Millhaven-Wade 2 SE, Ga.	15	16	Feb. 23	#17.8 #16.7	23-24 Feb. 4
Clyo, Ga.	11	15	1	#16.3 #15.6	26-27 Feb. 7-8
Ogeechee: Midville, Ga.	6	15	19	# 7.1	16
Scarboro, Ga.	8	15	28	#10.5	18
Dover, Ga.	7	15	25	# 9.2	21-22
Eden, Ga.	9	17	1/	#12.1 #11.1	23 Feb.9-10
Ocmulgee: Macon, Ga.	18	11	15	23.4	12
Hawkinsville, Ga.	25	15	19	27.0	16
Lumber City, Ga.	15	21	25	17.1	23
Oconee: Milledgeville, Ga.	20	12	15	31.8	14
Dublin, Ga.	21	16	20	26.4	17
Mount Vernon, Ga.	16	17	23	20.15	19
Altamaha: Charlotte, Ga.	15	18	29	20.95	22
EAST GULF OF MEXICO DRAINAGE					
Peachtree Creek:					
Atlanta, Ga.	13	10	11	#16.2	10
Chattahoochee:					
Atlanta, Ga.	14	11	11	#17.7	11
West Point, Ga.	19	12	13	#20.8	12
Fort Gaines Dam Tailwater, Ga.	134	14	14	#138.1	14
Flint: Albany, Ga.	20	15	19	#22.1	17
Apalachicola:					
Blountstown, Fla.	15	12 27	24 28	#21.4 #15.2	17 27-28
Jim Woodruff Dam Tailwater, Fla.	66	15	16	#67.0	15-16
Oostanaula:					
Resaca, Ga.	22	7 13	7 14	22.4 34.0	7 13
Etowah: Canton, Ga.	17	5 11	5 11	18.3 20.2	5 11
Cahaba: Centreville, Ala.	23	5 11	5 12	28.6 29.2	5 11
EAST GULF OF MEXICO DRAINAGE-(Continued)					
Cahaba (Continued):					
Marion Junction, Ala.	36	13	14	37.9	13
Alabama:					
Montgomery, Ala.	35	11	15	42.6	12
Selma, Ala.	45	12	16	47.7	13
Millers Ferry L&D (tailwater) Ala.	66	11	19	77.4	16
Claiborne, Ala.	40	12	25	47.2	18
Old Town Creek:					
Tupelo, Miss.	21	5	5	21.7	5
East Tombigbee:					
Fulton, Miss.	16	3	7	17.4	5
Tibbee: Tibbie, Miss.	23	4	8	27.65	5
Noxubee: Macon, Miss.	26	8	15	28.4	12
Tombigbee:					
Amory, Miss.	20	3	9	26.0	5
Aberdeen, Miss.	34	5	7	39.4	7
Columbus, Miss.	29	6	10	32.4	8
Gainesville, Ala.	36	6	20	48.6	13
Demopolis, L&D, Ala.	48	6	21	60.9	15
Coffeeville, L&D, Ala.	43	6	26	55.1	19
Chickasawhay:					
Enterprise, Miss.	20	11	14	26.25	12
Shubuta, Miss.	30	15	16	30.8	15
Pearl: Edinburg, Miss.	20	7	18	25.9	13
Jackson, Miss.	18	4	25	32.6	16
Monticello, Miss.	19	5	27	25.1	14
Columbia, Miss.	17	12	28	19.8	24
Bogalusa, La.	15	Dec. 4 5	2 Feb. 28	19.9 19.8	Dec. 13 26
Pearl River, La.	12	Dec. 10	Feb. 26	15.75 14.4	Dec. 16 Feb. 7
MISSISSIPPI SYSTEM					
Ohio Basin					
Tug Fork: Williamson, W. Va.	27	21	21	#27.9	21
Matewan, W. Va.	U	21	21	32.5	21
Green: Munfordville, Ky.	28	29	30	30.0	29
Lock 4, Woodbury, Ky.	33	28	Feb. 1	37.2	30
Cumberland:					
Barbourville, Ky.	27	21 29	22 29	28.1 27.5	22 29
South Chickamauga Creek:					
Chickamauga (nr.),Tenn.	10	4 10	8 12	12.5 11.3	4 10
Duck: Shelbyville, (nr.)Tenn.	23	2	2	23.0	2
Tennessee:					
Florence, Ala.	419	9	12	419.4	11
White Basin					
Cache: Patterson, Ark.	7	9	14	7.3	12
Red Basin					
Sulphur: Texarkana, Tex.	25	4	4	25.1	4
Lower Mississippi					
Big Black: West, Miss.	12	4	19	22.7	5
Bovina, Miss.	28	5	24	38.9	14
WEST GULF OF MEXICO					
Calcasieu: Hineston, La.	12	5 21	18 28	16.3 15.7	7 23
Sabine: Emory, Tex.	12	2	7	12.5	5
Mineola, Tex.	14	Dec. 6	12	17.6	4

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			Ft.	
WEST GULF OF MEXICO (Continued)					
Sabine (Continued):					
Gladewater, Tex.	26	Dec. 12 5	3 17	38.8 30.0	Dec. 15 10-12
Longview, Tex.	25	Dec. 15	19	35.8 26.9	Dec. 18 1,15
Logansport, La.	28	8	11	28.3	10
Bon Wier, Tex.	17	5	6	17.2	6
Deweyville, Tex.	14	6	29	14.8	9
Trinity: Rosser, Tex.	26	2 3	2 6	26.1 28.6	2 4
Trinidad, Tex.	28	1	14	37.9	7
Long Lake, Tex.	35	4	16	41.85	9
Liberty, Tex.	24	Dec. 15 6 20	4 18 25	#27.4 25.4 24.45	Dec. 31 7 22
Moss Bluff, Tex.	4	Nov. 25	Feb. 12	8.05 6.7	Dec.29-1 Feb. 3
Navasota: Easterly, Tex.	14	6	7	15.2	7
Bryan 17 NE, Tex.	12	7	12	13.2	9
Navidad: Ganado, Tex.	21	31	Feb. 2	26.5	Feb. 1
Lavaca: Edna, Tex.	21	31	Feb. 1	22.1	Feb. 1
PACIFIC SLOPE DRAINAGE					
Central Coastal Basins					
Smith: Crescent City 7 ENE, Cal.	35	21	22	43.4	22
Ft. Dick River, Calif.	33	21 21	21 22	33.25 37.1	22 22
Rogue: Eagle Point 4 NW, Oreg.	10	22	23	11.3	22
Raygold, Oreg.	12	22	23	16.15	22
Grants Pass, Oreg.	19	22	23	23.2	22
South Fork Coquille:					
Myrtle Point, Oreg.	35	20	24	42.0	22
Coquille:					
Coquille, Oreg.	21	21	24	23.85	22
South Umpqua:					
Roseburg, Oreg.	22	22	22	22.4	22
Umpqua: Tiller, Oreg.	15	21 22	21 22	16.15 18.5	21 22
Elkton 4 S, Oreg.	33	22	22	34.3	22
PACIFIC SLOPE DRAINAGE (Continued)					
Columbia Basin					
Weiser: Cambridge (nr), Idaho	9	21	21	9.3	21
Weiser (nr), Idaho	8	20	21	9.1	21
McKenzie: Coburg, Oreg.	11	21	21	13.1	21
Marys: Philomath, Oreg.	20	11 20	12 22	20.2 20.6	11 21
Santiam: Jefferson, Oreg.	15	20	22	20.4	21
Lukiamute:					
Suver, Oreg.	27	11 20	13 22	29.8 32.7	12 21
South Yamhill:					
Whiteson, Oreg.	38	11 20	14 23	44.0 44.7	12 21
Pudding: Aurora, Oreg.	20	12 20	16 28	22.5 28.3	13 21
Molalla: Canby, Oreg.	13	20	21	15.4	21
Tualatin: Farmington, Oreg.	29	21	28	34.0	22
West Linn, Oreg.	12	22	26	14.2	23
Clackamas:					
Clackamas, Oreg.	13	20	21	20.9	21
Johnson Creek:					
Sycamore, Oreg.	8	11 20	11 21	9.2 12.7	11 21
Willamette:					
Harrisburg, Oreg.	12	21	23	14.7	21
Corvallis, Oreg.	20	22	23	20.9	22
Albany, Oreg.	25	21	23	26.7	22
Salem, Oreg.	28	21	23	30.1	22
Wilsonville, Oreg.	25	21	26	30.3	23
Oregon City (upr), Oreg.	14	21	25	15.3	23
Oregon City (lwr), Oreg.	27	20	25	32.4	23
Portland, Oreg.	18	21	22	18.3	22
North Coastal Basins					
Skookumchuck:					
Centralia, Wash.	85	21	22	86.6	21
Chehalis: Centralia, Wash.	63	20	24	71.65	21
Snoqualmie:					
Carnation, Wash.	54	21	22	55.8	21
Snohomish:					
Snohomish, Wash.	25	20	21	26.8	21

* Provisional

# Highest Stage Observed

[illegible] at the end of month

[illegible]

M Missing

[illegible]

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	ALBANY, N. Y. 1008 MB						ALBUQUERQUE, N. MEX. 838 MB						AMARILLO, TEXAS 890 MB						* ANCHORAGE, ALASKA 1009 MB						* ANNETTE, ALASKA 1010 MB					
					Resultant Wind						Resultant Wind						Resultant Wind						Resultant Wind						Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	86	-6.0	-9.9	24	1.5	31	1,619	-2.2	-10.5	04	.8	31	1,095	-2.4	-10.1	28	2.3	31	45	-14.1	-18.9	02	2.2	31	37	-3.1	-8.2	06	.8
1000																														
950	31	552	-5.4	-9.5	26	6.0													31	510	-10.7	-19.2	02	3.6	31	516	-6.2	-11.0	16	1.6
900	31	975	-6.8	-11.3	27	9.2													31	925	-11.1	-19.8	02	2.8	31	937	-8.9	-13.5	23	2.3
850	31	1,420	-7.9	-14.7	27	12.6							31	1,462	3.7	-11.2	27	5.1	31	1,362	-13.3	-21.1	02	1.4	31	1,377	-10.9	-15.5	25	3.8
800	31	1,891	-9.3	-17.7	27	15.8	31	1,991	1.2	-16.0	31	2.7	31	1,955	3.7	-12.7	28	5.8	31	1,822	-15.4	-22.7	33	1.0	31	1,843	-12.3	-18.3	27	5.7
750	31	2,389	-10.2	-20.1	27	18.8	31	2,508	-.5	-18.5	30	6.9	31	2,477	2.1	-15.4	27	9.4	31	2,307	-17.6	-26.5	31	2.3	31	2,333	-15.0	-21.8	28	6.7
700	31	2,919	-12.1	-22.4	27	22.6	31	3,057	-3.0	-19.9	29	10.7	31	3,031	-.5	-17.9	27	13.4	31	2,821	-20.1	-29.9	31	3.0	31	2,852	-17.7	-25.3	28	8.2
650	31	3,484	-14.2	-24.8	27	25.6	31	3,641	-6.0	-22.8	28	13.8	31	3,620	-3.8	-21.0	27	15.7	31	3,368	-23.1	-32.8	30	3.8	31	3,403	-21.2	-28.2	28	9.4
600	31	4,089	-16.7	-27.4	26	29.2	31	4,263	-9.5	-27.3	28	16.5	31	4,247	-7.7	-24.0	27	18.0	31	3,950	-26.1	-36.5	28	5.1	31	3,990	-24.9	-32.1	29	11.2
550	31	4,738	-20.3	-31.8	26	33.4	31	4,929	-14.0	-31.1	28	18.5	31	4,918	-12.5	-28.3	27	19.7	31	4,576	-29.7	-39.6	28	6.3	31	4,618	-28.4	-36.0	29	14.7
500	31	5,438	-24.6	-35.2	26	36.5	31	5,647	-18.4	-35.2	28	21.0	31	5,638	-17.9	-33.2	27	20.2	31	5,249	-33.8	-41.6	27	8.0	31	5,296	-32.2	-39.0	29	18.0
450	31	6,198	-29.4	-40.4	26	38.5	31	6,425	-23.6	-39.3	27	23.0	31	6,418	-23.6	-37.7	27	22.6	31	5,981	-38.3	-42.7	27	10.4	31	6,034	-36.1	-39.1	29	20.7
400	31	7,030	-34.8	-44.7	26	42.4	31	7,276	-29.9	-45.0	27	22.8	31	7,267	-30.1	-43.8	27	24.3	31	6,783	-43.3	-43.9	27	12.3	31	6,844	-40.6	-41.7	30	21.9
350	31	7,954	-40.4	-46.7	26	46.5	31	8,216	-37.2	-51.4	27	22.5	31	8,206	-37.6	-48.5	27	25.8	31	7,674	-48.7		26	15.7	31	7,747	-45.4		30	25.6
300	31	8,986	-47.4		26	42.3	31	9,259	-45.6		27	23.9	31	9,247	-46.3		27	25.5	31	8,675	-52.7		26	18.2	30	8,755	-49.7		30	25.9
250	31	10,173	-54.4		26	39.2	30	10,447	-54.5		27	26.2	31	10,434	-55.5		26	30.5	31	9,848	-54.1		26	22.1	30	9,939	-53.1		29	23.7
200	31	11,588	-57.3		26	34.7	30	11,853	-60.1		27	30.6	31	11,836	-60.8		27	32.2	31	11,281	-53.4		27	22.9	30	11,371	-54.8		29	23.7
175	31	12,432	-58.0		26	36.5	30	12,687	-59.7		27	28.7	31	12,667	-60.3		26	33.1	31	12,142	-52.6		27	21.9	29	12,224	-53.1		30	24.0
150	31	13,403	-58.3		26	33.6	29	13,648	-60.2		27	26.1	30	13,625	-61.1		26	29.2	31	13,140	-52.1		27	21.9	29	13,218	-53.5		29	20.3
125	31	14,549	-59.1		26	34.3	29	14,777	-63.5		27	24.2	29	14,753	-63.0		27	28.0	30	14,329	-52.1		27	22.6	28	14,391	-53.8		29	19.7
100	31	15,945	-59.9		26	25.6	29	16,140	-65.6		27	24.1	29	16,119	-65.0		27	24.1	30	15,774	-52.2		28	23.0	27	15,832	-54.0		30	21.4
80	31	17,336	-60.7		27	26.1	27	17,497	-64.6		28	17.8	27	17,479	-65.4		26	18.6	30	17,217	-52.5		28	24.9	27	17,266	-53.5		30	19.9
70	30	18,169	-60.3		27	23.5	27	18,316	-63.7		28	12.9	26	18,290	-64.9		26	16.9	29	18,078	-51.5		28	25.1	27	18,125	-53.9		30	20.7
60	28	19,134	-60.2		27	21.8	27	19,264	-62.3		28	8.0	24	19,233	-62.9		27	12.6	29	19,081	-50.8		28	24.4	26	19,114	-53.5		30	18.9
50	28	20,271	-60.1		27	21.5	27	20,396	-60.2		29	7.0	23	20,362	-60.1		28	8.6	27	20,267	-51.0		28	25.6	25	20,291	-52.5		30	17.5
40	28	21,669	-58.8		27	22.3	27	21,796	-58.0		32	3.6	23	21,763	-58.0		29	3.5	27	21,722	-50.2		28	26.8	25	21,736	-51.9		31	18.3
30	27	23,487	-58.5		27	23.4	27	23,621	-55.1		01	2.8	23	23,586	-55.7		34	3.5	26	23,601	-49.6		29	24.9	23	23,588	-51.3		31	20.7
25	27	24,635	-58.1		27	23.9	27	24,789	-54.3		01	4.4	23	24,752	-54.1		36	4.7	24	24,800	-49.8		29	26.7	21	24,778	-51.3		32	21.3
20	24	26,029	-58.2		28	23.9	27	26,222	-53.3		01	4.8	20	26,193	-53.0		02	5.3	22	26,262	-49.2		29	29.5	18	26,220	-50.0		32	21.6
15	22	27,841	-56.8		28	26.3	21	28,100	-50.4		02	4.5	19	28,059	-51.3		02	4.7	19	28,171	-48.1		28	27.5	15	28,076	-49.6			
10	17	30,381	-55.5		28	31.4	11	30,805	-45.5				11	30,752	-47.2				14	30,860	-46.6				10	30,769	-47.4			
7	6	32,646	-50.6																10	33,237	-45.5				6	33,177	-44.0			

Standard pressure surface (mb)	ATHENS, GEORGIA 991 MB						* BARROW, ALASKA 1021 MB						BARTER IS., ALASKA 1020 MB						BETHEL, ALASKA 1011 MB						* BISMARCK, N. DAK. 953 MB					
SURFACE	31	246	5.8	1.4	32	.8	31	8	-26.5	-34.3	02	.9	29	15	-26.8	-30.7	27	3.9	31	39	-16.6	-19.2	06	1.1	31	503	-16.1	-20.8	31	2.7
1000							31	161	-22.7	-27.0	35	1.0	29	159	-23.0	-28.0	28	5.4												
950	31	590	7.3	1.1	26	2.0	31	540	-19.9	-23.3	34	1.9	29	537	-21.0	-24.8	28	7.1	31	513	-10.1	-16.6	14	2.8						
900	31	1,035	7.0	-.5	25	6.5	31	942	-19.2	-23.1	33	2.9	29	937	-20.7	-24.5	28	8.1	31	930	-11.0	-18.4	18	2.2	31	935	-14.8	-19.7	31	8.4
850	31	1,505	6.0	-4.3	25	10.8	31	1,367	-19.5	-25.2	32	3.7	29	1,359	-21.1	-26.0	29	8.0	31	1,367	-12.8	-21.1	22	1.2	31	1,369	-13.2	-17.9	31	11.0
800	31	2,001	4.6	-6.6	25	13.4	31	1,816	-21.0	-27.2	31	4.6	29	1,806	-22.5	-27.3	30	7.8	31	1,828	-14.7	-22.5	23	1.1	31	1,832	-13.1	-19.0	30	13.7
750	31	2,525	2.3	-10.7	25	16.4	31	2,291	-23.1	-29.7	32	4.9	29	2,278	-24.2	-29.1	31	7.7	31	2,314	-17.5	-25.5	24	1.9	31	2,322	-15.0	-20.9	30	15.7
700	31	3,079	-.8	-12.9	25	18.9	31	2,794	-25.9	-32.4	32	5.1	29	2,779	-26.6	-31.5	31	8.1	31	2,827	-20.5	-29.1	29	2.2	31	2,842	-17.1	-22.2	30	17.2
650	31	3,668	-3.2	-17.6	25	20.9	31	3,328	-28.6	-35.0	32	5.6	29	3,311	-29.3	-34.7	31	8.6	31	3,372	-23.7	-33.8	27	3.1	31	3,395	-19.7	-24.1	29	19.7
600	31	4,297	-7.0	-21.9	25	21.1	31	3,897	-31.8	-37.7	31	6.2	29	3,879	-32.6	-37.5	31	9.8	31	3,953	-27.2	-37.6	26	4.7	31	3,985	-23.4	-28.2	29	21.1
550	31	4,971	-11.0	-25.6	26	23.4	31	4,508	-35.6	-39.6	32	6.7	29	4,488	-36.0	-40.5	31	10.4	31	4,575	-30.9	-40.6	24	6.7	31	4,617	-27.3	-33.1	29	22.6
500	31	5,696	-15.9	-29.9	26	24.7	31	5,165	-39.8	-42.1	31	7.7	29	5,144	-39.9	-42.0	31	11.6	29	5,260	-34.6	-43.0	25	10.0	31	5,297	-31.9	-37.4	29	24.2
450	31	6,482	-21.4	-33.2	26	26.2	31	5,878	-44.6	-42.5	31	8.9	29	5,858	-44.1	-42.0	31	12.7	29	5,990	-38.6	-44.5	25	11.3	31	6,034	-36.9	-39.7	29	25.7
400	31	7,340	-27.7	-39.5	26	27.1	31	6,657	-49.9		31	9.6	29	6,640	-48.9		31	13.8	29	6,792	-43.3	-46.3	25	12.9	31	6,839	-42.6	-41.6	29	28.3
350	31	8,288	-35.1	-45.7	26	28.9	30	7,517	-55.3		31	10.2	29	7,510	-53.8		31	14.8	29	7,685	-47.7		25	15.4	31	7,734	-47.3		29	32.2
300	30	9,339	-43.7		26	30.8	30	8,486	-60.4		30	11.0	29	8,488	-58.2		30	16.5	29	8,691	-51.6		25	18.5	31	8,742	-50.9		29	34.9
250	30	10,540	-52.6		26	33.3	30	9,617	-61.6		29	12.5	29	9,631	-59.4		30	16.8	29	9,867	-54.1		25	20.2	31	9,922	-53.5		28	35.3
200	30	11,951	-60.7		26	37.9	30	11,006	-59.5		28	14.2	29	11,033	-57.8		29	17.9	29	11,302	-52.4		25	20.7	31	11,357	-53.3		29	33.2
175	30	12,780	-62.0		26	37.6	30	11,842	-59.3		28	16.0	29	11,876	-57.5		29	19.5	29	12,166	-51.7		25	21.9	31	12,218	-53.0		28	31.7
150	29	13,733	-62.9		26	36.4	30	12,808	-59.4		28	18.9	29	12,850	-57.4		29	20.9	28	13,162	-50.7		26	21.5	31	13,210	-53.6		28	30.4
125	29	14,849	-65.5		26	32.7	30	13,948	-59.9		28	22.2	29	14,001	-57.9		29	23.9	28	14,350	-50.9		26	24.7	30	14,380	-54.2		28	29.5
100	29	16,197	-68.1		26	27.3	30	15,342	-60.0		28	25.9	28	15,407	-58.3		29	27.6	28	15,804	-50.7		26	23.9	30	15,808	-55.2		28	26.6
80	27	17,534	-69.3		26	22.3	29	16,740	-59.9		28	30.1	28	16,810	-58.5		29	33.7	28	17,257	-50.7		26	24.6	29	17,228	-55.8		28	25.0
70	26	18,336	-67.8		25	17.8	29	17,575	-59.7		28	33.2	28	17,649	-59.1		29	36.9	27	18,124	-50.4		26	26.4	29	18,078	-56.1		28	23.5
60	24	19,268	-65.1		26	14.3	27	18,571	-59.2		28	37.3	28	18,617	-58.7		29	39.1	26	19,129	-49.5		27	28.5	29	19,059	-55.9		29	22.6
50	22	20,386	-62.9		27	9.5	25	19,719	-58.7		28	41.5	27	19,763	-57.8		29	43.0	25	20,324	-49.4		27	26.1	29	20,218	-55.9		29	22.2
40	22	21,770	-60.2		27	7.9	21	21,121	-57.7		28	45.8	26	21,188	-57.0		29	47.3	24	21,786	-48.6		27	28.4	27	21,648	-55.9		29	21.3
30	22	23,576	-57.6		28	6.5	8	23,001	-57.5				23	22,996	-56.3		29	52.3	24	23,680	-48.4		28	27.5	26	23,483	-55.2		30	21.2
25	22	24,730	-56.6		29	5.9							23	24,156	-55.6		29	53.6	23	24,882	-48.3		28	28.0	24	24,663	-53.8		31	20.7
20	21	26,149	-54.1		29	6.8							21	25,558	-53.8		29	61.0	20	26,343	-48.5		28	28.3	21	26,090	-53.7		30	23.1
15	20	28,004	-52.1		28	9.7							10	27,361	-49.2				13	28,214	-47.2				12	27,930	-52.1		31	23.9
10	13	30,649	-47.8																											

Standard pressure surface (mb)	BOISE, IDAHO 918 MB						BOOTHVILLE, LA. 1019 MB						* BROWNSVILLE, TEXAS 1015 MB						BUFFALO, N. Y. 991 MB						CAPE HATTERAS, N. C. 1019 MB					
SURFACE	30	871	-1.6	-5.8	02	.4	31	1	14.3	12.7	03	1.3	27	7	17.0	14.3	17	1.3	30	218	-4.5	-8.3	25	4.6	29	4	11.3	8.6	30	1.9
1000							31	156	15.3	13.2	11	1.3	27	131	18.0	16.3	16	3.6							29	160	11.6	7.8	28	3.1
950							31	591	13.8	9.5	19	3.7	27	571	17.3	12.1	17	8.6	30	549	-6.1	-9.2	24	8.8	29	589	9.8	5.5	26	6.8
900	30	1,023	-1.7	-6.6	31	1.0	31	1,047	12.7	5.1	22	4.6	27	1,033	16.0	6.6	18	8.2	30	971	-8.3	-12.2	25	12.3	29	1,037	8.3	.8	25	9.8
850	30	1,477	-3.0	-8.4	27	4.5	31	1,526	11.1	2.1	24	6.6	27	1,517	13.7	2.7	19	7.4	30	1,413	-9.6	-15.9	26	14.7	29	1,508	6.5	-1.4	25	13.0
800	30	1,956	-5.4	-10.2	28	9.0	31	2,030	8.8	-.8	25	8.3	27	2,026	11.7	-.9	21	6.7	30	1,881	-10.0	-19.2	26	17.3	29	2,005	4.4	-4.0	25	15.0
750	30	2,461	-7.5	-13.5	28	12.5	31	2,562	6.2	-6.3	25	9.9	27	2,564	9.2	-5.6	23	6.3	30	2,377	-11.7	-22.5	26	19.4	29	2,529	2.6	-8.7	25	16.4
700	30	2,995	-10.3	-15.9	29	14.3	31	3,125	3.1	-10.5	25	10.9	27	3,132	5.6	-9.8	24	6.5	30	2,904	-13.4	-24.5	26	22.1	29	3,085	.1	-12.9	25	18.1
650	30	3,564	-13.3	-18.3	29	16.2	31	3,721	-.4	-13.9	26	12.0	27	3,733	1.5	-13.3	25	7.6	30	3,466	-15.3	-27.2	27	24.8	29	3,676	-2.8	-16.8	25	20.4
600	30	4,170	-16.4	-22.9	29	19.2	31	4,357	-4.3	-19.7	26	13.0	27	4,373	-2.7	-16.7	25	9.4	30	4,068	-18.6	-30.3	27	27.7	29	4,306	-6.2	-21.5	25	22.5
550	30	4,819	-20.2	-26.4	29	22.0	31	5,037	-8.5	-23.8	25	14.8	27	5,056	-7.5	-20.5	25	11.3	30	4,712	-22.4	-33.3	27	31.2	29	4,982	-10.7	-24.1	25	24.3
500	30	5,520	-24.5	-32.2	29	24.6	31	5,769	-13.6	-27.6	26	16.8	27	5,792	-12.1	-27.0	25	12.9	30	5,406	-26.4	-36.4	26	35.4	29	5,708	-15.4	-29.0	26	27.3
450	30	6,280	-28.9	-35.6	30	27.6	31	6,562	-19.3	-32.3	25	18.1	27	6,589	-18.0	-33.1	24	15.1	30	6,161	-31.1	-40.2	26	38.3	29	6,496	-20.8	-32.3	26	30.8
400	30	7,111	-35.1	-40.9	29	29.1	31	7,427	-25.6	-38.3	25	20.2	27	7,458	-24.6	-37.8	25	17.0	29	6,983	-36.4	-44.5	26	44.1	29	7,356	-27.1	-37.7	25	32.7
350	29	8,041	-41.7	-45.0	30	31.1	31	8,384	-32.7	-44.7	25	23.7	27	8,419	-31.7	-43.5	25	20.6	29	7,900	-42.0		26	45.7	29	8,307	-34.5	-44.2	26	33.7
300	29	9,067	-48.8		30	34.2	31	9,448	-41.4	-51.0	26	27.0	27	9,487	-40.3	-50.4	25	23.1	29	8,928	-48.1		26	47.1	28	9,361	-43.2		25	36.1
250	29	10,247	-56.2		30	36.2	29	10,660	-51.0		26	29.5	26	10,704	-50.5		25	25.8	29	10,113	-53.9		26	43.2	27	10,563	-52.5		26	37.9
200	29	11,651	-59.5		30	33.7	29	12,080	-60.0		26	30.7	25	12,125	-60.2		26	28.2	29	11,534	-56.2		27	38.1	27	11,976	-60.9		26	42.9
175	27	12,483	-57.8		29	28.6	29	12,908	-62.5		26	30.1	24	12,956	-62.2		26	28.7	29	12,383	-56.4		27	37.6	27	12,804	-62.0		26	39.7
150	26	13,457	-57.5		29	25.1	26	13,860	-63.2		26	28.8	24	13,905	-64.3		25	25.6	29	13,360	-56.8		26	33.7	26	13,754	-62.9		26	37.6
125	24	14,605	-58.3		29	23.9	24	14,972	-67.4		26	25.4	24	15,011	-68.1		25	24.6	28	14,509	-58.6		26	28.0	24	14,874	-65.4		26	35.1
100	24	16,004	-59.2		29	20.6	24	16,303	-71.2		26	19.9	24	16,337	-71.8		25	18.4	27	15,912	-59.5		26	27.9	21	16,215	-67.6		26	37.8
80	24	17,402	-58.7		30	16.2	20	17,621	-72.2		26	14.0	22	17,640	-73.1		25	12.1	26	17,308	-60.0		27	26.0	21	17,558	-67.9		26	26.1
70	21	18,242	-58.6		30	12.6	19	18,407	-71.9		26	11.4	21	18,424	-71.6		25	9.1	25	18,138	-59.7		27	24.1	20	18,362	-66.9		26	20.0
60	20	19,211	-57.7		31	10.6	17	19,330	-68.5		26	8.2	21	19,340	-68.7		26	5.3	24	19,103	-59.9		27	23.3	20	19,299	-64.2		26	15.1
50	19	20,368	-56.8		32	8.1	17	20,436	-64.2		26	5.5	21	20,442	-65.4		26	4.0	23	20,242	-59.7		27	19.9	18	20,426	-61.9		26	8.9
40	18	21,793	-55.2		33	7.2	17	21,812	-61.0		24	3.5	21	21,815	-60.8		26	2.2	23	21,642	-58.7		28	16.4	17	21,816	-59.8		27	8.5
30	15	23,660	-53.9		35	5.7	16	23,618	-57.3		27	3.3	21	23,625	-56.4		29	1.0	19	23,455	-58.2		28	16.3	13	23,640	-57.0		29	5.5
25	15	24,831	-53.7		36	5.7	15	24,779	-55.4		27	4.1	19	24,786	-54.8		29	2.7	17	24,594	-59.0		28	20.3	12	24,794	-55.9		31	5.9
20	13	26,269	-53.3		36	7.1	15	26,206	-54.1		27	5.0	16	26,224	-52.4		33	1.7	15	25,984	-58.0		28	21.6	12	26,225	-52.4		29	9.7
15	7	28,159	-51.9				11	28,077	-50.6		27	7.1	13	28,088	-50.0		27	3.9	11	27,814	-56.6				12	28,095	-49.7		28	11.4
10													9	30,784	-44.2				6	30,385	-50.2				6	30,752	-45.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE
991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-15.4	-18.5	26	1.8
1000						
950	31	507	-12.5	-16.4	24	5.1
900	31	920	-12.5	-16.9	25	8.2
850	31	1,356	-13.6	-18.7	26	12.1
800	31	1,816	-14.7	-20.6	26	14.5
750	31	2,304	-15.7	-22.6	26	17.1
700	31	2,823	-17.6	-24.0	26	20.0
650	31	3,376	-19.9	-26.3	26	22.0
600	31	3,966	-22.7	-28.8	26	24.7
550	31	4,601	-26.0	-31.8	26	27.7
500	31	5,285	-30.1	-35.3	26	31.0
450	31	6,028	-34.5	-39.0	26	35.0
400	31	6,843	-39.2	-43.7	26	39.4
350	31	7,751	-44.3		26	43.7
300	31	8,770	-49.4		26	48.1
250	31	9,954	-53.2		26	49.5
200	31	11,383	-55.6		26	44.3
175	31	12,234	-55.5		26	42.6
150	31	13,217	-55.3		26	40.2
125	31	14,380	-55.7		26	37.0
100	31	15,797	-57.0		26	34.0
80	31	17,205	-58.1		26	30.7
70	31	18,045	-58.4		26	30.2
60	29	19,010	-58.4		26	27.6
50	28	20,157	-58.3		26	27.5
40	28	21,562	-58.7		26	27.3
30	26	23,368	-59.1		27	27.3
25	24	24,521	-58.5		27	28.2
20	23	25,916	-58.2		27	31.5
15	21	27,726	-57.5		26	35.9
10	16	30,299	-55.8		26	39.2
7	9	32,585	-52.0			
5						
4						
3						

CHARLESTON, S. C.
1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	10.1	7.6	35	1.4
1000	31	165	11.0	6.2	32	.8
950	31	594	11.3	6.1	23	4.6
900	31	1,046	9.9	2.9	24	8.6
850	31	1,519	8.0	-1.5	25	11.5
800	31	2,018	5.6	-4.6	25	12.2
750	31	2,544	3.3	-10.8	25	13.8
700	31	3,102	.8	-15.1	25	15.0
650	31	3,694	-2.3	-19.4	25	17.1
600	31	4,326	-5.7	-23.0	25	19.6
550	31	5,002	-10.1	-27.4	26	21.4
500	31	5,731	-14.8	-31.8	26	23.4
450	30	6,517	-20.6	-34.4	25	25.6
400	30	7,377	-27.1	-40.3	25	27.7
350	30	8,329	-34.2	-46.0	25	30.2
300	30	9,386	-42.5	-49.4	25	31.7
250	30	10,593	-51.9		26	34.3
200	30	12,009	-60.3		26	37.9
175	30	12,838	-62.1		26	38.4
150	30	13,790	-63.1		26	35.6
125	30	14,904	-66.0		26	33.1
100	29	16,255	-69.2		26	27.9
80	26	17,585	-70.2		26	21.4
70	26	18,382	-68.9		26	15.4
60	25	19,310	-65.8		26	12.2
50	25	20,425	-63.1		27	8.4
40	23	21,803	-60.5		27	8.0
30	22	23,613	-57.1		27	5.5
25	21	24,778	-55.3		27	7.0
20	21	26,207	-53.9		27	6.8
15	18	28,070	-51.2		27	10.6
10	14	30,717	-48.1		26	14.3
7						
5						
4						
3						

CHATHAM, MASS.
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	16	.2	-3.3	26	2.2
1000	30	145	.2	-4.6	26	4.1
950	30	556	-1.2	-6.0	27	8.0
900	30	986	-2.6	-10.5	26	10.2
850	30	1,439	-3.5	-14.5	26	12.9
800	30	1,917	-5.0	-16.9	26	15.9
750	30	2,423	-6.7	-18.1	26	19.4
700	30	2,960	-8.4	-19.9	26	23.7
650	30	3,533	-10.7	-22.9	26	26.4
600	30	4,145	-13.9	-27.3	26	29.3
550	30	4,801	-17.8	-30.8	26	31.8
500	30	5,508	-22.3	-36.0	26	35.1
450	30	6,275	-27.0	-39.1	26	40.0
400	30	7,115	-32.6	-43.5	26	44.7
350	30	8,047	-38.9	-45.2	26	48.7
300	30	9,084	-46.8		26	51.9
250	30	10,273	-54.4		26	52.8
200	30	11,683	-59.2		26	51.8
175	29	12,518	-58.2		27	47.3
150	27	13,483	-57.7		26	42.5
125	26	14,628	-59.9		26	38.7
100	26	16,017	-61.0		26	32.5
80	25	17,400	-60.7		26	25.2
70	24	18,235	-60.5		26	21.8
60	24	19,195	-60.3		26	20.8
50	23	20,338	-59.4		27	18.1
40	22	21,736	-58.3		27	17.1
30	22	23,551	-57.7		26	16.5
25	22	24,706	-56.6		26	17.3
20	21	26,124	-55.7		26	19.1
15	19	27,962	-54.5		26	23.1
10	17	30,578	-50.6		26	27.0
7	8	32,906	-46.9			
5						
4						
3						

CHIHUAHUA, MEXICO
857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	4.2	-2.9	24	.5
1000						
950						
900						
850	30	1,500	7.4	-2.2	25	.8
800	31	1,999	8.9	-2.4	24	3.3
750	31	2,531	6.7	-5.6	25	5.0
700	31	3,095	3.5	-10.7	25	7.4
650	31	3,692	-.3	-13.8	25	7.7
600	31	4,328	-4.4	-18.3	25	8.1
550	31	5,007	-9.3	-22.4	26	9.7
500	31	5,736	-14.4	-27.0	25	12.0
450	31	6,526	-20.2	-31.6	25	12.9
400	31	7,388	-27.0	-36.7	25	15.4
350	31	8,339	-34.3	-43.5	26	18.1
300	31	9,396	-42.6		26	21.3
250	31	10,604	-51.4		26	22.2
200	31	12,028	-58.7		26	21.7
175	31	12,863	-60.6		26	20.5
150	31	13,820	-62.1		26	18.5
125	30	14,939	-65.6		26	16.2
100	30	16,284	-68.6		26	14.8
80	29	17,618	-70.1		26	11.6
70	29	18,415	-69.0		27	9.0
60	28	19,344	-66.3		27	6.0
50	28	20,456	-63.8		27	4.8
40	27	21,841	-59.8		27	2.6
30	25	23,656	-55.7		27	1.1
25	23	24,820	-53.8		27	2.2
20	19	26,254	-52.5		28	2.7
15	17	28,131	-50.0		28	4.1
10	9	30,807	-46.2			
7						
5						
4						
3						

* COLD BAY, ALASKA
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	-2.6	-5.5	15	2.1
1000						
950	30	508	-4.8	-8.0	17	4.0
900	30	931	-7.3	-10.2	19	3.3
850	30	1,374	-9.7	-13.3	20	3.0
800	30	1,841	-11.3	-16.6	21	3.4
750	30	2,335	-13.1	-21.1	24	5.1
700	30	2,859	-15.0	-24.5	24	7.5
650	30	3,417	-17.6	-26.9	24	9.2
600	30	4,012	-21.2	-29.9	24	11.0
550	30	4,649	-25.1	-33.4	24	13.4
500	30	5,336	-29.0	-36.0	24	15.3
450	30	6,082	-33.6	-39.4	24	17.4
400	30	6,900	-38.9	-43.2	24	20.8
350	30	7,807	-44.8		23	21.5
300	30	8,822	-51.0		24	24.2
250	30	9,994	-55.6		23	22.5
200	30	11,423	-53.3		24	18.2
175	29	12,279	-51.1		23	13.4
150	29	13,282	-51.4		24	14.8
125	27	14,464	-51.2		24	14.3
100	27	15,915	-51.2		24	13.3
80	27	17,366	-51.0		25	12.1
70	27	18,237	-50.2		25	11.4
60	26	19,241	-49.7		25	12.2
50	25	20,435	-49.1		25	11.6
40	25	21,901	-49.0		26	10.7
30	25	23,793	-48.3		26	9.7
25	25	24,994	-48.1		27	10.3
20	25	26,466	-48.1		27	10.8
15	24	28,368	-47.0		28	11.3
10	20	31,059	-46.0		28	13.9
7	14	33,431	-44.3			
5	7	35,683	-42.3			
4	5	37,189	-40.6			
3	5	39,152	-39.7			

DAYTON, OHIO
984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	-4.7	-9.2	23	1.8
1000						
950	31	571	-4.9	-9.5	24	5.2
900	31	996	-4.3	-13.9	26	8.7
850	31	1,447	-4.0	-14.2	27	12.2
800	31	1,925	-5.2	-15.5	27	14.7
750	31	2,431	-7.0	-17.6	26	17.5
700	31	2,966	-9.3	-20.5	26	20.3
650	31	3,537	-12.0	-24.3	26	23.7
600	31	4,146	-15.2	-26.7	26	26.4
550	31	4,799	-18.8	-30.1	26	29.6
500	31	5,503	-22.8	-34.5	26	33.8
450	31	6,269	-27.3	-39.0	26	38.0
400	31	7,108	-32.6	-42.8	26	42.7
350	31	8,040	-38.8	-47.2	26	47.5
300	31	9,079	-46.3		26	50.4
250	31	10,267	-54.6		26	52.0
200	31	11,681	-58.0		26	49.3
175	30	12,519	-57.5		26	45.8
150	30	13,491	-58.2		26	41.2
125	30	14,636	-59.6		26	36.1
100	30	16,025	-61.6		26	28.7
80	29	17,403	-62.5		26	25.1
70	29	18,230	-61.3		26	22.5
60	29	19,188	-60.4		26	18.5
50	28	20,326	-59.7		27	14.9
40	28	21,725	-58.5		27	12.5
30	28	23,540	-57.1		28	11.5
25	28	24,696	-56.2		28	12.3
20	26	26,116	-55.4		28	14.2
15	22	27,961	-53.6		29	15.1
10	11	30,500	-53.1			

DEL RIO, TEXAS
981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	7.5	2.6	06	.7
1000						
950	31	578	10.1	1.2	15	1.5
900	31	1,029	10.1	-1.1	21	3.4
850	31	1,504	10.0	-3.1	22	5.1
800	31	2,007	8.9	-6.6	24	5.8
750	31	2,539	6.6	-10.3	25	6.7
700	31	3,102	3.1	-13.6	26	8.3
650	31	3,699	-.5	-15.3	26	10.4
600	30	4,334	-4.8	-19.1	26	12.0
550	30	5,012	-9.7	-23.5	25	13.9
500	30	5,740	-15.3	-28.8	25	16.3
450	30	6,528	-20.8	-33.8	25	17.5
400	30	7,387	-27.2	-39.1	25	20.4
350	30	8,338	-34.6	-45.4	26	23.2
300	30	9,393	-42.9		25	26.2
250	30	10,598	-52.4		26	29.8
200	30	12,015	-59.8		26	32.3
175	30	12,845	-61.9		26	30.9
150	30	13,798	-62.7		26	29.1
125	29	14,915	-65.7		26	26.2
100	29	16,260	-69.3		26	21.8
80	28	17,585	-70.9		26	15.4
70	28	18,377	-69.4		26	13.3
60	28	19,301	-67.9		26	9.3
50	28	20,407	-64.1		26	6.0
40	28	21,788	-60.1		27	2.8
30	27	23,604	-56.5		27	1.1
25	27	24,764	-55.1		31	1.6
20	25	26,204	-52.8		31	2.0
15	24	28,073	-50.8		34	2.6
10	15	30,774	-45.4		32	2.5

DENVER, COLO.
833 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	-4.4	-12.2	22	1.8
1000						
950						
900						
850						
800	31	1,927	-.7	-16.4	26	5.0
750	31	2,441	-2.2	-18.5	28	9.7
700	31	2,986	-5.9	-20.7	29	13.3
650	31	3,562	-9.8	-23.0	29	15.9
600	31	4,174	-14.0	-26.1	29	17.7
550	31	4,830	-17.9	-30.0	29	18.7
500	31	5,536	-22.6	-35.0	29	22.0
450	31	6,302	-27.9	-39.9	29	24.2
400	31	7,138	-33.9	-45.5	29	26.9
350	31	8,063	-40.5	-48.5	28	30.3
300	31	9,095	-47.6		28	32.1
250	31	10,278	-55.2		28	31.0
200	31	11,685	-59.3		28	30.8
175	31	12,521	-59.2		28	30.1
150	31	13,489	-59.2		28	30.1
125	30	14,633	-60.3		28	25.6
100	30	16,022	-60.7		28	18.6
80	30	17,407	-61.6		27	12.8
70	30	18,236	-60.6		28	11.0
60	30	19,199	-59.2		29	10.0
50	30	20,346	-58.2		29	6.3
40	29	21,757	-56.9		30	5.9
30	27	23,593	-55.5		33	6.1
25	24	24,748	-54.9		33	7.0
20	24	26,178	-53.9		34	8.0
15	22	28,057	-52.2		34	6.8
10	8	30,752	-48.8			

DODGE CITY, KANS.
924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	-6.4	-10.5	33	1.5
1000						
950						
900	31	994	-2.1	-10.2	32	2.4
850	31	1,451	1.3	-13.6	31	4.9
800	31	1,939	.8	-15.3	30	6.3
750	31	2,455	-1.5	-16.6	28	9.2
700	31	3,002	-4.6	-19.4	28	11.6
650	31	3,581	-8.1	-22.1	27	14.0
600	31	4,198	-11.8	-25.8	28	16.6
550	31	4,860	-15.2	-30.2	28	20.6
500	31	5,574	-20.1	-34.0	28	22.8
450	31	6,347	-25.4	-38.5	27	25.5
400	31	7,190	-31.8	-43.1	27	27.6
350	31	8,123	-38.9	-47.2	27	30.5
300	31	9,160	-47.0		27	32.2
250	30	10,348	-55.7		27	33.2
200	30	11,751	-60.3		27	34.5
175	30	12,585	-59.7		27	31.7
150	28	13,552	-59.1		27	30.1
125	28	14,688	-61.7		27	27.7
100	27	16,064	-63.6		27	21.4
80	25	17,425	-63.4		27	16.4
70	24	18,252	-62.3		27	13.2
60	23	19,204	-60.9		27	11.8
50	21	20,351	-59.1		28	7.9
40	20	21,753	-57.7		30	5.9
30	18	23,567	-55.2		31	5.9
25	18	24,735	-54.2		32	6.3
20	17	26,175	-54.2		32	6.9
15	11	28,024	-51.7		32	8.3
10	5	30,674	-47.4			

EL PASO, TEXAS
883 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	2.8	-7.4	27	.6
1000						
950						
900						
850	31	1,502	7.2	-7.1	29	2.4
800	31	1,999	5.7	-9.1	27	6.4
750	31	2,525	3.6	-11.1	27	9.5
700	31	3,083	1.0	-15.4	27	9.7
650	31	3,675	-2.5	-18.0	26	11.2
600	31	4,305	-6.6	-21.8	26	11.1
550	31	4,978	-11.3	-26.3	26	12.0
500	31	5,702	-16.5	-30.3	27	14.5
450	31	6,486	-22.3	-35.4	26	14.9
400	31	7,340	-29.1	-40.9	26	16.7
350	31	8,283	-36.5	-46.6	26	18.1
300	31	9,329	-45.0		26	19.9
250	31	10,525	-53.3		26	23.8
200	30	11,938	-59.4		26	28.8
175	30	12,771	-61.1		26	27.8
150	30	13,727	-62.1		26	25.4
125	29	14,848	-64.1		27	24.0
100	29	16,203	-67.6		27	20.5
80	27	17,538	-68.9		27	16.9
70	24	18,342	-67.5		27	13.3
60	24	19,276	-65.0		27	9.0
50	[illegible]	20,397	-62.8		27	5.7
40	18	21,802	-59.1		34	1.6
30	18	23,619	-56.0		05	2.9
25	17	24,775	-54.8		04	3.6
20	16	26,215	-53.4		05	4.1
15	13	28,083	-50.5		06	4.3
10	7	30,794	-44.5			

ELY, NEV.
809 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	-9.7	-13.6	20	3.8
1000						
950						
900						
850						
800	30	1,999	-4.6	-10.0	21	2.8
750	31	2,506	-4.1	-12.0	27	3.4
700	31	3,048	-6.3	-15.4	29	7.7
650	31	3,624	-9.1	-18.9	30	11.0
600	31	4,240	-12.5	-23.3	30	14.0
550	31	4,899	-16.5	-27.4	30	16.8
500	31	5,610	-20.9	-32.0	30	19.0
450	31	6,381	-25.8	-37.3	29	19.4
400	31	7,224	-31.9	-42.5	30	20.3
350	31	8,157	-38.8	-47.2	30	23.1
300	30	9,200	-46.6		30	22.8
250	30	10,387	-54.6		30	25.1
200	30	11,792	-61.0		29	25.4
175	30	12,623	-60.6		29	26.3
150	29	13,583	-59.6		29	24.6
125	29	14,723	-60.6		29	22.9
100	28	16,107	-61.3		29	16.6
80	28	17,485	-62.2		29	11.1
70	27	18,319	-61.1		31	9.8
60	26	19,278	-59.7		32	7.1
50	26	20,422	-58.2		33	5.7
40	25	21,835	-56.4		35	4.4
30	23	23,672	-54.4		01	5.0
25	23	24,841	-54.2		01	5.5
20	22	26,27	-52.8		01	7.2
15	21	28,154	-50.2		02	8.2
10	13	30,828	-48.2		05	7.3

EMPALME, MEXICO
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	11.4	4.4	33	2.2
1000	30	127	15.1	2.1	34	2.5
950	30	563	17.3	-1.3	35	2.8
900	30	1,023	15.0	-3.3	34	.6
850	30	1,504	12.2	-6.0	21	1.4
800	30	2,009	9.7	-9.1	22	2.5
750	30	2,542	6.8	-13.7	23	4.0
700	30	3,104	3.0	-17.5	23	4.9
650	30	3,701	-.2	-20.5	24	5.2
600	30	4,335	-4.6	-23.3	25	7.1
550	30	5,014	-9.3	-26.8	26	8.4
500	30	5,743	-14.7	-30.7	26	10.0
450	30	6,533	-20.5	-34.8	26	11.5
400	30	7,392	-27.4	-40.0	26	13.6
350	30	8,343	-34.5	-47.5	26	16.8
300	30	9,398	-43.0		26	21.3
250	30	10,604	-51.8		26	24.4
200	30	12,027	-58.7		26	25.6
175	30	12,861	-61.0		26	23.8
150	30	13,817	-62.2		26	21.3
125	29	14,931	-65.4		26	19.2
100	28	16,275	-68.4		26	17.2
80	26	17,609	-69.5		26	12.6
70	25	18,406	-68.6		27	10.2
60	25	19,334	-67.0		27	7.6
50	24	20,443	-64.3		28	4.7
40	21	21,824	-60.3		35	1.3
30	19	23,632	-56.2		03	1.9
25	18	24,800	-54.4		04	2.2
20	18	26,237	-52.7		05	1.9
15	18	28,104	-50.2		02	3.2
10	13	30,795	-46.2			

■ FAIRBANKS, ALASKA
1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	-27.2	-28.5	02	.5
1000						
950	31	540	-19.7	-22.7	12	1.6
900	31	943	-18.0	-22.5	18	1.7
850	31	1,370	-17.9	-23.1	24	1.9
800	31	1,823	-19.2	-23.9	27	1.9
750	31	2,301	-21.2	-25.7	29	3.1
700	31	2,808	-23.6	-29.1	29	4.0
650	31	3,347	-26.1	-31.2	29	5.2
600	31	3,923	-29.3	-34.1	29	5.8
550	31	4,539	-33.2	-37.3	29	6.1
500	31	5,203	-37.4	-41.0	29	7.3
450	31	5,924	-41.9	-39.9	29	8.7
400	31	6,713	-47.0		29	11.3
350	31	7,591	-51.8		29	15.3
300	31	8,578	-55.5		29	15.6
250	31	9,737	-56.3		28	18.1
200	31	11,157	-55.6		28	20.6
175	31	12,010	-54.8		28	22.1
150	31	12,996	-54.6		28	24.4
125	31	14,166	-54.2		28	26.3
100	30	15,588	-54.1		28	29.2
80	30	17,020	-54.1		28	31.5
70	29	17,876	-54.1		28	34.3
60	29	18,866	-53.8		29	37.0
50	28	20,032	-53.2		29	39.7
40	28	21,475	-52.0		29	42.3
30	27	23,335	-50.9		29	45.7
25	26	24,515	-50.6		29	46.2
20	20	25,960	-50.7		29	52.8
15	15	27,818	-48.0		30	59.8
10	9	30,530	-47.6			

FLINT, MICH.
988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	236	-6.6	-10.7	25	3.8
1000						
950	31	537	-8.0	-11.8	25	7.8
900	31	956	-9.3	-13.9	27	10.9
850	31	1,398	-9.5	-16.2	27	13.0
800	31	1,866	-10.4	-19.4	27	15.8
750	31	2,362	-11.8	-20.9	27	18.2
700	31	2,889	-13.5	-23.7	27	20.5
650	31	3,450	-16.3	-27.0	27	22.0
600	31	4,048	-20.0	-29.8	27	24.8
550	31	4,688	-23.8	-32.4	27	27.9
500	31	5,379	-27.6	-37.4	26	32.1
450	31	6,129	-32.3	-40.0	26	35.8
400	31	6,951	-37.5	-44.3	26	40.5
350	31	7,866	-42.5	-48.2	26	44.7
300	31	8,892	-48.0		26	48.5
250	31	10,079	-53.8		26	48.0
200	31	11,503	-55.3		27	41.4
175	30	12,357	-54.6		27	40.7
150	30	13,342	-55.8		27	38.5
125	30	14,502	-56.4		27	34.6
100	30	15,912	-58.2		27	28.2
80	30	17,313	-59.2		27	25.5
70	30	18,150	-59.6		27	24.5
60	30	19,116	-58.9		27	20.6
50	29	20,261	-58.5		27	18.0
40	28	21,669	-58.0		28	17.9
30	28	23,484	-57.6		28	18.2
25	26	24,638	-56.6		28	19.8
20	24	26,064	-56.0		28	19.7
15	18	27,889	-55.1		28	23.3
10	9	30,567	-50.2			

FORT WORTH, TEXAS
997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	3.6	-1.5	30	.7
1000						
950	31	571	5.2	-2.4	23	3.7
900	31	1,015	7.7	-6.7	25	5.9
850	31	1,486	7.5	-8.7	25	7.2
800	31	1,985	6.8	-12.0	26	8.9
750	31	2,513	4.7	-14.2	26	11.0
700	31	3,072	1.8	-16.3	26	13.5
650	31	3,666	-1.8	-19.2	26	15.6
600	31	4,297	-5.8	-23.2	26	17.5
550	31	4,973	-10.4	-27.0	26	18.4
500	31	5,699	-15.8	-31.0	26	20.3
450	31	6,485	-21.4	-35.6	26	21.2
400	31	7,342	-28.1	-41.4	26	22.5
350	31	8,289	-35.5	-47.5	26	25.2
300	31	9,341	-44.0		26	28.5
250	31	10,540	-52.9		26	32.0
200	31	11,955	-59.4		26	34.9
175	31	12,788	-60.7		26	34.5
150	30	13,745	-61.1		26	32.9
125	27	14,877	-63.6		26	29.6
100	25	16,236	-66.7		26	26.0
80	24	17,578	-67.5		26	19.2
70	24	18,583	-66.9		26	15.6
60	22	19,328	-63.9		26	11.1
50	22	20,453	-61.2		27	6.8
40	22	21,846	-59.0		28	2.2
30	22	23,665	-55.9		34	1.0
25	22	24,828	-54.8		33	2.8
20	19	26,260	-53.2		33	2.7
15	16	28,128	-51.5		36	2.5
10	7	30,771	-46.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1972

GLASGOW, MONT.
932 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-16.3	-21.2	32	1.5
1000						
950						
900	31	957	-15.0	-19.6	31	5.7
850	31	1,391	-13.8	-19.6	31	10.3
800	31	1,852	-14.2	-20.1	30	13.3
750	31	2,341	-15.1	-20.6	30	15.7
700	31	2,860	-17.2	-22.0	30	16.8
650	31	3,413	-20.0	-25.1	30	18.4
600	31	4,003	-23.7	-28.8	30	20.3
550	31	4,633	-28.0	-32.5	30	22.9
500	31	5,311	-32.9	-37.3	30	23.3
450	31	6,045	-37.8	-40.7	30	26.6
400	31	6,848	-43.2	-42.6	30	29.8
350	31	7,740	-48.2		30	32.4
300	31	8,743	-52.2		30	34.6
250	31	9,917	-54.1		29	35.3
200	31	11,346	-54.6		30	31.1
175	31	12,202	-53.8		29	29.6
150	31	13,195	-53.5		29	27.4
125	31	14,365	-54.4		30	25.4
100	31	15,794	-54.8		30	23.4
80	31	17,217	-55.8		30	24.1
70	31	18,067	-55.6		30	21.9
60	31	19,050	-55.6		30	21.6
50	31	20,211	-55.8		30	21.4
40	30	21,630	-55.2		30	19.5
30	29	23,479	-54.4		31	19.6
25	29	24,649	-54.0		31	21.0
20	25	26,089	-54.5		31	19.7
15	20	27,938	-54.6		32	20.9
10	8	30,670	-50.9			
7						

GRAND JUNCTION, COLO.
853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	-4.7	-11.0	13	1.7
1000						
950						
900						
850						
800	31	1,978	-2.9	-14.4	20	2.1
750	31	2,488	-4.9	-16.4	25	4.5
700	31	3,028	-7.4	-17.6	26	8.7
650	31	3,602	-10.5	-20.2	28	11.9
600	31	4,214	-13.8	-23.8	28	15.4
550	31	4,871	-17.5	-27.4	29	17.5
500	31	5,578	-22.1	-33.9	29	19.9
450	31	6,346	-26.9	-38.3	29	23.0
400	31	7,185	-32.7	-43.7	29	26.6
350	31	8,115	-39.7	-47.8	29	28.7
300	31	9,149	-47.5		29	29.4
250	31	10,334	-54.9		29	32.1
200	31	11,744	-58.9		29	29.9
175	31	12,581	-58.7		28	29.3
150	31	13,552	-57.9		28	27.1
125	31	14,699	-59.0		28	21.6
100	31	16,088	-62.2		28	17.4
80	31	17,464	-62.6		28	14.6
70	31	18,291	-61.3		29	13.2
60	30	19,251	-59.3		30	10.6
50	29	20,395	-57.6		30	7.0
40	28	21,805	-57.0		32	5.1
30	26	23,638	-54.9		33	5.5
25	26	24,807	-53.6		33	5.7
20	24	26,243	-53.0		34	6.8
15	19	28,122	-50.0		34	6.6
10	7	30,776	-46.3			
7						

* **GREAT FALLS, MONT.**
884 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,118	-12.0	-17.3	24	4.9
1000						
950						
900						
850	30	1,417	-12.0	-19.0	25	8.6
800	30	1,881	-12.3	-18.2	27	11.1
750	30	2,374	-12.8	-17.8	28	13.5
700	30	2,900	-14.2	-19.4	28	16.5
650	30	3,458	-17.7	-23.1	29	19.7
600	30	4,053	-21.4	-27.5	29	21.1
550	30	4,689	-25.7	-31.6	29	22.8
500	30	5,374	-29.9	-35.6	29	26.1
450	30	6,118	-34.8	-39.0	29	28.2
400	30	6,930	-40.4	-42.7	29	32.6
350	30	7,831	-46.2		30	34.5
300	30	8,843	-50.9		29	36.9
250	30	10,018	-54.8		30	33.7
200	30	11,442	-55.1		30	29.5
175	30	12,296	-54.5		30	27.4
150	28	13,281	-54.4		29	26.0
125	28	14,449	-54.8		29	25.2
100	26	15,885	-56.1		29	20.5
80	25	17,309	-55.5		30	16.9
70	25	18,163	-55.1		30	16.2
60	25	19,148	-55.1		30	15.1
50	25	20,312	-54.7		31	13.0
40	22	21,749	-53.8		31	13.2
30	21	23,596	-52.9		33	13.7
25	19	24,786	-52.6		33	13.9
20	13	26,208	-51.9		33	13.6
15	9	28,085	-51.1			
10	6	30,786	-47.5			
7						

GREEN BAY, WIS.
990 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-13.4	-17.8	25	4.0
1000						
950	31	522	-12.8	-16.5	27	6.5
900	31	935	-12.1	-18.6	27	9.3
850	31	1,373	-11.6	-21.5	27	11.4
800	31	1,837	-12.4	-23.5	27	13.4
750	31	2,329	-14.2	-25.5	27	15.7
700	31	2,850	-16.4	-27.7	27	17.9
650	31	3,406	-18.7	-28.0	27	20.3
600	30	4,005	-21.1	-30.4	27	23.7
550	30	4,642	-25.1	-33.6	27	25.9
500	30	5,328	-29.9	-36.7	27	28.8
450	30	6,071	-34.7	-39.1	27	32.1
400	30	6,885	-40.1	-42.0	27	36.3
350	30	7,789	-45.0		27	39.9
300	30	8,805	-49.8		26	44.3
250	30	9,987	-53.4		27	43.6
200	30	11,419	-54.3		26	40.2
175	30	12,276	-53.8		27	37.8
150	30	13,266	-53.5		27	34.7
125	30	14,435	-55.4		27	32.2
100	30	15,851	-57.0		27	28.9
80	28	17,257	-57.9		27	26.9
70	28	18,099	-58.1		27	24.3
60	28	19,072	-57.4		28	22.5
50	28	20,225	-57.3		27	21.7
40	27	21,631	-57.2		28	20.6
30	27	23,454	-56.8		28	20.3
25	27	24,608	-57.4		28	19.9
20	25	26,020	-57.3		29	22.8
15	23	27,848	-55.8		28	26.1
10	13	30,469	-55.0		28	29.7
7						

GREENSBORO, N. C.
988 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	2.9	-.4	27	1.1
1000						
950	31	588	4.9	-2.3	27	3.6
900	31	1,030	4.9	-3.9	27	7.3
850	31	1,495	3.9	-7.4	27	10.1
800	31	1,987	2.4	-7.8	27	12.4
750	31	2,507	.4	-10.8	26	15.5
700	31	3,058	-2.3	-14.5	26	19.3
650	31	3,644	-4.7	-18.7	26	22.1
600	30	4,269	-8.0	-23.3	26	24.5
550	30	4,940	-12.1	-28.2	26	27.2
500	30	5,663	-16.9	-30.5	26	29.4
450	30	6,446	-22.2	-33.4	26	30.4
400	30	7,301	-28.4	-39.3	26	32.8
350	30	8,247	-35.6	-43.7	26	33.9
300	30	9,299	-43.8		26	35.6
250	30	10,499	-53.0		26	39.6
200	29	11,913	-60.4		26	37.8
175	29	12,743	-61.3		26	39.8
150	29	13,699	-61.8		27	35.5
125	29	14,822	-64.1		27	32.9
100	29	16,180	-66.3		27	26.5
80	27	17,528	-66.7		27	18.7
70	27	18,337	-65.8		27	16.6
60	27	19,278	-63.9		27	11.4
50	26	20,403	-61.6		27	10.8
40	26	21,790	-59.9		28	9.6
30	26	23,599	-57.6		28	9.0
25	26	24,755	-55.9		28	8.9
20	26	26,182	-54.1		28	9.2
15	24	28,029	-52.5		28	12.4
10	15	30,675	-49.2		27	18.9
7	5	33,021	-46.5			

GUADALUPE IS., MEXICO
1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	23	12.7	10.1	34	4.3
1000	29	151	12.5	7.6	33	4.8
950	29	580	11.2	-1.2	32	3.2
900	29	1,031	11.0	-8.0	33	1.9
850	29	1,507	11.1	-14.0	36	1.3
800	29	2,011	9.5	-15.7	33	1.5
750	29	2,543	6.4	-17.9	30	2.1
700	29	3,105	3.2	-21.0	27	2.7
650	29	3,701	-.4	-23.8	26	3.5
600	29	4,336	-4.9	-27.0	26	3.7
550	29	5,014	-9.4	-29.9	26	4.1
500	29	5,743	-14.5	-33.1	24	5.4
450	29	6,533	-20.2	-37.0	27	6.0
400	29	7,395	-26.7	-42.3	26	8.0
350	29	8,347	-34.2	-47.8	24	5.4
300	29	9,404	-42.7		26	8.2
250	29	10,610	-51.6		27	8.4
200	28	12,042	-57.0		28	11.0
175	28	12,883	-59.0			
150	27	13,838	-61.1			
125	27	14,964	-63.8			
100	27	16,321	-66.7			
80	27	17,668	-67.3			
70	25	18,475	-65.9			
60	25	19,413	-64.9			
50	23	20,535	-61.9			
40	23	21,923	-59.2			
30	21	23,749	-54.7			
25	21	24,919	-53.3			
20	20	26,361	-51.3			
15	15	28,244	-49.1			
10	8	30,936	-45.6			
7						

* **GUAM, MARIANA IS.**
998 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	23.9	21.3	08	4.2
1000						
950	31	546	21.8	18.6	08	10.5
900	31	1,014	19.0	15.1	08	9.5
850	31	1,504	16.8	10.9	08	7.8
800	31	2,020	15.1	3.6	08	6.5
750	31	2,565	13.1	-3.1	08	6.0
700	31	3,142	10.4	-6.0	07	5.9
650	31	3,755	6.8	-9.2	07	5.6
600	31	4,408	3.0	-13.4	08	5.3
550	31	5,107	-1.0	-18.1	09	4.7
500	31	5,861	-5.7	-23.6	09	4.1
450	31	6,680	-10.6	-28.1	09	3.5
400	31	7,576	-16.4	-32.8	08	3.4
350	31	8,570	-23.3	-39.9	08	2.9
300	31	9,676	-31.8	-47.4	08	1.2
250	31	10,937	-42.2		17	.3
200	30	12,408	-54.4		20	2.0
175	30	13,251	-61.0		19	2.8
150	30	14,191	-68.8		17	4.2
125	28	15,262	-76.6		14	4.6
100	27	16,522	-83.4		11	7.4
80	24	17,767	-80.8		10	9.4
70	20	18,529	-76.5		08	4.9
60	20	19,430	-71.2		06	1.5
50	19	20,524	-65.8		26	.9
40	19	21,891	-61.8		24	1.8
30	19	23,692	-57.3		33	.8
25	19	24,854	-54.2		04	2.1
20	18	26,296	-50.9		07	5.9
15	17	28,181	-48.2		08	11.5
10	13	30,875	-44.1		08	14.5
7	9	33,274	-41.2			

HILO, HAWAII
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	19.0	16.0	23	1.7
1000	31	125	20.0	16.1	22	1.0
950	31	566	16.9	14.0	11	1.9
900	31	1,026	13.7	11.6	11	2.1
850	31	1,506	10.7	9.3	13	1.8
800	31	2,010	8.5	1.2	17	1.9
750	31	2,543	7.1	-4.8	19	1.2
700	31	3,108	4.6	-11.1	25	1.3
650	31	3,708	1.5	-15.5	27	2.7
600	31	4,349	-2.2	-20.1	27	4.2
550	31	5,034	-6.1	-24.1	27	4.6
500	30	5,775	-10.5	-29.2	27	6.5
450	30	6,578	-15.7	-31.9	27	9.2
400	30	7,456	-21.7	-36.7	27	11.4
350	28	8,425	-28.7	-42.5	28	14.1
300	28	9,507	-37.0	-49.7	28	18.1
250	28	10,744	-46.1		28	25.1
200	28	12,198	-54.8		28	25.8
175	27	13,045	-59.9		29	25.8
150	27	13,995	-65.7		29	23.2
125	27	15,089	-71.2		30	17.4
100	27	16,390	-76.2		29	11.8
80	26	17,670	-76.1		29	6.5
70	26	18,447	-73.6		33	1.7
60	26	19,358	-69.2		08	2.5
50	26	20,458	-65.8		09	2.7
40	25	21,830	-61.8		07	2.3
30	24	23,636	-56.7		07	2.9
25	24	24,797	-54.8		05	2.0
20	24	26,233	-52.2		06	2.1
15	21	28,104	-49.6		08	2.6
10	21	30,778	-45.9		18	1.0
7	15	33,183	-41.7			

HUNTINGTON W. VA.
991 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	-.4	-4.8	24	.6
1000						
950	31	580	-.6	-4.7	24	4.8
900	31	1,012	-1.2	-7.2	25	8.0
850	31	1,469	-1.4	-9.7	26	11.4
800	31	1,951	-2.5	-12.6	27	14.3
750	31	2,462	-4.2	-14.7	27	17.6
700	31	3,004	-6.5	-17.1	26	20.3
650	31	3,580	-9.2	-21.0	26	23.4
600	31	4,196	-12.0	-24.8	26	27.1
550	31	4,857	-15.5	-28.2	26	29.9
500	31	5,571	-19.6	-31.4	26	33.8
450	31	6,347	-24.3	-36.0	26	37.3
400	31	7,195	-30.2	-41.1	26	39.9
350	31	8,135	-37.2	-46.8	25	41.7
300	31	9,180	-45.2		26	45.0
250	31	10,373	-53.6		26	47.9
200	30	11,788	-59.8		26	45.4
175	30	12,624	-59.2		26	44.3
150	29	13,587	-59.6		26	41.9
125	26	14,725	-61.6		26	35.4
100	25	16,101	-63.9		26	28.9
80	25	17,466	-64.3		27	23.1
70	24	18,284	-62.7		27	19.6
60	22	19,232	-61.6		27	16.6
50	22	20,365	-60.3		27	14.0
40	22	21,765	-58.2		28	10.7
30	21	23,577	-57.0		28	9.7
25	21	24,737	-55.5		29	11.1
20	20	26,163	-53.8		29	13.5
15	16	28,019	-50.0		29	16.1
10	12	30,654	-47.3			
7						

* **INTERNATIONAL FALLS, MINN.**
969 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-21.5	-23.3	26	2.6
1000						
950	29	510	-21.5	-25.1	28	3.9
900	31	899	-19.7	-22.8	28	6.1
850	31	1,325	-17.8	-20.6	28	9.0
800	31	1,779	-17.5	-20.8	29	10.3
750	31	2,262	-18.2	-22.1	29	12.2
700	31	2,776	-20.4	-25.4	29	14.1
650	31	3,322	-23.2	-29.0	28	15.2
600	31	3,904	-26.7	-32.4	28	16.6
550	31	4,527	-30.3	-34.5	28	19.9
500	31	5,199	-34.7	-38.1	28	21.1
450	31	5,927	-39.7	-39.1	28	23.4
400	31	6,724	-45.0	-43.9	28	24.7
350	31	7,609	-49.9		28	26.7
300	31	8,607	-52.9		28	30.7
250	31	9,780	-53.9		28	30.3
200	31	11,216	-53.2		28	30.8
175	31	12,077	-53.1		28	30.7
150	30	13,063	-53.3		28	30.1
125	30	14,235	-54.2		28	28.7
100	28	15,669	-55.3		28	27.2
80	26	17,089	-55.6		28	28.2
70	26	17,939	-55.9		28	25.4
60	23	18,928	-56.6		28	23.4
50	21	20,078	-57.0		28	27.6
40	18	21,488	-58.8		28	27.4
30	15	23,352	-56.7		29	26.2
25	13	24,540	-55.5		29	26.4
20	10	25,962	-55.4			
15						
10						
7						

JACKSON, MISS.
1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	7.7	4.6	04	.7
1000						
950	31	589	8.5	1.9	22	3.2
900	31	1,037	8.6	-.6	25	5.7
850	31	1,509	7.8	-4.2	26	8.7
800	31	2,008	6.2	-6.5	25	11.7
750	31	2,535	3.7	-9.2	25	12.9
700	31	3,093	1.2	-14.5	26	14.5
650	31	3,686	-2.0	-19.6	26	16.7
600	31	4,317	-5.6	-24.3	26	17.9
550	31	4,994	-10.0	-28.4	26	20.0
500	31	5,722	-15.2	-32.7	25	21.6
450	31	6,509	-20.7	-36.9	25	23.4
400	31	7,369	-27.3	-41.8	25	25.3
350	31	8,320	-34.6	-48.2	25	28.2
300	31	9,374	-43.4	-49.6	25	31.1
250	31	10,579	-52.0		25	35.8
200	31	11,997	-59.5		25	37.8
175	31	12,829	-61.4		26	37.9
150	29	13,779	-62.1		26	34.5
125	27	14,903	-64.9		26	30.7
100	27	16,252	-68.1		26	26.7
80	24	17,599	-69.0		26	18.9
70	23	18,397	-68.4		26	14.0
60	23	19,326	-66.1		26	11.9
50	23	20,441	-63.1		26	6.5
40	23	21,822	-60.8		27	4.5
30	23	23,624	-57.8		30	2.3
25	22	24,779	-56.5		29	3.9
20	22	26,201	-54.8		29	5.2
15	19	28,046	-52.6		29	7.6
10	11	30,653	-51.1			
7						

JOHN F. KENNEDY INT. AP NY
1019 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	1.0	-5.1	30	2.5
1000	31	154	-.5	-6.2	29	3.8
950	31	563	-2.0	-7.4	28	6.5
900	31	992	-3.3	-10.2	28	10.3
850	31	1,444	-4.0	-13.5	27	14.6
800	31	1,923	-3.8	-16.8	27	17.8
750	31	2,432	-5.1	-19.2	26	20.6
700	31	2,971	-7.3	-22.7	26	24.8
650	31	3,546	-9.9	-25.3	26	28.6
600	31	4,160	-13.2	-27.2	26	31.3
550	31	4,817	-17.1	-29.4	26	35.9
500	31	5,527	-21.3	-33.2	26	39.8
450	31	6,297	-26.0	-37.1	26	45.0
400	31	7,140	-31.8	-42.3	26	46.7
350	31	8,074	-38.3	-45.2	26	50.4
300	31	9,115	-45.8		26	49.0
250	30	10,318	-54.5		26	50.7
200	30	11,723	-60.4		27	45.5
175	30	12,557	-59.6		27	43.5
150	30	13,525	-58.8		27	37.9
125	30	14,666	-60.4		27	36.1
100	30	16,049	-62.2		27	32.9
80	28	17,425	-61.8		27	22.1
70	27	18,257	-61.0		28	21.8
60	25	19,225	-60.4		28	17.0
50	25	20,364	-59.7		27	16.5
40	24	21,761	-58.8		27	14.1
30	22	23,577	-56.6		28	15.6
25	22	24,735	-56.0		27	15.0
20	22	26,155	-55.7		27	15.5
15	21	28,006	-53.3		28	15.1
10	14	30,645	-50.7			
7						

JOHNSTON IS., PACIFIC AREA
1011 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.2	20.3	09	5.8
1000	31	100	23.2	19.3	09	5.7
950	31	547	19.7	17.3	10	6.5
900	31	1,012	17.1	13.0	10	5.8
850	31	1,498	14.4	9.6	09	4.2
800	31	2,009	12.0	4.7	09	2.7
750	31	2,547	9.4	-.1	13	1.5
700	31	3,117	6.4	-6.7	20	.8
650	31	3,721	3.3	-11.8	23	2.2
600	31	4,366	-.4	-17.2	25	3.7
550	31	5,057	-3.9	-21.8	25	5.9
500	31	5,803	-8.4	-26.0	26	7.4
450	31	6,612	-13.7	-29.7	26	9.9
400	31	7,498	-19.3	-36.2	27	12.9
350	31	8,481	-26.1	-41.9	27	16.0
300	31	9,576	-33.8	-48.3	27	19.9
250	31	10,829	-43.5		27	24.0
200	31	12,296	-54.0		27	26.5
175	31	13,141	-60.0		28	25.3
150	31	14,089	-66.4		28	20.1
125	30	15,176	-73.2		28	15.2
100	30	16,463	-78.9		30	8.0
80	26	17,730	-78.8		02	1.5
70	26	18,496	-75.9		07	2.6
60	22	19,399	-70.7		10	3.3
50	22	20,497	-65.1		12	.5
40	21	21,869	-61.5		29	1.0
30	20	23,674	-57.1		03	1.3
25	19	24,837	-54.3		06	2.0
20	19	26,275	-51.8		09	3.1
15	17	28,159	-48.6		06	2.6
10	14	30,840	-44.7		12	4.6
7	9	33,236	-40.5			

KEY WEST, FLA.
1018 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	22.2	19.7	08	3.1
1000	30	155	21.8	18.4	08	4.1
950	30	599	18.8	15.4	10	4.6
900	30	1,062	16.0	11.2	12	5.0
850	30	1,546	13.4	5.2	13	4.0
800	30	2,055	11.3	-2.4	14	2.6
750	30	2,592	8.9	-8.6	13	1.4
700	30	3,159	5.5	-11.8	14	1.0
650	30	3,762	2.5	-17.4	20	1.1
600	30	4,405	-.9	-20.7	21	3.0
550	30	5,093	-5.5	-23.7	24	3.1
500	30	5,833	-10.8	-28.9	24	4.5
450	30	6,634	-16.6	-32.4	24	6.0
400	30	7,508	-23.4	-36.9	25	6.8
350	29	8,477	-30.3	-43.4	27	5.7
300	29	9,552	-38.9	-49.5	28	8.2
250	29	10,776	-49.0		28	12.6
200	28	12,211	-58.7		26	17.8
175	28	13,042	-62.4		26	19.6
150	28	13,988	-65.2		26	16.7
125	25	15,095	-69.4		26	13.9
100	25	16,409	-74.4		27	8.8
80	19	17,696	-75.8		27	5.3
70	18	18,471	-74.3			
60	17	19,374	-70.5			
50	16	20,478	-64.7			
40	16	21,851	-61.3			
30	13	23,666	-56.0			
25	13	24,834	-53.2			
20	13	26,281	-50.6			
15	10	28,189	-47.1			
10	8	30,854	-41.9			
7						

KING SALMON, ALASKA
1011 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	15	-16.4	-21.0	07	1.2
1000						
950	27	491	-10.4	-16.8	04	2.1
900	27	907	-10.7	-17.8	01	2.4
850	27	1,345	-12.1	-20.3	34	2.8
800	27	1,808	-14.2	-22.8	33	3.9
750	27	2,295	-16.7	-25.6	32	4.2
700	27	2,810	-19.8	-28.9	29	3.7
650	26	3,360	-22.1	-31.7	28	5.2
600	26	3,945	-25.1	-35.0	27	8.3
550	26	4,573	-28.5	-36.5	27	11.9
500	26	5,251	-32.5	-40.1	27	13.2
450	26	5,987	-37.1	-42.2	27	14.9
400	25	6,778	-42.1	-46.0	27	19.2
350	25	7,676	-46.4		27	20.1
300	25	8,687	-50.6		27	20.7
250	25	9,868	-53.1		27	18.4
200	25	11,309	-52.0		27	18.7
175	25	12,176	-51.2		27	19.8
150	25	13,180	-50.7		27	19.6
125	25	14,367	-51.0		27	19.9
100	25	15,820	-50.6		27	19.4
80	25	17,275	-50.7		27	19.8
70	25	18,146	-50.6		27	19.8
60	25	19,152	-49.9		27	21.8
50	25	20,347	-49.0		28	20.6
40	25	21,816	-48.1		28	21.3
30	25	23,712	-48.5		28	21.0
25	25	24,912	-48.5		29	24.0
20	24	26,383	-47.2		29	22.6
15	23	28,283	-47.5		30	24.2
10	15	30,979	-44.6			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1972

+ KOROR, CAROLINE IS. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.1	24.3	09	1.4
1000	31	80	26.7	22.7	09	1.8
950	31	533	23.7	19.5	09	3.0
900	31	1,004	20.9	15.9	09	2.7
850	31	1,497	18.0	12.3	09	2.4
800	31	2,015	15.6	8.7	09	2.4
750	31	2,562	13.2	4.0	10	2.5
700	31	3,139	10.0	.5	10	3.2
650	31	3,752	6.6	-3.9	09	4.6
600	31	4,405	2.7	-7.6	09	5.6
550	31	5,104	-1.4	-14.0	09	6.2
500	31	5,858	-5.4	-20.5	10	7.9
450	31	6,677	-10.4	-26.4	09	8.4
400	31	7,574	-16.1	-32.9	10	8.7
350	31	8,570	-22.8	-38.5	10	9.1
300	31	9,679	-31.1	-45.9	10	9.0
250	31	10,945	-41.3		11	9.9
200	30	12,419	-53.9		11	11.5
175	30	13,263	-60.8		11	12.2
150	30	14,205	-68.4		11	13.7
125	30	15,277	-76.3		11	14.5
100	30	16,538	-83.4		10	15.8
80	30	17,792	-78.1		09	5.5
70	30	18,567	-72.1		30	1.9
60	30	19,484	-68.5		28	6.2
50	30	20,590	-64.3		28	7.8
40	30	21,969	-60.3		27	7.9
30	28	23,776	-57.1		26	5.0
25	27	24,937	-55.0		22	1.0
20	27	26,374	-51.4		10	5.2
15	27	28,250	-50.0		09	14.8
10	21	30,941	-45.1		09	23.5
7	14	33,352	-39.6		09	25.3
5	8	35,697	-34.2			

KOTZEBUE, ALASKA 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	5	-22.2	-26.5	09	3.7
1000	25	162	-18.3	-24.7	11	4.4
950	27	535	-15.5	-22.3	10	3.6
900	27	944	-15.6	-23.1	11	2.3
850	27	1,374	-16.8	-25.1	12	1.3
800	27	1,828	-18.8	-26.8	10	.9
750	27	2,307	-21.2	-29.2	07	.4
700	27	2,813	-23.8	-31.9	33	.9
650	27	3,351	-26.7	-34.3	32	1.7
600	27	3,925	-30.1	-37.6	32	3.1
550	27	4,540	-34.1	-40.6	30	3.9
500	27	5,201	-38.5	-42.1	30	4.2
450	27	5,918	-43.4	-41.9	29	5.8
400	27	6,701	-48.6		29	8.0
350	27	7,572	-54.0		28	9.5
300	27	8,548	-58.4		27	11.3
250	27	9,693	-59.1		27	13.2
200	27	11,098	-57.1		27	15.9
175	27	11,946	-55.9		27	18.2
150	26	12,928	-55.7		27	19.9
125	26	14,089	-55.6		27	24.6
100	26	15,514	-54.8		27	28.9
80	25	16,947	-54.3		27	33.2
70	25	17,804	-53.8		27	36.1
60	23	18,810	-53.5		27	39.1
50	22	19,984	-53.0		27	42.8
40	16	21,425	-51.8		27	47.9
30	14	23,300	-48.8		28	48.3
25	12	24,481	-47.4		28	51.3
20	11	25,938	-47.9			
15	8	27,826	-45.7			

KWAJALEIN, MARSHALL IS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.2	22.8	07	5.0
1000	31	80	25.6	22.4	07	6.1
950	31	531	21.9	19.9	07	8.3
900	31	1,000	18.9	16.3	08	8.1
850	31	1,490	16.5	12.4	08	6.4
800	31	2,005	14.0	8.7	08	5.2
750	31	2,548	11.8	2.6	07	3.9
700	31	3,124	9.1	-3.5	07	3.5
650	31	3,735	6.0	-9.2	07	3.9
600	31	4,387	2.7	-12.8	07	3.9
550	31	5,086	-1.1	-18.8	06	5.2
500	31	5,840	-5.8	-23.7	06	5.5
450	31	6,657	-11.1	-27.9	06	6.7
400	31	7,552	-16.8	-33.8	05	6.1
350	31	8,541	-23.7	-40.0	04	3.1
300	31	9,649	-31.9	-46.7	31	2.1
250	31	10,910	-42.0	-54.2	26	2.1
200	31	12,381	-54.2	-64.6	23	4.9
175	31	13,223	-61.3		22	4.9
150	31	14,163	-68.8		21	4.6
125	31	15,230	-77.3		17	1.1
100	27	16,482	-84.3		07	4.9
80	25	17,720	-81.0		08	4.8
70	24	18,480	-76.1		01	1.5
60	23	19,383	-70.8		28	5.6
50	22	20,476	-66.6		26	8.6
40	21	21,846	-61.7		28	7.7
30	21	23,643	-58.2		28	3.6
25	21	24,797	-55.9		08	.8
20	21	26,226	-52.9		10	6.7
15	21	28,096	-49.4		09	15.1
10	21	30,780	-45.1		09	21.9
7	17	33,196	-41.8		09	24.4
5	12	35,504	-38.9			

LAKE CHARLES, LA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	10.6	8.7	06	2.1
1000	31	154	11.3	8.3	10	1.8
950	31	583	11.7	5.8	21	3.6
900	31	1,036	11.7	1.6	23	5.3
850	31	1,514	10.1	-.8	24	7.0
800	31	2,016	7.9	-3.6	25	9.1
750	31	2,547	5.7	-9.6	25	10.7
700	31	3,108	2.5	-12.7	25	11.8
650	31	3,704	-.6	-17.8	25	13.0
600	31	4,338	-4.7	-22.1	25	13.3
550	31	5,017	-9.3	-25.2	25	15.8
500	31	5,747	-14.7	-29.0	25	17.4
450	31	6,536	-20.4	-34.4	25	20.1
400	31	7,397	-26.7	-39.6	25	22.2
350	31	8,350	-33.9	-46.6	26	24.7
300	31	9,409	-42.1	-45.1	26	28.3
250	31	10,618	-51.6		26	32.7
200	31	12,036	-59.9		26	34.8
175	29	12,864	-60.7		26	33.7
150	28	13,820	-62.5		26	31.8
125	27	14,933	-65.6		25	29.9
100	27	16,278	-69.2		26	24.6
80	27	17,607	-70.2		26	16.4
70	27	18,402	-69.4		26	14.4
60	27	19,328	-66.5		26	10.9
50	27	20,442	-62.7		26	6.9
40	26	21,826	-59.7		26	5.8
30	24	23,637	-57.0		26	2.6
25	23	24,797	-54.9		29	2.8
20	21	26,234	-53.0		30	3.1
15	20	28,100	-50.2		32	3.6
10	16	30,790	-45.8		03	2.9
7	6	33,246	-41.0			

LANDER, WYO. 823 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	-8.9	-15.6	27	2.3
800	31	1,917	-5.4	-15.0	26	2.6
750	31	2,422	-6.4	-18.0	28	6.2
700	31	2,960	-8.6	-20.4	29	11.8
650	31	3,530	-12.5	-23.3	29	16.3
600	31	4,137	-16.5	-27.3	29	19.6
550	31	4,786	-20.6	-31.2	29	21.9
500	31	5,484	-25.6	-35.1	29	23.2
450	31	6,240	-30.9	-39.6	29	24.7
400	31	7,065	-37.2	-42.8	30	27.3
350	31	7,979	-43.3	-47.1	30	30.7
300	31	8,999	-49.8		30	32.7
250	31	10,176	-55.9		30	36.0
200	30	11,588	-58.6		29	33.6
175	30	12,428	-58.0		29	30.9
150	30	13,401	-57.3		29	26.8
125	30	14,555	-57.6		29	23.8
100	28	15,964	-59.3		29	20.4
80	28	17,363	-59.3		29	17.2
70	27	18,200	-58.9		29	12.1
60	26	19,167	-58.1		30	11.7
50	26	20,317	-57.5		30	10.9
40	24	21,729	-56.3		31	9.6
30	24	23,566	-54.5		32	10.0
25	23	24,740	-54.7		33	10.5
20	21	26,182	-53.5		33	9.3
15	20	28,041	-52.1		35	7.3
10	5	30,676	-51.0			

* LIHUE KAUAI, HAWAII 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	19.8	16.6	34	.6
1000	31	128	20.4	15.8	04	1.1
950	31	570	17.3	14.1	07	2.9
900	31	1,030	14.1	11.4	07	2.9
850	31	1,511	11.2	6.7	09	1.9
800	31	2,016	9.5	-1.3	10	1.0
750	31	2,550	7.5	-8.6	31	.5
700	31	3,115	4.9	-11.5	29	1.7
650	31	3,716	1.7	-15.2	28	3.0
600	31	4,357	-1.9	-19.5	28	4.3
550	31	5,044	-5.9	-21.7	27	4.6
500	31	5,783	-10.8	-24.8	29	6.2
450	31	6,586	-16.0	-28.6	28	8.7
400	31	7,462	-22.1	-34.2	28	11.8
350	31	8,433	-29.2	-40.3	28	15.7
300	31	9,514	-37.3	-46.6	28	21.1
250	31	10,749	-46.1		28	27.0
200	31	12,204	-54.4		28	28.7
175	31	13,051	-59.1		28	28.1
150	31	14,006	-64.1		29	25.8
125	30	15,105	-69.8		29	18.2
100	30	16,416	-74.8		29	10.3
80	27	17,711	-74.0		32	3.8
70	27	18,495	-71.8		03	2.1
60	21	19,426	-69.5		06	4.2
50	21	20,524	-65.7		09	5.5
40	17	21,848	-60.8		08	4.7
30	17	23,708	-55.6		07	6.8
25	17	24,875	-53.6		08	6.5
20	17	26,318	-51.4		08	7.9
15	16	28,200	-48.4		10	6.2
10	15	30,891	-44.6		13	3.6
7	8	33,312	-41.0			
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LITTLE ROCK, ARK. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	3.8	.7	35	.7
950	31	575	3.7	-3.5	25	2.5
900	31	1,015	4.7	-5.2	25	6.2
850	31	1,481	4.7	-8.4	26	9.9
800	31	1,974	3.4	-12.5	26	10.6
750	31	2,495	1.2	-15.7	26	12.9
700	31	3,048	-1.2	-18.3	26	16.0
650	31	3,635	-4.5	-21.3	26	18.8
600	31	4,261	-8.0	-24.4	26	22.0
550	31	4,932	-12.3	-28.0	26	24.6
500	31	5,653	-17.2	-33.0	26	27.9
450	31	6,435	-22.7	-37.3	26	29.0
400	31	7,288	-28.9	-42.6	26	32.6
350	31	8,232	-36.0	-48.2	26	34.5
300	31	9,281	-44.5		26	37.6
250	31	10,478	-53.5		26	39.6
200	29	11,888	-59.9		26	42.0
175	28	12,722	-60.2		26	40.1
150	28	13,683	-60.9		26	36.3
125	27	14,811	-63.0		26	33.4
100	26	16,175	-65.2		26	29.4
80	26	17,528	-66.5		26	23.2
70	26	18,338	-65.6		26	18.6
60	25	19,279	-63.9		26	14.6
50	25	20,404	-61.2		27	9.8
40	25	21,795	-59.5		27	7.0
30	21	23,608	-56.3		28	4.9
25	21	24,771	-54.9		30	5.4
20	21	26,200	-54.0		30	6.1
15	20	28,057	-52.0		29	6.1
10	10	30,713	-47.9			

MCGRATH, ALASKA 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	103	-27.3	-19.0	21	1.0
1000	22	190	-22.0	-23.1	19	.4
950	25	553	-15.5	-18.4	11	1.0
900	24	965	-14.0	-19.3	17	1.6
850	24	1,398	-14.8	-20.3	06	1.4
800	24	1,856	-16.7	-21.9	34	1.3
750	24	2,339	-19.1	-24.4	33	1.9
700	24	2,850	-21.7	-28.5	32	2.2
650	24	3,393	-24.6	-32.2	29	3.0
600	24	3,972	-27.8	-35.3	29	3.9
550	24	4,592	-31.7	-38.3	27	5.2
500	24	5,260	-35.8	-41.0	27	7.2
450	24	5,986	-40.0	-42.7	27	10.2
400	24	6,783	-44.6		28	11.7
350	24	7,670	-49.3		28	14.9
300	24	8,669	-53.2		28	16.0
250	24	9,836	-55.6		28	19.0
200	24	11,264	-53.7		27	20.5
175	24	12,126	-52.5		27	22.1
150	23	13,116	-52.5		27	22.1
125	22	14,312	-52.5		27	24.4
100	22	15,752	-52.8		27	25.9
80	22	17,194	-52.2		27	26.7
70	22	18,059	-51.6		27	29.0
60	22	19,060	-51.2		28	29.5
50	22	20,249	-50.0		28	30.6
40	21	21,706	-50.6		28	29.2
30	19	23,578	-50.4		28	30.8
25	18	24,776	-50.4		28	33.2
20	15	26,232	-49.8			
15	6	28,142	-47.8			

+ MAJURO, MARSHALL IS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	27.9	23.5	07	4.7
1000	31	85	26.7	18.8	07	5.5
950	31	536	22.9	16.9	07	7.1
900	31	1,006	20.0	13.4	07	7.0
850	31	1,497	17.5	8.7	08	5.9
800	31	2,014	15.0	5.2	08	3.9
750	31	2,558	12.6	.8	10	2.9
700	31	3,135	10.0	-3.5	09	2.3
650	31	3,748	7.0	-8.8	07	2.7
600	31	4,402	3.4	-13.1	07	3.3
550	31	5,103	-.4	-18.5	06	3.7
500	31	5,858	-4.9	-22.4	06	4.0
450	31	6,680	-9.5	-27.9	06	5.4
400	31	7,579	-15.4	-32.6	05	5.4
350	31	8,578	-22.2	-39.1	03	1.9
300	31	9,690	-30.5	-46.0	28	1.9
250	31	10,959	-40.4	-53.7	23	5.1
200	30	12,438	-53.1		22	7.7
175	30	13,286	-59.8		22	6.5
150	30	14,231	-67.6		22	4.0
125	30	15,308	-75.5		26	.6
100	30	16,574	-82.0		05	7.2
80	30	17,826	-78.3		07	4.0
70	30	18,602	-71.8		28	3.1
60	30	19,522	-67.3		27	8.7
50	30	20,635	-62.6		27	10.6
40	30	22,019	-60.3		27	9.3
30	29	23,833	-56.1		26	5.3
25	28	24,998	-53.9		27	1.5
20	27	26,440	-50.8		09	7.3
15	26	28,329	-47.9		09	17.1
10	25	31,037	-41.4		09	23.5
7	15	33,477	-36.1		08	24.1
5	7	35,816	-33.6			

* MEDFORD, OREG. 974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	.1	-2.3	23	.5
950	31	604	1.0	-2.4	21	.8
900	31	1,040	1.4	-4.3	21	2.6
850	31	1,499	.0	-7.8	24	4.8
800	31	1,983	-2.1	-10.4	27	7.3
750	31	2,494	-3.9	-11.6	29	10.1
700	31	3,037	-6.3	-14.0	29	13.5
650	31	3,614	-9.4	-17.6	29	15.7
600	31	4,228	-13.0	-21.2	30	16.8
550	31	4,887	-17.0	-27.2	29	18.0
500	31	5,595	-21.9	-32.1	29	18.8
450	31	6,361	-27.6	-36.4	29	19.9
400	31	7,198	-33.6	-42.2	29	21.8
350	31	8,126	-39.7	-45.9	29	23.7
300	30	9,177	-46.9		29	25.5
250	30	10,363	-54.9		29	25.5
200	30	11,769	-60.7		29	24.4
175	27	12,602	-59.8		29	25.0
150	27	13,567	-58.8		29	23.2
125	27	14,709	-60.1		29	21.2
100	26	16,098	-60.9		29	16.8
80	26	17,487	-60.2		30	13.6
70	26	18,323	-59.1		31	10.3
60	24	19,287	-58.9		32	9.5
50	23	20,435	-56.7		34	7.3
40	[illegible]	21,855	-55.9		36	7.0
30	20	23,692	-53.8		01	8.1
25	16	24,871	-52.3		02	8.5
20	15	26,318	-51.7		02	10.7
15	10	28,179	-51.1			
10	8	30,831	-47.8			

MERIDA, MEXICO 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	20.0	19.4	08	[illegible]
1000	31	134	22.1	20.3	10	4.7
950	31	580	20.5	17.1	12	7.0
900	31	1,046	17.9	12.9	12	6.6
850	31	1,534	15.1	8.4	11	5.0
800	31	2,046	12.6	2.4	11	4.3
750	31	2,585	9.7	-2.7	12	3.6
700	31	3,155	6.4	-8.0	13	2.2
650	31	3,759	3.1	-12.3	15	1.4
600	31	4,404	-.1	-17.8	20	2.2
550	31	5,095	-4.0	-24.7	23	2.8
500	31	5,840	-9.0	-28.8	23	3.9
450	31	6,646	-14.8	-32.9	24	4.7
400	31	7,526	-21.3	-38.1	25	6.0
350	31	8,500	-28.5	-44.7	25	9.5
300	31	9,583	-37.2	-52.3	25	10.6
250	31	10,816	-47.4		25	12.7
200	30	12,256	-57.3		25	17.5
175	30	13,092	-61.2		25	18.6
150	30	14,042	-64.4		25	19.4
125	29	15,144	-68.6		25	16.9
100	29	16,463	-74.1		24	12.4
80	29	17,756	-75.2		24	7.0
70	28	18,535	-73.1		23	3.6
60	27	19,447	-69.7		23	2.8
50	27	20,545	-65.3		24	2.8
40	26	21,917	-61.4		24	2.0
30	24	23,724	-56.0		34	1.5
25	23	24,892	-53.4		02	3.3
20	23	26,339	-50.1		04	2.1
15	21	28,234	-46.1		27	1.9
10	17	30,946	-43.0		19	3.9
7	9	33,345	-40.9			

MIAMI, FLA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	20.5	17.2	07	1.6
1000	31	163	21.4	17.6	11	3.0
950	31	607	18.3	15.3	12	5.1
900	31	1,069	15.6	11.6	13	4.0
850	31	1,552	13.0	6.4	13	2.4
800	31	2,060	10.8	.8	17	1.6
750	31	2,597	8.4	-5.2	22	2.0
700	31	3,163	5.3	-9.7	23	2.7
650	31	3,765	2.2	-14.9	23	4.0
600	31	4,407	-1.4	-19.6	24	4.7
550	31	5,095	-5.8	-23.9	24	5.6
500	31	5,834	-11.2	-28.5	25	6.6
450	30	6,634	-17.1	-33.0	25	8.2
400	30	7,506	-23.6	-37.5	25	9.1
350	30	8,471	-30.7	-43.2	25	10.0
300	30	9,543	-39.2	-50.2	27	11.4
250	30	10,766	-49.1		27	14.1
200	30	12,198	-58.2		26	19.9
175	30	13,033	-61.2		26	22.2
150	30	13,983	-64.5		26	20.5
125	30	15,088	-68.6		26	17.2
100	29	16,408	-73.3		26	14.2
80	29	17,709	-74.3		25	8.9
70	29	18,490	-72.8		26	6.7
60	29	19,401	-69.5		26	4.8
50	29	20,504	-64.3		26	2.9
40	29	21,881	-60.8		29	2.2
30	28	23,693	-55.7		05	2.0
25	27	24,863	-53.1		05	1.6
20	25	26,307	-50.4		02	1.0
15	23	28,196	-47.2		27	3.7
10	12	30,894	-43.4			

MIDLAND, TEXAS 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	.8	-6.6	26	.9
900	31	1,019	6.0	-5.5	25	2.3
850	31	1,490	8.2	-9.6	27	6.3
800	31	1,989	7.1	-11.7	27	8.1
750	31	2,518	5.5	-13.9	27	9.8
700	31	3,079	2.3	-17.7	26	10.5
650	31	3,673	-1.4	-19.2	26	12.5
600	31	4,306	-5.8	-22.3	26	14.0
550	31	4,981	-10.5	-27.4	26	14.8
500	31	5,707	-15.9	-31.6	26	16.2
450	31	6,493	-21.8	-36.0	26	18.1
400	31	7,348	-28.6	-41.0	26	19.6
350	31	8,293	-36.1	-46.8	25	21.7
300	31	9,341	-44.6		26	24.8
250	31	10,538	-52.9		26	29.8
200	31	11,954	-59.8		26	30.4
175	30	12,789	-60.5		26	31.1
150	30	13,746	-62.1		26	28.5
125	30	14,867	-64.3		26	26.7
100	28	16,221	-67.1		26	23.3
80	28	17,562	-68.8		26	18.6
70	27	18,361	-67.6		27	15.5
60	26	19,293	-65.7		26	10.7
50	26	20,409	-62.4		27	7.4
40	25	21,795	-59.4		29	3.9
30	24	23,615	-55.8		01	2.0
25	23	24,762	-54.4		35	2.1
20	21	26,213	-53.1		01	3.0
15	20	28,074	-51.3		36	3.2
10	8	30,755	-48.0			

MONTERREY, MEXICO 966 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	17	423	12.3	8.0	34	1.3
950	17	589	14.0	6.1	34	2.0
900	17	1,046	13.7	3.6	33	1.3
850	17	1,527	12.2	2.5	16	2.4
800	17	2,034	10.7	-.3	18	1.9
750	17	2,570	9.0	-3.8	21	3.2
700	17	3,138	5.4	-7.4	23	4.2
650	17	3,739	1.0	-9.8	25	5.6
600	17	4,378	-3.2	-15.3	24	8.3
550	17	5,060	-8.1	-20.9	24	9.1
500	17	5,793	-13.0	-28.9	24	9.3
450	17	6,588	-18.5	-32.6	23	10.8
400	17	7,454	-25.2	-36.4	24	15.0
350	17	8,412	-32.4	-41.9	24	15.5
300	17	9,478	-40.9	-49.3	25	19.0
250	17	10,692	-50.6		25	20.5
200	17	12,115	-59.3		26	24.5
175	17	12,949	-61.2		26	21.9
150	17	13,899	-64.0		26	20.3
125	17	15,011	-66.7		25	18.7
100	16	16,339	-71.4		26	15.5
80	16	17,653	-72.7		26	10.5
70	16	18,439	-71.4		25	7.0
60	14	19,358	-68.9		26	5.2
50	14	20,458	-65.3		28	3.8
40	14	21,832	-61.0		32	.7
30	14	23,641	-56.6		06	3.1
25	14	24,802	-55.0		06	2.6
20	14	26,235	-52.8		04	2.9
15	12	28,111	-49.4			

MONETT, MO. 966 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	438	-1.7	-4.9	16	1.3
950	29	578	-1.3	-6.8	21	2.0
900	30	1,006	.7	-8.6	25	7.4
850	30	1,466	1.7	-11.8	26	10.3
800	30	1,954	.5	-14.6	27	12.3
750	30	2,470	-1.5	-16.4	27	13.4
700	30	3,017	-4.0	-19.1	27	16.4
650	30	3,598	-7.1	-21.5	27	19.7
600	30	4,218	-10.9	-25.7	27	22.0
550	30	4,881	-14.7	-29.2	27	25.1
500	30	5,597	-19.3	-34.1	27	27.4
450	30	6,371	-24.9	-39.8	27	29.5
400	30	7,217	-30.9	-44.6	27	32.3
350	30	8,155	-37.6	-49.4	27	34.7
300	30	9,198	-45.3		27	38.4
250	30	10,391	-54.0		27	40.7
200	30	11,803	-59.3		26	41.6
175	29	12,637	-59.1		26	38.4
150	28	13,601	-59.6		27	37.3
125	28	14,737	-61.3		27	33.0
100	28	16,114	-63.7		27	27.3
80	28	17,480	-64.0		26	21.2
70	27	18,303	-63.0		27	16.3
60	27	19,255	-61.1		27	12.7
50	26	20,395	-59.6		28	9.0
40	26	21,798	-58.0		29	6.7
30	24	23,618	-56.2		31	6.4
25	24	24,781	-55.0		32	6.3
20	21	26,200	-54.3		32	7.9
15	17	28,031	-52.4		29	9.9
10	10	30,682	-48.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA.
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	7.8	4.9	36	.7
1000	31	168	8.7	4.5	03	.2
950	31	594	8.9	3.1	22	2.7
900	31	1,042	9.1	.1	27	5.3
850	31	1,516	7.8	-.7	26	8.9
800	31	2,015	6.3	-4.0	26	10.3
750	31	2,542	3.9	-6.9	26	12.3
700	31	3,100	1.1	-11.2	26	14.3
650	31	3,693	-2.1	-15.5	26	15.5
600	31	4,326	-5.5	-19.6	26	18.4
550	31	5,002	-9.9	-23.9	26	19.7
500	31	5,731	-14.7	-28.5	26	21.2
450	31	6,520	-20.4	-33.6	26	22.9
400	31	7,381	-27.0	-38.3	26	26.3
350	31	8,332	-34.2	-44.9	25	28.5
300	30	9,389	-42.7	-48.2	26	31.3
250	30	10,596	-51.7		25	35.7
200	30	12,015	-59.9		26	37.9
175	30	12,846	-61.5		26	36.9
150	30	13,800	-62.3		26	35.0
125	30	14,918	-65.5		26	32.0
100	30	16,264	-68.8		26	26.8
80	28	17,592	-70.0		26	20.4
70	27	18,387	-68.2		26	16.3
60	27	19,318	-65.2		26	12.5
50	27	20,439	-62.0		26	7.9
40	27	21,829	-59.0		26	6.3
30	26	23,644	-56.0		28	5.2
25	25	24,808	-54.4		29	5.2
20	23	26,247	-52.6		29	5.5
15	21	28,124	-49.5		29	5.0
10	14	30,791	-46.3		27	10.8

NASHVILLE, TENN.
999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	2.2	-2.4	29	.5
1000						
950	30	582	1.8	-3.5	23	3.0
900	30	1,019	2.2	-5.7	25	6.0
850	30	1,481	1.9	-7.2	26	10.4
800	30	1,969	.5	-11.2	26	12.8
750	30	2,485	-1.4	-14.7	26	16.0
700	30	3,032	-4.1	-18.4	26	18.8
650	30	3,614	-6.7	-21.1	26	22.5
600	30	4,236	-9.7	-24.7	26	25.8
550	30	4,902	-13.7	-28.1	26	28.2
500	30	5,621	-18.2	-32.1	26	31.3
450	30	6,400	-23.3	-36.3	26	34.0
400	30	7,251	-29.6	-42.5	26	37.0
350	30	8,193	-36.6	-49.1	26	40.0
300	30	9,239	-45.1		26	41.8
250	30	10,432	-54.1		25	44.4
200	30	11,843	-59.5		26	44.3
175	30	12,675	-60.2		26	42.1
150	30	13,635	-61.7		26	38.1
125	27	14,749	-63.5		26	35.8
100	23	16,114	-65.9		26	30.4
80	21	17,468	-66.2		26	25.5
70	21	18,281	-64.7		26	19.9
60	21	19,225	-63.5		26	16.5
50	21	20,351	-61.3		26	13.4
40	20	21,742	-59.6		27	9.3
30	16	23,555	-57.0		28	7.3
25	17	24,709	-55.6		28	7.6
20	14	26,132	-54.1		28	8.6
15	13	27,989	-52.0		28	8.8
10	8	30,704	-46.9			

* NOME, ALASKA
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-16.6	-21.4	10	2.8
1000						
950	31	516	-12.3	-18.0	13	4.1
900	31	929	-13.3	-19.2	15	3.0
850	31	1,363	-14.8	-21.3	14	2.5
800	31	1,820	-16.9	-23.3	14	1.4
750	31	2,302	-19.1	-26.2	17	.9
700	31	2,813	-21.9	-29.1	21	1.0
650	30	3,355	-25.0	-32.1	23	1.1
600	30	3,932	-28.6	-35.6	24	1.9
550	30	4,551	-32.5	-38.8	26	3.5
500	30	5,217	-36.7	-41.2	27	4.8
450	30	5,939	-41.5	-43.7	26	5.6
400	30	6,729	-46.7		26	7.3
350	30	7,608	-51.5		27	7.9
300	30	8,597	-55.0		26	10.4
250	30	9,756	-56.8		26	14.2
200	30	11,178	-54.3		25	16.2
175	30	12,036	-53.3		26	17.8
150	30	13,030	-53.0		26	20.3
125	29	14,205	-52.7		26	23.1
100	28	15,642	-52.3		26	26.5
80	28	17,086	-51.8		27	30.3
70	27	17,946	-51.8		27	32.6
60	27	18,946	-51.4		27	34.7
50	26	20,129	-50.9		27	38.4
40	26	21,587	-49.4		27	40.0
30	25	23,476	-49.0		27	39.3
25	22	24,667	-49.0		27	39.7
20	21	26,128	-48.5		27	44.0
15	15	28,012	-45.4			
10	10	30,753	-40.9			

NORTH PLATTE, NEBR.
916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	-10.3	-14.3	31	1.4
1000						
950						
900	30	989	-8.2	-14.9	31	3.4
850	31	1,432	-3.6	-14.1	30	9.2
800	31	1,910	-5.0	-16.0	30	11.5
750	31	2,416	-6.7	-16.7	29	14.5
700	31	2,952	-9.7	-18.3	29	17.0
650	31	3,521	-12.7	-21.6	29	18.6
600	31	4,129	-16.0	-26.3	28	20.2
550	31	4,779	-20.2	-30.3	28	22.1
500	31	5,479	-24.9	-35.0	29	25.7
450	31	6,237	-29.8	-39.5	28	28.3
400	31	7,067	-35.6	-44.8	28	31.0
350	31	7,988	-41.5	-47.9	28	34.2
300	31	9,015	-48.2		28	37.5
250	31	10,199	-54.9		28	38.5
200	31	11,613	-57.3		27	37.0
175	31	12,459	-56.9		27	35.0
150	31	13,435	-56.5		28	33.5
125	31	14,590	-57.6		28	28.0
100	31	15,996	-59.0		28	21.4
80	31	17,392	-60.2		28	16.9
70	31	18,229	-58.3		28	14.5
60	31	19,200	-58.1		28	12.2
50	30	20,349	-57.2		29	11.1
40	29	21,757	-57.0		30	11.0
30	27	23,585	-55.3		31	10.7
25	27	24,749	-54.9		32	12.0
20	24	26,185	-53.8		32	12.2
15	18	28,048	-52.3		31	12.2
10	5	30,720	-46.3			

OAKLAND, CALIF.
1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	5.6	2.1	06	.9
1000	31	179	7.2	-.3	04	1.3
950	31	601	7.1	-3.2	36	3.1
900	31	1,045	6.8	-7.1	34	4.0
850	31	1,513	5.4	-10.5	31	4.0
800	31	2,007	3.5	-13.3	31	5.5
750	31	2,529	1.1	-17.9	31	6.4
700	31	3,080	-1.7	-20.4	30	7.2
650	31	3,666	-5.0	-23.6	30	8.9
600	31	4,291	-9.1	-27.6	30	10.9
550	31	4,957	-14.0	-31.0	30	12.0
500	31	5,674	-18.8	-35.0	30	13.5
450	31	6,450	-24.6	-39.1	29	14.9
400	31	7,297	-30.8	-44.8	29	17.7
350	31	8,234	-38.0	-50.3	29	19.2
300	31	9,274	-46.2		29	20.3
250	31	10,463	-54.8		29	20.6
200	31	11,866	-61.2		29	21.2
175	31	12,696	-60.2		29	20.9
150	30	13,655	-59.5		29	20.0
125	29	14,795	-61.1		29	17.3
100	29	16,174	-63.2		29	14.0
80	26	17,544	-63.1		31	10.9
70	24	18,361	-62.4		31	8.7
60	24	19,315	-61.5		33	7.8
50	23	20,451	-59.4		35	5.8
40	23	21,856	-57.2		02	6.1
30	22	23,684	-54.7		04	7.6
25	20	24,857	-53.4		05	8.4
20	20	26,300	-51.6		05	10.8
15	14	28,184	-49.3		06	14.3
10	8	30,874	-46.8			

OMAHA, NEBR.
968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	-9.6	-12.0	28	1.4
1000						
950	30	555	-9.1	-13.3	30	3.4
900	31	970	-5.6	-14.9	28	8.5
850	31	1,419	-4.4	-15.9	28	11.2
800	31	1,896	-5.9	-17.1	28	13.9
750	31	2,400	-8.1	-18.3	28	16.0
700	31	2,933	-10.8	-21.4	28	18.8
650	31	3,500	-13.8	-23.9	28	20.7
600	31	4,104	-17.2	-28.3	28	24.1
550	31	4,751	-21.4	-32.1	28	26.9
500	31	5,448	-26.1	-36.1	28	29.1
450	31	6,203	-31.0	-40.5	28	32.5
400	31	7,029	-36.3	-46.1	28	37.2
350	31	7,947	-41.8	-47.6	27	41.5
300	31	8,975	-48.2		27	45.8
250	31	10,159	-54.3		27	45.1
200	31	11,578	-56.3		27	44.4
175	30	12,423	-55.7		27	41.4
150	30	13,405	-55.9		27	38.8
125	29	14,555	-57.3		27	30.5
100	27	15,954	-58.1		27	25.1
80	27	17,353	-59.5		28	18.6
70	27	18,191	-58.3		28	16.3
60	27	19,161	-58.3		28	13.5
50	27	20,309	-57.9		29	12.9
40	25	21,710	-57.2		30	9.9
30	23	23,544	-55.7		31	9.5
25	22	24,714	-55.7		30	10.1
20	20	26,148	-53.9		32	10.8
15	14	28,020	-52.4		32	12.9
10	5	30,731	-48.1			
7						

+ PAGO PAGO, AMERICAN SAMOA
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	28.1	23.5	03	2.3
1000	31	75	27.0	21.0	03	2.6
950	31	527	23.5	18.2	02	4.4
900	31	998	20.3	15.4	01	4.2
850	31	1,490	17.3	11.4	36	3.5
800	31	2,007	14.8	8.6	36	2.5
750	31	2,551	12.1	4.9	36	2.4
700	31	3,127	8.8	.0	35	1.8
650	31	3,737	5.8	-3.5	35	2.2
600	31	4,389	2.4	-8.2	33	2.1
550	31	5,087	-1.5	-12.6	34	1.8
500	31	5,841	-5.6	-18.1	32	.4
450	30	6,661	-10.3	-22.6	25	.3
400	30	7,559	-15.7	-28.1	25	.8
350	30	8,556	-22.3	-35.3	22	1.8
300	30	9,667	-30.7	-44.9	21	3.9
250	30	10,934	-41.1	-52.0	21	5.7
200	30	12,410	-53.5		20	7.5
175	28	13,259	-60.6		20	9.0
150	28	14,202	-68.1		19	10.6
125	28	15,277	-75.1		18	8.0
100	28	16,553	-79.8		15	5.5
80	27	17,819	-77.3		10	8.0
70	27	18,594	-72.9		09	8.1
60	27	19,506	-69.5		09	7.8
50	27	20,608	-64.0		09	8.4
40	26	21,987	-60.6		08	9.8
30	25	23,799	-55.9		09	12.4
25	24	24,967	-53.0		09	14.9
20	22	26,416	-49.9		08	20.1
15	19	28,319	-46.1		09	23.7
10	12	31,050	-41.0			
7						

* PEORIA, ILL.
995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	-8.4	-12.1	25	.8
1000						
950	31	555	-7.1	-12.6	26	4.9
900	31	978	-5.2	-13.5	26	8.3
850	31	1,428	-5.1	-15.5	27	11.3
800	31	1,903	-6.2	-17.5	27	13.6
750	31	2,407	-7.8	-20.5	27	16.2
700	31	2,941	-10.6	-22.6	27	18.5
650	31	3,508	-13.6	-24.1	27	20.5
600	31	4,113	-16.8	-26.2	27	24.1
550	31	4,762	-20.6	-30.7	27	27.7
500	31	5,461	-24.9	-33.4	27	30.7
450	31	6,220	-29.5	-37.6	27	34.7
400	31	7,052	-34.8	-42.0	26	38.5
350	31	7,975	-41.0	-46.7	26	41.4
300	31	9,005	-47.8		26	44.6
250	31	10,191	-54.3		26	47.1
200	31	11,608	-57.5		26	45.1
175	31	12,452	-57.3		26	43.0
150	30	13,423	-57.2		26	37.9
125	29	14,571	-58.7		26	33.3
100	29	15,966	-60.2		26	26.5
80	28	17,352	-60.7		26	21.6
70	28	18,184	-60.5		26	21.1
60	27	19,145	-59.5		27	16.4
50	27	20,286	-59.3		28	15.9
40	25	21,691	-58.5		28	13.7
30	23	23,498	-57.5		29	14.5
25	21	24,654	-56.8		29	14.0
20	17	26,094	-55.5		30	13.3
15	13	27,903	-54.4		29	19.7
10	11	30,585	-48.3		30	21.8
7	7	33,039	-43.4			

* PITTSBURGH, PA.
976 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-3.5	-8.0	24	2.7
1000						
950	31	566	-4.0	-8.7	25	4.9
900	31	992	-5.8	-10.8	26	9.1
850	31	1,440	-5.8	-15.2	27	12.8
800	31	1,914	-6.5	-17.1	27	15.8
750	31	2,417	-8.0	-19.2	27	18.7
700	31	2,952	-10.0	-20.7	27	21.5
650	31	3,521	-12.5	-23.3	27	24.9
600	31	4,129	-15.5	-26.0	27	28.3
550	31	4,781	-19.1	-30.3	26	32.3
500	31	5,485	-23.1	-33.8	26	36.3
450	31	6,250	-27.4	-37.3	26	40.5
400	31	7,089	-32.5	-42.0	26	44.7
350	31	8,020	-39.0	-47.9	26	48.6
300	31	9,058	-46.5		26	50.9
250	31	10,247	-54.4		26	53.8
200	31	11,661	-58.0		26	47.8
175	28	12,506	-58.0		26	45.3
150	26	13,481	-58.5		26	42.0
125	25	14,623	-60.5		26	38.1
100	24	16,011	-62.2		26	33.0
80	24	17,390	-62.0		26	26.5
70	24	18,218	-60.9		26	22.1
60	23	19,181	-60.2		27	18.6
50	21	20,321	-60.2		26	15.4
40	21	21,714	-59.2		27	14.1
30	20	23,530	-57.5		28	13.4
25	19	24,681	-57.3		28	14.3
20	17	26,088	-56.2		28	17.6
15	12	27,923	-54.7		28	18.5
10	11	30,579	-49.6		29	18.1
7	5	32,926	-47.3			

+ PONAPE, CAROLINE IS.
1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	27.7	23.8	08	3.1
1000	30	68	26.6	21.3	07	3.6
950	31	519	23.1	18.5	07	7.1
900	31	989	19.8	15.1	07	7.6
850	31	1,481	17.2	9.8	08	7.4
800	31	1,997	15.3	4.8	09	5.5
750	31	2,542	12.9	-.5	09	4.6
700	31	3,119	10.1	-5.6	09	4.3
650	31	3,732	6.9	-10.7	09	5.3
600	31	4,385	3.1	-16.0	08	5.9
550	30	5,087	-.7	-19.5	08	6.8
500	30	5,842	-5.1	-24.0	08	7.7
450	30	6,662	-9.9	-28.8	08	8.7
400	30	7,561	-15.2	-34.4	07	9.0
350	30	8,560	-21.9	-40.0	07	9.0
300	30	9,673	-30.4	-46.8	08	6.5
250	30	10,942	-40.6	-54.4	10	4.6
200	30	12,422	-53.0		10	4.4
175	29	13,266	-59.9		11	4.5
150	29	14,212	-67.7		11	5.8
125	29	15,287	-75.8		10	7.5
100	29	16,551	-82.8		08	10.9
80	29	17,798	-78.9		08	6.6
70	29	18,572	-71.9		28	1.2
60	28	19,491	-68.1		27	7.5
50	28	20,597	-64.3		27	10.3
40	28	21,973	-60.8		27	9.2
30	28	23,781	-56.6		27	4.5
25	28	24,942	-54.8		23	1.9
20	26	26,377	-52.4		10	3.2
15	25	28,252	-49.0		09	14.7
10	16	30,939	-44.3		09	22.7
7	7	33,370	-38.5			

PORTLAND, MAINE
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	-7.0	-11.8	30	2.3
1000	31	135	-4.9	-10.5	28	2.8
950	31	538	-6.0	-11.7	26	4.9
900	31	961	-7.5	-14.3	26	7.9
850	31	1,405	-8.4	-16.6	27	12.1
800	31	1,875	-9.2	-19.2	26	15.9
750	31	2,373	-10.7	-20.4	26	18.5
700	31	2,902	-13.1	-22.8	26	21.3
650	31	3,464	-15.3	-25.6	26	24.1
600	31	4,066	-18.1	-28.9	26	28.0
550	31	4,712	-21.5	-32.4	26	30.9
500	31	5,409	-25.6	-37.4	26	36.0
450	31	6,165	-30.5	-40.7	26	39.2
400	31	6,993	-35.9	-45.1	26	42.7
350	31	7,913	-41.3	-47.6	26	46.3
300	31	8,943	-47.4		26	44.0
250	31	10,131	-54.1		27	37.8
200	31	11,548	-57.7			
175	31	12,392	-57.3			
150	31	13,368	-56.5			
125	29	14,526	-58.0			
100	29	15,927	-59.3			
80	28	17,328	-59.2			
70	28	18,165	-59.7			
60	27	19,130	-59.1			
50	27	20,274	-58.7		27	20.7
40	26	21,676	-58.6		27	22.3
30	25	23,498	-56.7		27	20.1
25	25	24,654	-56.9		27	21.1
20	24	26,070	-56.1		27	21.6
15	19	27,888	-56.4		27	22.5
10	13	30,503	-52.7			
7						

* QUILLAYUTE, WASH.
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	1.8	-.2	23	.8
1000						
950	31	548	.0	-2.1	25	6.0
900	31	980	-2.4	-5.0	26	8.3
850	31	1,432	-4.3	-9.7	26	9.8
800	31	1,908	-6.2	-13.1	27	11.1
750	31	2,411	-8.4	-15.9	27	14.0
700	31	2,944	-11.1	-18.5	28	16.2
650	31	3,510	-13.8	-22.2	28	18.8
600	31	4,115	-16.9	-25.0	28	21.0
550	30	4,760	-20.7	-28.7	29	23.4
500	30	5,459	-25.4	-33.9	29	23.7
450	30	6,215	-30.8	-37.6	29	25.1
400	30	7,042	-36.3	-42.1	29	25.3
350	30	7,960	-42.3	-47.1	29	24.2
300	30	8,985	-48.4		29	26.1
250	30	10,170	-54.2		29	27.3
200	29	11,578	-57.4		30	23.7
175	28	12,426	-57.1		30	22.1
150	27	13,401	-55.8		29	20.8
125	25	14,573	-55.4		29	18.9
100	24	15,995	-55.8		29	16.1
80	24	17,415	-56.0		30	14.8
70	24	18,265	-55.6		30	12.0
60	22	19,241	-55.7		30	10.5
50	22	20,403	-55.3		31	10.4
40	21	21,832	-55.0		32	10.6
30	18	23,680	-53.1		34	8.9
25	18	24,855	-53.3		35	7.8
20	14	26,322	-51.9		35	8.4
15	11	28,223	-50.6		01	8.9
10	7	30,865	-49.1			
7						

RAPID CITY, S. DAK.
901 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	-10.3	-16.9	33	3.1
1000						
950						
900						
850	31	1,412	-7.8	-16.6	30	8.0
800	31	1,884	-8.1	-17.3	30	10.8
750	31	2,384	-10.3	-19.8	30	14.0
700	31	2,913	-12.5	-21.9	30	17.1
650	31	3,476	-15.9	-24.7	30	19.0
600	31	4,075	-19.6	-28.1	29	21.4
550	31	4,716	-23.7	-31.8	29	23.3
500	31	5,405	-28.2	-35.7	29	26.4
450	31	6,154	-33.5	-39.9	29	29.4
400	31	6,970	-39.4	-44.0	29	31.5
350	31	7,875	-45.1	-48.7	29	35.3
300	31	8,890	-50.5		29	35.9
250	31	10,066	-54.9		29	36.5
200	30	11,483	-56.3		28	32.4
175	29	12,334	-56.0		28	31.6
150	28	13,318	-55.3		28	29.6
125	28	14,479	-56.4		28	27.8
100	26	15,899	-57.5		28	24.6
80	25	17,308	-57.7		28	18.9
70	23	18,158	-59.0		29	17.6
60	23	19,128	-57.8		29	16.3
50	23	20,279	-57.2		30	15.6
40	21	21,701	-55.7		30	15.1
30	19	23,547	-54.6		31	12.1
25	17	24,706	-54.2		31	13.0
20	15	26,141	-54.0		32	16.5
15	9	28,022	-52.5			
10						
7						

ST CLOUD, MINN.
977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	-16.9	-21.8	26	2.1
1000						
950	31	523	-16.1	-19.9	28	4.5
900	31	932	-14.0	-18.8	28	7.7
850	31	1,368	-12.6	-18.3	28	10.8
800	31	1,831	-12.5	-19.0	28	12.7
750	31	2,323	-14.2	-21.1	28	14.3
700	31	2,844	-16.5	-23.7	28	16.9
650	31	3,399	-19.4	-26.9	28	19.2
600	31	3,990	-22.9	-29.6	28	21.4
550	31	4,623	-26.8	-33.6	28	23.9
500	31	5,304	-31.5	-36.6	28	26.3
450	31	6,042	-36.6	-39.9	28	27.5
400	31	6,849	-41.9	-44.0	28	30.2
350	31	7,746	-46.9		27	33.4
300	31	8,755	-51.2		27	37.2
250	31	9,933	-53.7		27	35.8
200	31	11,365	-53.8		27	36.0
175	31	12,224	-53.4		28	33.9
150	31	13,215	-53.7		27	30.3
125	30	14,384	-54.5		27	29.1
100	30	15,807	-56.0		28	27.4
80	30	17,222	-56.9		28	25.5
70	30	18,067	-57.5		28	24.6
60	28	19,042	-56.5		28	24.0
50	27	20,200	-56.5		28	22.3
40	27	21,617	-56.2		29	21.7
30	24	23,475	-55.8		29	18.5
25	23	24,639	-56.8		30	17.4
20	20	26,087	-55.2		30	18.3
15	17	27,938	-54.8		31	20.6
10	6	30,476	-55.1			
7						

* ST PAUL IS., ALASKA
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	10	-3.0	-4.8	13	3.0
1000						
950	28	476	-6.0	-7.5	14	5.3
900	28	897	-8.6	-11.3	16	5.2
850	28	1,339	-10.2	-15.8	17	5.6
800	28	1,804	-12.5	-19.6	18	5.8
750	28	2,295	-15.1	-24.3	18	5.5
700	28	2,814	-17.8	-27.0	19	6.4
650	28	3,365	-21.2	-29.9	21	7.2
600	28	3,951	-24.8	-34.0	21	8.5
550	28	4,579	-28.8	-37.5	22	9.9
500	28	5,255	-33.0	-40.3	22	11.0
450	28	5,989	-37.5	-43.0	22	13.3
400	28	6,794	-42.2	-44.5	22	16.5
350	28	7,691	-46.6		23	19.5
300	28	8,701	-51.0		22	22.8
250	28	9,880	-53.3		23	21.5
200	28	11,324	-50.7		23	18.5
175	28	12,196	-50.0		23	17.7
150	28	13,204	-49.3		23	19.6
125	28	14,399	-49.8		24	17.9
100	28	15,859	-49.5		24	18.0
80	28	17,324	-48.8		24	18.2
70	28	18,202	-48.7		24	18.3
60	27	19,214	-48.3		25	18.2
50	27	20,416	-47.8		25	18.7
40	27	21,893	-47.1		25	16.9
30	26	23,799	-46.6		26	18.1
25	26	25,010	-46.7		26	17.6
20	24	26,488	-46.6		26	17.7
15	22	28,403	-44.9		27	19.7
10	16	31,123	-44.0			
7	7	33,617	-40.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1972

SALEM, ILL.
998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	-4.1	-7.4	17	.2
1000						
950	31	565	-2.8	-11.0	24	3.6
900	31	995	-1.5	-13.1	26	6.4
850	31	1,451	-1.4	-16.7	26	9.4
800	31	1,933	-2.9	-18.5	26	12.7
750	31	2,443	-4.7	-20.8	26	15.6
700	31	2,983	-7.2	-24.9	26	19.0
650	31	3,557	-10.2	-26.3	27	21.0
600	31	4,170	-13.6	-29.4	27	24.6
550	31	4,827	-17.2	-30.5	27	28.9
500	31	5,536	-21.6	-34.6	26	31.9
450	31	6,304	-26.6	-38.5	26	34.7
400	31	7,145	-32.3	-44.2	26	38.2
350	31	8,078	-38.7	-47.9	26	39.1
300	31	9,117	-46.2		26	37.7
250	31	10,307	-54.2		26	39.9
200	30	11,723	-58.3		26	35.6
175	30	12,564	-58.1		26	34.7
150	30	13,534	-58.7		26	38.0
125	30	14,673	-61.0		26	28.9
100	30	16,053	-62.5		26	21.5
80	30	17,428	-62.5		26	17.5
70	30	18,253	-62.4		27	14.2
60	30	19,208	-60.8		27	12.8
50	29	20,340	-60.1		28	12.0
40	29	21,737	-59.0		29	10.1
30	28	23,554	-57.0		31	7.0
25	28	24,709	-56.6		30	8.4
20	27	26,131	-55.4		31	11.0
15	26	27,981	-53.3		31	9.0
10	17	30,640	-50.3		31	11.1
7	8	32,966	-48.6			

SALEM, OREG.
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	2.6	.1	19	3.4
1000	29	175	2.7	.1	20	3.5
950	31	581	2.1	-1.8	22	6.7
900	31	1,016	.5	-5.1	24	8.6
850	31	1,473	-1.7	-7.3	25	9.7
800	31	1,954	-4.1	-10.3	26	11.3
750	31	2,461	-6.3	-13.5	27	13.6
700	31	2,999	-8.9	-18.2	28	15.4
650	31	3,569	-11.8	-22.8	29	16.8
600	31	4,178	-15.2	-25.8	29	19.5
550	31	4,831	-19.5	-30.1	29	20.9
500	31	5,533	-23.9	-34.8	29	22.5
450	31	6,294	-29.0	-39.4	29	24.0
400	31	7,126	-34.9	-44.1	29	23.3
350	31	8,048	-41.3	-48.7	29	24.4
300	31	9,077	-48.1		30	22.3
250	31	10,261	-54.7		29	22.7
200	31	11,672	-58.9		30	19.3
175	28	12,503	-58.2		29	20.8
150	27	13,480	-57.3		29	20.1
125	27	14,630	-58.5		29	19.8
100	25	16,027	-59.4		29	16.9
80	24	17,442	-57.0		30	11.6
70	23	18,283	-57.9		31	9.5
60	22	19,250	-58.3		31	9.3
50	22	20,401	-56.8		32	9.0
40	21	21,820	-55.3		34	7.6
30	19	23,650	-55.2		34	9.8
25	19	24,816	-54.4		34	10.6
20	17	26,235	-53.4		35	9.1
15	12	28,114	-52.4		35	11.4
10	5	30,813	-50.2			
7						

SALT LAKE CITY, UTAH
873 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	-3.2	-8.2	15	2.4
1000						
950						
900						
850	31	1,500	-1.4	-10.3	19	2.7
800	31	1,982	-2.8	-12.5	24	4.0
750	31	2,491	-6.2	-14.1	26	6.5
700	31	3,028	-9.1	-16.7	28	10.3
650	31	3,599	-12.0	-19.4	29	12.7
600	31	4,208	-15.3	-23.1	29	14.6
550	31	4,861	-19.1	-27.1	29	17.1
500	31	5,564	-23.5	-32.5	29	20.6
450	31	6,327	-28.5	-37.2	29	23.7
400	31	7,162	-34.0	-42.6	30	26.5
350	31	8,087	-40.2	-47.0	30	28.6
300	31	9,120	-47.8		30	30.1
250	31	10,302	-55.5		29	31.6
200	31	11,709	-59.0		29	29.9
175	31	12,547	-58.5		29	28.3
150	31	13,517	-58.4		29	26.0
125	31	14,662	-59.4		29	22.7
100	31	16,055	-60.7		29	19.4
80	30	17,437	-61.8		29	15.2
70	30	18,268	-60.1		30	13.2
60	30	19,233	-58.6		30	9.9
50	30	20,382	-57.5		31	6.6
40	30	21,794	-56.5		33	6.1
30	30	23,626	-55.1		34	6.5
25	30	24,792	-54.4		34	7.5
20	29	26,224	-53.7		34	9.0
15	22	28,099	-51.9		36	8.6
10	9	30,822	-47.3			
7						

SAN DIEGO, CALIF.
1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	6.4	3.5	04	1.6
1000	29	153	9.0	-.2	04	1.4
950	31	576	11.1	-3.9	02	1.1
900	31	1,028	11.6	-9.3	01	1.1
850	31	1,504	9.6	-11.6	34	1.3
800	31	2,004	7.3	-14.6	30	1.8
750	31	2,533	4.9	-16.8	28	3.2
700	31	3,092	1.6	-19.2	30	4.6
650	31	3,684	-2.1	-22.4	29	6.0
600	31	4,315	-6.4	-25.9	29	6.5
550	31	4,989	-11.2	-28.8	29	7.3
500	30	5,713	-16.4	-32.8	29	7.2
450	30	6,496	-22.4	-37.9	29	8.3
400	30	7,350	-29.1	-42.9	29	9.2
350	30	8,292	-36.6	-49.1	29	10.0
300	30	9,338	-45.2		29	12.5
250	30	10,531	-54.1		29	15.4
200	30	11,942	-59.7		28	18.6
175	30	12,777	-59.6		27	19.1
150	30	13,738	-61.1		27	19.4
125	30	14,863	-63.7		27	18.6
100	30	16,224	-66.1		28	14.3
80	30	17,574	-66.7		28	10.6
70	29	18,383	-66.2		30	8.6
60	29	19,321	-64.4		31	6.5
50	29	20,444	-61.8		34	4.3
40	29	21,835	-59.0		02	4.2
30	27	23,653	-55.6		05	5.7
25	26	24,819	-54.0		05	5.3
20	24	26,255	-52.0		04	6.5
15	24	28,125	-50.0		05	7.2
10	20	30,785	-47.5		02	5.5
7	5	33,210	-42.3			

SAN JUAN, P. R.
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	23.3	17.5	11	3.4
1000	31	150	22.8	18.3	09	6.5
950	31	596	19.4	15.8	09	9.3
900	31	1,059	16.1	11.9	09	9.7
850	31	1,544	12.8	7.8	09	9.3
800	31	2,051	10.7	1.5	09	8.5
750	31	2,588	8.7	-5.6	09	7.8
700	31	3,156	6.4	-12.9	08	7.1
650	31	3,760	3.5	-16.7	08	6.6
600	31	4,405	-.2	-20.4	08	5.4
550	31	5,096	-4.4	-25.4	07	5.1
500	31	5,839	-9.4	-29.9	04	3.8
450	31	6,645	-14.7	-34.9	01	4.1
400	31	7,526	-21.3	-40.2	34	6.0
350	31	8,500	-28.0	-45.9	31	7.1
300	31	9,586	-36.0	-52.2	30	13.3
250	31	10,828	-45.4		28	17.7
200	31	12,282	-55.8		28	21.1
175	31	13,122	-61.1		28	19.8
150	29	14,067	-66.3		28	17.1
125	29	15,159	-71.4		29	11.5
100	29	16,459	-76.6		31	6.5
80	29	17,739	-77.0		01	3.2
70	29	18,511	-74.8		04	2.3
60	29	19,417	-70.6		04	1.7
50	29	20,513	-65.6		02	2.1
40	25	21,878	-60.5		03	.9
30	25	23,693	-54.4		04	2.2
25	23	24,869	-51.5		06	2.3
20	21	26,326	-48.8		09	1.6
15	17	28,215	-46.4		16	2.6
10	10	30,948	-43.3			
7						

SAN NICOLAS, CALIF.
994 MB

INSUFFICIENT OBSERVATIONS

* SAULT STE MARIE, MICH.
985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-12.0	-15.1	27	2.5
1000						
950	31	494	-11.1	-14.7	27	6.8
900	31	908	-12.9	-15.2	28	10.0
850	31	1,342	-14.3	-17.5	28	11.9
800	31	1,801	-15.6	-20.8	27	14.0
750	31	2,287	-16.9	-24.8	28	15.3
700	31	2,803	-19.0	-27.0	27	17.8
650	31	3,352	-21.4	-29.2	27	19.7
600	31	3,939	-24.4	-32.3	27	21.8
550	31	4,569	-27.9	-35.7	27	24.2
500	31	5,248	-32.0	-39.5	27	27.1
450	31	5,985	-37.0	-41.5	27	29.8
400	31	6,790	-42.1	-43.6	27	33.2
350	31	7,687	-46.6		27	36.9
300	31	8,699	-50.5		27	39.7
250	31	9,881	-53.1		27	40.3
200	31	11,318	-53.3		27	38.6
175	31	12,178	-53.1		27	37.9
150	31	13,171	-53.6		27	34.9
125	31	14,339	-55.0		27	34.2
100	31	15,762	-55.9		27	32.6
80	29	17,202	-56.8		27	27.3
70	28	18,044	-57.2		27	25.3
60	27	19,021	-57.9		27	24.7
50	26	20,165	-58.3		27	24.4
40	24	21,589	-57.0		27	25.1
30	22	23,435	-56.7		28	21.2
25	19	24,617	-56.5		29	21.6
20	19	26,032	-56.4		29	22.0
15	19	27,863	-55.3		29	24.0
10	19	30,469	-52.5		29	25.1
7	10	32,769	-46.4			
5						

* SHEMYA, ALASKA
997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	38	-.7	-5.1	32	.9
1000						
950	30	419	-3.9	-7.4	07	.5
900	30	843	-7.3	-9.1	16	1.2
850	30	1,285	-10.5	-12.1	20	1.5
800	30	1,750	-13.4	-17.6	21	1.9
750	30	2,238	-16.1	-21.9	19	2.2
700	30	2,755	-19.1	-25.1	20	3.0
650	30	3,303	-22.2	-28.1	21	3.7
600	30	3,887	-25.8	-32.0	22	4.5
550	30	4,513	-29.8	-36.6	23	5.7
500	30	5,186	-34.0	-39.1	23	7.4
450	30	5,917	-38.5	-40.3	23	9.5
400	30	6,717	-43.8	-42.8	23	12.4
350	30	7,608	-48.5		23	13.6
300	30	8,611	-51.6		23	15.1
250	30	9,793	-52.0		23	15.5
200	30	11,246	-49.5		23	17.0
175	30	12,123	-48.6		23	16.7
150	30	13,137	-48.6		23	16.4
125	30	14,337	-48.3		23	16.6
100	30	15,806	-48.3		23	16.3
80	30	17,275	-48.5		23	15.2
70	30	18,154	-48.1		23	14.4
60	30	19,171	-48.2		23	13.9
50	29	20,377	-47.6		23	13.2
40	29	21,854	-46.8		23	11.9
30	28	23,761	-46.6		22	10.7
25	27	24,976	-46.0		22	10.3
20	26	26,466	-45.7		22	10.2
15	25	28,393	-45.1		22	9.9
10	21	31,124	-44.2		22	8.3
7	14	33,481	-43.0			
5	6	35,737	-43.0			

* SHREVEPORT, LA.
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	6.0	4.0	14	.5
1000						
950	31	576	7.3	2.2	21	4.9
900	31	1,023	8.4	-1.1	24	7.1
850	31	1,495	7.5	-6.5	26	8.8
800	31	1,993	5.9	-9.6	26	10.4
750	31	2,520	3.7	-12.0	26	12.1
700	31	3,077	.8	-14.6	26	13.7
650	31	3,668	-2.6	-18.8	26	16.1
600	31	4,299	-6.4	-22.6	26	17.8
550	31	4,973	-11.0	-27.8	26	19.9
500	31	5,698	-15.9	-32.0	26	21.8
450	31	6,484	-21.6	-36.2	26	23.6
400	31	7,341	-28.1	-40.7	25	25.0
350	31	8,288	-35.4	-46.2	25	27.2
300	31	9,339	-44.0		26	28.4
250	31	10,537	-53.3		26	33.1
200	31	11,948	-60.4		26	35.4
175	31	12,778	-61.3		26	36.0
150	31	13,734	-61.8		26	33.5
125	31	14,854	-65.2		26	30.1
100	30	16,203	-67.9		26	25.0
80	28	17,536	-69.5		26	20.5
70	26	18,339	-68.5		26	16.8
60	26	19,270	-65.5		26	11.2
50	25	20,385	-62.9		26	9.4
40	22	21,763	-60.2		27	4.8
30	19	23,575	-57.4		27	4.7
25	18	24,731	-55.7		30	3.6
20	18	26,158	-54.1		29	5.6
15	17	28,010	-52.5		30	4.3
10	13	30,653	-49.2		26	10.3
7	10	33,052	-44.4			
5						

SPOKANE, WASH.
930 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	-5.9	-9.7	21	2.8
1000						
950						
900	30	977	-4.9	-8.4	22	6.3
850	30	1,426	-5.9	-10.6	24	9.1
800	30	1,900	-7.5	-12.2	26	11.4
750	30	2,401	-10.0	-14.1	27	12.8
700	30	2,930	-13.1	-17.9	28	14.6
650	30	3,491	-16.0	-23.1	28	17.2
600	30	4,091	-19.3	-26.4	28	19.7
550	30	4,733	-23.2	-30.4	28	22.2
500	30	5,425	-27.4	-34.3	29	25.1
450	30	6,176	-31.9	-36.5	29	29.1
400	30	6,999	-37.2	-41.8	29	30.9
350	30	7,911	-44.0	-47.1	29	34.2
300	30	8,930	-49.9		30	37.4
250	30	10,109	-54.8		30	38.8
200	30	11,529	-56.7		30	35.0
175	30	12,378	-55.5		30	31.4
150	29	13,368	-54.4		30	28.1
125	28	14,537	-54.8		30	24.0
100	28	15,960	-55.9		30	22.0
80	26	17,384	-55.4		30	19.0
70	26	18,239	-54.5		30	15.2
60	26	19,225	-55.3		30	14.6
50	26	20,389	-55.2		31	13.7
40	26	21,817	-54.6		31	13.9
30	23	23,666	-52.8		33	13.5
25	22	24,836	-53.8		33	13.2
20	19	26,309	-52.4		34	13.4
15	13	28,181	-51.6		33	12.5
10	■	30,898	-50.1			
7						
5						

* SWAN ISLAND, W. I.
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	25.1	21.5	08	5.3
1000	30	122	24.7	20.8	08	6.4
950	30	571	21.0	18.8	09	8.0
900	30	1,038	17.9	14.5	09	8.4
850	30	1,525	14.9	9.3	10	8.3
800	30	2,037	12.2	5.2	10	7.9
750	30	2,575	9.8	-.7	10	7.8
700	30	3,146	7.1	-6.4	09	7.0
650	30	3,752	4.1	-11.9	10	6.6
600	30	4,399	.9	-16.4	10	4.8
550	30	5,093	-3.0	-21.2	10	2.8
500	30	5,841	-7.8	-25.6	12	1.7
450	30	6,652	-13.6	-30.5	21	1.6
400	30	7,536	-20.2	-36.1	26	3.3
350	30	8,514	-27.7	-42.5	25	6.3
300	30	9,600	-36.3	-50.1	25	9.9
250	30	10,839	-46.1		25	14.2
200	29	12,285	-57.0		24	18.1
175	28	13,121	-62.4		24	18.2
150	28	14,064	-65.6		25	15.6
125	26	15,162	-70.5		26	12.4
100	25	16,466	-76.8		25	8.3
80	25	17,744	-77.5		23	1.8
70	25	18,514	-75.4		15	.7
60	23	19,421	-70.1		11	.4
50	22	20,521	-65.1		31	.8
40	22	21,894	-61.5		32	1.0
30	19	23,703	-55.4		03	1.7
25	18	24,872	-52.1		06	2.6
20	18	26,326	-49.4		01	.8
15	13	28,220	-45.4		06	2.8
10						
7						
5						

TAMPA, FLA.
1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	16.0	14.6	11	1.5
1000	31	165	17.2	14.7	14	2.6
950	31	604	17.0	10.4	18	4.4
900	31	1,065	14.6	7.3	20	4.6
850	31	1,546	11.9	3.3	22	4.9
800	31	2,052	9.8	-2.5	24	5.4
750	31	2,586	7.4	-10.0	25	6.3
700	31	3,150	4.3	-14.7	25	7.1
650	31	3,749	.9	-17.2	25	7.8
600	31	4,388	-2.7	-22.0	25	9.1
550	31	5,072	-7.1	-25.9	25	10.6
500	31	5,808	-12.1	-30.0	26	12.9
450	31	6,604	-18.1	-34.7	25	14.4
400	31	7,473	-24.4	-39.1	25	16.0
350	31	8,435	-31.8	-45.5	25	18.2
300	31	9,503	-40.3	-54.9	26	20.8
250	31	10,720	-50.3		26	23.7
200	31	12,146	-59.2		26	26.2
175	31	12,977	-62.1		26	27.2
150	31	13,927	-63.7		26	26.0
125	31	15,035	-67.7		26	23.7
100	31	16,362	-72.0		25	19.5
80	31	17,670	-73.2		26	14.8
70	31	18,454	-72.2		26	10.6
60	31	19,368	-69.5		25	7.7
50	31	20,469	-64.7		25	5.4
40	31	21,844	-61.1		27	3.6
30	31	23,650	-56.7		32	1.4
25	30	24,813	-54.2		32	2.0
20	29	26,254	-52.2		32	1.4
15	25	28,127	-49.1		2-	4.9
10	19	30,820	-43.9		25	10.7
7	9	33,224	-42.0			
5						

TOPEKA, KANS.
987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	268	-6.2	-10.0	33	.8
1000						
950	31	562	-5.1	-10.3	26	2.8
900	31	988	-2.5	-9.4	27	6.2
850	31	1,443	-1.6	-11.2	27	9.6
800	31	1,925	-2.9	-14.6	28	11.2
750	31	2,435	-5.0	-17.4	28	14.3
700	31	2,974	-7.7	-20.7	28	16.9
650	31	3,548	-10.6	-23.3	27	19.8
600	31	4,159	-14.1	-26.6	27	22.1
550	31	4,815	-18.1	-30.6	27	25.1
500	31	5,521	-22.6	-34.1	27	28.4
450	31	6,286	-27.6	-38.2	27	32.1
400	31	7,123	-33.3	-42.8	27	35.4
350	31	8,051	-40.0	-46.9	27	38.3
300	31	9,083	-47.8		27	38.2
250	31	10,268	-54.9		27	41.2
200	31	11,680	-57.9		27	35.6
175	30	12,530	-57.5		27	31.6
150	30	13,503	-58.0		27	29.4
125	30	14,647	-60.0		27	27.8
100	30	16,034	-61.2		27	23.0
80	30	17,415	-62.0		27	19.5
70	29	18,245	-60.4		27	16.7
60	29	19,206	-60.2		28	13.0
50	29	20,347	-58.8		29	10.9
40	29	21,753	-57.6		29	11.0
30	29	23,575	-56.0		31	7.7
25	27	24,737	-55.6		31	7.6
20	26	26,156	-55.2		33	9.4
15	19	28,038	-52.6		35	9.6
10	7	30,734	-47.6			
7						
5						

◆ TRUK, CAROLINE IS.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	■	28.1	23.1	05	3.9
1000	31	85	27.4	20.0	06	4.5
950	31	538	23.6	17.5	07	7.4
900	31	1,008	20.3	13.7	07	7.1
850	31	1,500	17.7	8.1	08	6.0
800	31	2,017	15.5	3.7	08	5.8
750	31	2,563	13.5	-3.1	07	5.3
700	31	3,141	10.6	-8.6	08	5.2
650	31	3,754	7.2	-12.3	08	6.1
600	31	4,408	3.1	-14.5	09	6.4
550	31	5,108	-.7	-18.9	09	7.1
500	31	5,863	-4.8	-24.0	09	8.8
450	31	6,684	-9.8	-28.9	09	9.3
400	31	7,583	-15.4	-33.3	08	8.4
350	31	8,581	-22.1	-39.7	08	8.7
300	31	9,693	-30.3	-47.1	08	8.0
250	31	10,962	-40.8	-55.4	09	7.5
200	31	12,441	-53.1		10	7.1
175	31	13,288	-60.0		10	8.1
150	31	14,233	-67.7		10	8.9
125	31	15,307	-76.2		10	10.5
100	31	16,570	-82.6		09	13.3
80	31	17,819	-78.2		09	7.0
70	31	18,595	-72.1		27	1.9
60	31	19,510	-68.3		27	6.3
50	31	20,618	-63.9		27	8.6
40	31	21,996	-60.8		27	8.1
30	31	23,806	-56.3		27	4.7
25	30	24,967	-54.6		26	1.4
20	29	26,403	-51.9		11	4.8
15	25	28,278	-48.9		09	14.2
10	20	30,961	-43.5		10	23.5
7	14	33,381	-39.7			
5	6	35,681	-37.7			

* TUCSON, ARIZ.
926 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	3.8	-4.6	15	3.3
1000						
950						
900	31	1,026	10.3	-6.3	13	1.8
850	31	1,500	9.2	-9.6	21	.4
800	31	2,000	6.6	-11.8	25	3.3
750	31	2,527	3.8	-15.9	26	5.1
700	31	3,084	.8	-20.4	28	6.3
650	30	3,674	-2.8	-23.0	27	7.5
600	30	4,304	-6.8	-26.0	27	8.6
550	30	4,977	-11.5	-30.3	27	10.4
500	30	5,700	-16.6	-33.9	27	12.9
450	30	6,483	-22.2	-36.9	27	13.8
400	29	7,342	-28.8	-42.4	27	14.3
350	29	8,285	-36.5	-48.0	27	14.4
300	29	9,332	-45.0		27	15.2
250	29	10,525	-54.3		27	18.8
200	29	11,936	-59.4		27	23.0
175	28	12,773	-59.8		27	21.8
150	27	13,730	-62.0		27	21.4
125	26	14,850	-64.3		27	19.8
100	26	16,204	-67.1		27	17.6
80	26	17,549	-67.4		28	13.3
70	26	18,354	-66.8		28	10.8
60	26	19,290	-64.9		29	7.2
50	26	20,409	-62.3		31	4.2
40	26	21,797	-59.1		01	2.3
30	25	23,612	-55.8		04	3.4
25	25	24,777	-54.2		05	4.3
20	21	26,222	-52.4		05	5.0
15	16	28,092	-50.5		03	4.0
10	6	30,776	-46.7			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* VANDENBERG AFB, CALIF.
1008 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	7.1	3.3	05	1.8
1000	27	169	9.0	3.1	03	2.1
950	29	589	10.3	-2.6	01	3.1
900	29	1,039	10.3	-7.6	36	3.4
850	29	1,512	8.3	-11.5	35	4.0
800	29	2,011	6.1	-13.5	34	4.6
750	29	2,537	3.3	-16.9	33	5.1
700	29	3,092	-.1	-19.5	33	6.0
650	29	3,682	-3.4	-23.4	32	6.5
600	29	4,310	-7.5	-26.1	30	7.4
550	29	4,981	-12.3	-29.1	30	8.0
500	29	5,702	-17.4	-33.1	29	8.8
450	29	6,483	-23.0	-37.6	29	10.1
400	29	7,335	-29.6	-43.4	29	10.6
350	29	8,275	-37.2	-49.4	29	11.9
300	29	9,318	-45.8		29	13.0
250	29	10,508	-54.6		29	14.2
200	29	11,914	-59.7		29	16.4
175	29	12,750	-59.0		29	17.5
150	29	13,716	-60.0		29	17.2
125	29	14,849	-62.1		29	15.4
100	29	16,219	-64.1		29	12.8
80	29	17,583	-65.0		30	9.4
70	29	18,399	-64.1		31	7.6
60	29	19,345	-63.0		32	6.1
50	29	20,475	-60.1		35	5.2
40	29	21,875	-58.0		03	5.1
30	29	23,700	-55.2		05	6.2
25	29	24,870	-53.1		06	6.3
20	29	26,311	-52.2		06	7.5
15	27	28,178	-50.1		05	9.0
10	25	30,852	-46.6		06	8.1
7	14	33,264	-43.1			

VICTORIA, TEXAS
1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	10.6	8.3	02	1.2
1000	31	145	11.5	8.2	07	1.0
950	31	576	12.7	5.6	18	3.2
900	31	1,031	12.6	1.2	20	4.5
850	31	1,509	11.2	-2.9	23	4.8
800	31	2,014	9.6	-6.7	25	5.9
750	31	2,547	6.6	-10.8	25	6.8
700	31	3,110	3.8	-15.1	25	8.5
650	31	3,709	.3	-17.4	25	10.5
600	31	4,345	-3.9	-21.1	26	12.1
550	31	5,026	-8.8	-24.0	25	13.9
500	31	5,756	-14.1	-30.0	25	15.9
450	31	6,548	-19.5	-33.3	25	19.3
400	31	7,412	-25.8	-39.6	25	21.7
350	30	8,365	-33.5	-45.3	26	23.9
300	30	9,425	-41.8	-46.9	26	27.8
250	30	10,635	-51.5		26	32.1
200	30	12,053	-59.8		25	34.6
175	30	12,884	-61.6		26	32.8
150	30	13,837	-62.5		26	29.0
125	30	14,952	-66.3		26	26.9
100	28	16,290	-69.4		26	21.9
80	25	17,617	-70.7		26	16.4
70	25	18,409	-70.0		26	12.9
60	25	19,331	-67.7		26	9.4
50	25	20,439	-63.8		27	6.3
40	24	21,818	-60.3		26	3.6
30	23	23,626	-56.6		27	2.5
25	23	24,787	-55.2		28	2.5
20	23	26,218	-53.2		27	4.1
15	22	28,084	-50.4		30	3.4
10	12	30,795	-45.1			
7						

* WAKE IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	23.5	18.7	05	6.8
1000	31	123	22.5	16.8	06	7.3
950	31	567	18.6	15.5	06	7.7
900	31	1,030	15.2	12.9	06	7.4
850	31	1,512	12.0	8.7	06	5.5
800	31	2,019	10.9	-1.4	05	3.0
750	31	2,557	9.5	-8.4	01	2.0
700	31	3,127	7.6	-13.1	33	3.1
650	31	3,735	5.6	-17.6	31	4.2
600	31	4,385	1.8	-20.4	31	5.4
550	31	5,080	-2.5	-23.9	31	7.1
500	31	5,829	-7.2	-27.6	30	9.0
450	31	6,643	-12.1	-32.1	30	11.1
400	31	7,533	-18.2	-37.3	30	13.1
350	31	8,519	-25.7	-43.7	30	16.1
300	31	9,615	-33.5	-50.6	30	18.1
250	31	10,871	-42.5		30	19.6
200	31	12,343	-53.6		29	18.7
175	31	13,190	-59.8		28	16.7
150	31	14,137	-67.0		28	15.5
125	27	15,218	-74.4		28	13.5
100	23	16,488	-80.3		29	7.1
80	16	17,740	-79.7		31	1.6
70	15	18,505	-75.9		34	.5
60	14	19,409	-71.2		14	.8
50	14	20,503	-65.5		04	.2
40	13	21,874	-61.4		08	1.5
30	13	23,682	-56.0		08	2.0
25	11	24,853	-52.3		06	2.9
20	9	26,306	-50.5			
15	8	28,177	-48.1			
10	7	30,854	-42.9			
7						

* WALLOPS IS., VA. NASA
1020 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	3.7	.2	32	1.7
1000	31	160	4.1	-.2	29	2.5
950	31	578	3.6	-1.6	27	6.6
900	31	1,017	2.6	-3.6	26	9.2
850	31	1,479	1.5	-7.0	26	11.8
800	31	1,966	-.1	-9.2	26	14.2
750	31	2,482	-1.5	-11.6	25	17.2
700	31	3,029	-3.9	-15.6	25	19.8
650	31	3,611	-6.9	-18.7	25	23.7
600	31	4,232	-10.1	-21.9	25	27.2
550	31	4,898	-13.8	-25.2	25	29.3
500	31	5,616	-18.3	-29.9	25	33.1
450	31	6,395	-23.4	-33.2	25	36.0
400	31	7,246	-29.6	-38.4	25	37.8
350	31	8,188	-36.5	-44.1	25	37.4
300	31	9,235	-44.8		25	39.6
250	31	10,429	-54.1		26	40.0
200	31	11,834	-61.1		26	37.9
175	31	12,664	-60.9		26	37.3
150	30	13,621	-61.3		26	33.4
125	30	14,747	-63.6		26	31.4
100	29	16,110	-65.6		26	25.9
80	28	17,471	-65.5		26	20.6
70	27	18,290	-64.6		27	15.8
60	27	19,236	-62.9		27	13.7
50	27	20,364	-61.2		27	11.6
40	26	21,758	-59.4		27	9.2
30	25	23,570	-57.1		27	8.6
25	25	24,727	-56.1		28	8.1
20	24	26,148	-54.3		28	12.5
15	22	27,998	-52.8		27	14.4
10	13	30,644	-49.5			
7	11	33,021	-45.8			

WASHINGTON DULLES INT. AP
1010 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	-.8	-6.5	31	1.5
1000	28	170	.0	-6.9	30	2.5
950	31	572	.6	-6.6	28	6.0
900	31	1,005	-.3	-8.4	28	9.4
850	31	1,463	-.6	-11.7	28	12.3
800	31	1,946	-1.7	-13.2	27	14.8
750	31	2,459	-3.4	-15.5	27	17.2
700	31	3,002	-5.6	-18.8	26	20.1
650	31	3,580	-8.4	-21.4	26	22.9
600	31	4,198	-11.7	-24.3	26	26.6
550	31	4,860	-15.2	-26.9	26	30.6
500	31	5,574	-19.6	-31.4	26	33.9
450	31	6,349	-24.6	-35.6	26	37.0
400	31	7,196	-30.7	-41.9	26	39.8
350	31	8,135	-37.1	-46.8	26	43.4
300	31	9,180	-45.2		26	46.9
250	31	10,375	-53.7		26	49.7
200	31	11,785	-60.2		26	49.2
175	31	12,617	-60.2		26	48.2
150	31	13,580	-59.8		26	43.9
125	31	14,715	-61.9		26	39.1
100	31	16,089	-63.6		26	32.4
80	31	17,458	-63.5		26	26.4
70	31	18,280	-62.4		26	21.7
60	31	19,235	-61.5		26	17.5
50	31	20,368	-60.4		26	16.6
40	30	21,763	-58.8		27	14.6
30	29	23,578	-56.7		27	13.1
25	28	24,736	-55.6		27	12.4
20	28	26,163	-54.3		27	13.0
15	28	28,013	-52.6		27	15.7
10	22	30,645	-50.0		27	21.7
7	11	33,014	-44.3			

WAYCROSS, GA.
1014 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	44	10.9	9.5	26	.3
1000	31	162	12.0	8.2	22	.8
950	31	593	12.7	6.5	22	4.6
900	31	1,047	11.6	2.2	23	7.7
850	31	1,524	9.8	-.1	24	8.9
800	31	2,025	7.6	-5.0	25	9.6
750	31	2,555	5.2	-8.3	25	11.4
700	31	3,116	2.3	-12.2	25	13.5
650	31	3,711	-.9	-15.5	25	15.4
600	31	4,346	-4.5	-23.1	25	16.6
550	31	5,026	-8.9	-26.4	25	18.8
500	31	5,756	-14.1	-30.8	25	20.1
450	31	6,548	-19.7	-34.8	25	22.5
400	31	7,411	-26.1	-39.8	25	23.6
350	31	8,367	-33.1	-47.2	25	26.6
300	31	9,429	-41.6	-51.4	25	28.0
250	31	10,639	-51.2		26	32.3
200	30	12,058	-59.9		26	35.6
175	30	12,888	-62.1		26	34.4
150	29	13,840	-62.9		26	35.0
125	29	14,954	-66.8		26	31.3
100	29	16,292	-70.0		26	25.8
80	29	17,613	-71.3		26	19.7
70	29	18,405	-70.3		26	16.1
60	28	19,331	-67.2		26	10.6
50	28	20,443	-63.3		26	7.3
40	28	21,822	-61.0		26	5.9
30	28	23,628	-56.9		27	4.5
25	28	24,787	-55.4		28	5.0
20	27	26,218	-53.4		27	6.9
15	26	28,084	-50.8		27	8.9
10	23	30,755	-46.5		27	13.5
7	8	33,147	-43.2			
5						

WINNEMUCCA, NEV.
872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,312	-5.9	-9.2	20	1.5
1000						
950						
900						
850	31	1,516	-2.1	-8.5	21	3.0
800	31	1,997	-2.9	-10.2	25	5.9
750	31	2,507	-5.0	-13.7	27	8.2
700	31	3,047	-7.4	-16.4	28	9.8
650	31	3,622	-10.0	-20.6	29	12.9
600	31	4,235	-13.5	-23.1	29	15.1
550	31	4,892	-17.2	-27.0	30	17.1
500	31	5,601	-21.8	-33.3	30	17.9
450	31	6,369	-27.0	-37.8	30	20.2
400	31	7,207	-33.3	-44.0	29	18.5
350	31	8,135	-39.9	-48.0	29	20.6
300	30	9,166	-47.7		28	21.9
250	30	10,350	-55.4		29	21.8
200	30	11,752	-60.3		29	19.4
175	29	12,585	-59.3		29	19.7
150	28	13,547	-58.2		29	18.2
125	28	14,692	-59.4		29	16.7
100	26	16,080	-60.6		29	14.0
80	26	17,467	-61.4		30	10.4
70	26	18,297	-60.0		31	8.4
60	26	19,262	-59.3		31	6.9
50	26	20,408	-57.8		32	6.0
40	25	21,817	-56.5		34	6.3
30	25	23,653	-54.4		01	5.5
25	24	24,823	-53.0		01	5.6
20	21	26,264	-52.2		01	5.4
15	19	28,137	-50.7		01	6.7
10						
7						
5						

WINSLOW, ARIZ.
853 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,487	-4.4	-10.5	21	.8
1000						
950						
900						
850						
800	31	2,000	1.5	-12.6	28	3.8
750	31	2,519	.1	-15.8	27	5.3
700	31	3,069	-2.4	-18.7	28	8.1
650	30	3,654	-5.4	-22.3	28	10.2
600	30	4,277	-9.3	-25.6	29	12.4
550	30	4,944	-13.6	-29.1	29	13.9
500	30	5,662	-18.2	-33.2	29	15.5
450	30	6,441	-23.8	-38.1	29	15.6
400	30	7,290	-30.4	-43.6	29	16.5
350	30	8,227	-37.8	-48.8	28	19.1
300	30	9,268	-46.4		28	20.2
250	30	10,454	-55.6		29	21.0
200	29	11,861	-60.7		28	24.0
175	29	12,692	-60.7		28	23.2
150	28	13,655	-60.9		28	21.9
125	28	14,781	-63.8		28	20.8
100	27	16,141	-66.3		28	17.6
80	26	17,490	-66.3		28	14.0
70	25	18,303	-64.7		29	11.0
60	25	19,249	-62.7		30	7.6
50	25	20,377	-61.0		31	4.9
40	24	21,775	-58.1		35	3.1
30	22	23,609	-54.6		03	5.1
25	21	24,783	-54.1		05	5.9
20	21	26,220	-52.9		04	6.9
15	16	28,078	-51.7		04	6.5
10	9	30,737	-48.0			
7						
5						

YAKUTAT, ALASKA
1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	-9.5	-13.8	09	2.4
1000						
950	31	483	-5.9	-12.8	08	2.6
900	31	905	-8.4	-14.5	09	1.7
850	31	1,346	-11.0	-17.5	11	.9
800	31	1,810	-13.3	-20.1	26	.7
750	31	2,299	-16.0	-22.8	26	1.6
700	31	2,816	-18.9	-27.4	27	2.8
650	31	3,365	-22.1	-31.0	27	4.2
600	31	3,949	-25.5	-33.9	28	5.9
550	31	4,576	-29.4	-37.1	28	7.6
500	31	5,250	-33.8	-39.7	29	9.1
450	31	5,981	-38.8	-38.7	29	10.2
400	31	6,782	-43.1	-42.2	29	13.8
350	31	7,675	-47.5		29	18.9
300	31	8,683	-50.5		29	23.4
250	31	9,869	-52.0		29	24.5
200	31	11,310	-52.6		29	22.6
175	31	12,173	-52.4		29	22.7
150	31	13,171	-52.3		29	22.1
125	28	14,353	-52.4		29	23.2
100	28	15,798	-52.3		29	23.9
80	28	17,242	-52.0		29	25.2
70	28	18,107	-52.3		29	25.3
60	28	19,105	-51.8		29	27.5
50	28	20,289	-50.9		29	26.4
40	27	21,740	-51.1		30	27.2
30	27	23,614	-50.5		30	30.4
25	26	24,800	-49.7		30	29.8
20	25	26,274	-49.9		31	30.4
15	23	28,162	-49.9		31	33.8
10	15	30,840	-48.0			
7						
5						

YAP, CAROLINE IS.
+ 1008 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	27.5	23.8	08	2.7
1000	31	81	26.3	21.2	08	3.9
950	31	532	23.2	18.1	07	6.8
900	31	1,003	20.3	14.4	08	5.9
850	31	1,495	17.5	10.9	09	5.5
800	31	2,012	15.5	6.4	09	5.2
750	31	2,557	12.8	2.2	09	5.6
700	31	3,134	9.7	-3.5	09	6.0
650	31	3,746	6.4	-7.3	09	6.5
600	31	4,398	2.6	-11.8	09	6.9
550	31	5,097	-1.1	-16.7	09	7.5
500	31	5,851	-5.4	-22.5	10	7.6
450	31	6,670	-10.4	-26.0	10	7.9
400	31	7,567	-16.3	-32.9	10	8.4
350	31	8,562	-23.0	-39.7	10	8.5
300	31	9,669	-31.5	-47.3	10	8.0
250	31	10,933	-41.9		10	7.7
200	31	12,404	-54.1		12	7.7
175	31	13,249	-60.8		12	8.5
150	31	14,190	-68.5		12	10.3
125	31	15,261	-76.4		11	13.2
100	31	16,522	-83.1		10	13.7
80	31	17,769	-79.1		10	7.1
70	31	18,540	-73.6		08	.9
60	31	19,454	-68.9		29	3.8
50	31	20,556	-64.8		28	6.2
40	31	21,931	-60.9		28	4.6
30	31	23,738	-57.1		22	1.2
25	31	24,898	-54.5		12	2.4
20	30	26,336	-51.6		10	5.0
15	29	28,211	-49.3		09	12.4
10	27	30,899	-44.4		09	20.4
7	19	33,315	-39.8		09	22.6
5	5	35,663	-34.6			

YUCCA FLAT, NEV.
884 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,198	-3.2	-7.2	32	1.3
1000						
950						
900						
850	31	1,513	2.3	-9.1	35	2.8
800	31	2,002	1.5	-11.4	31	2.0
750	31	2,521	.0	-14.2	30	4.7
700	31	3,071	-2.0	-16.8	31	6.6
650	31	3,657	-5.4	-19.9	30	9.0
600	31	4,280	-9.3	-23.5	30	10.9
550	31	4,947	-13.7	-27.5	30	13.3
500	31	5,665	-18.5	-31.6	29	15.1
450	31	6,443	-24.0	-36.5	29	16.6
400	31	7,291	-30.6	-42.6	30	17.8
350	31	8,228	-38.0	-47.7	30	18.5
300	31	9,269	-46.3		29	19.4
250	31	10,457	-55.1		30	17.9
200	31	11,860	-60.9		30	20.5
175	31	12,692	-60.0		30	23.7
150	31	13,656	-59.8		29	20.6
125	30	14,790	-62.0		29	19.2
100	29	16,165	-63.5		29	16.7
80	28	17,529	-63.5		30	13.2
70	28	18,351	-62.8		31	9.5
60	28	19,305	-61.2		31	7.7
50	28	20,443	-58.9		33	5.5
40	28	21,850	-57.3		35	4.5
30	27	23,680	-54.7		03	5.5
25	27	24,849	-53.6		03	6.2
20	27	26,290	-52.2		03	6.2
15	23	28,161	-50.1		03	10.3
10	7	30,825	-47.2			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.
These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G. C. T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

JANUARY 1972

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jan.									
1	----	----	----	1.39	1.40	1.37	1.24	1.12	1.01
2	1.05	1.16	1.26	1.39	1.40	1.38	1.22	1.11	1.01
3	1.07	1.16	1.26	1.38	----	----	----	----	----
4	1.00	1.11	----	1.41	1.42	1.39	1.26	1.15	1.05
5	1.06	1.16	1.22	1.36	1.36	1.33	1.18	1.06	.97
6	----	----	----	1.35	1.37	1.34	1.19	1.06	.97
7	1.03	1.12	----	----	----	----	----	----	----
8	1.01	1.11	----	----	----	----	1.18	1.06	.98
9	1.00	1.11	1.25	1.37	1.34	1.33	1.15	1.04	.92
10	.96	1.07	1.21	1.38	1.38	1.34	1.18	1.03	.89
11	----	----	----	----	----	----	----	----	.92
12	1.03	1.13	1.21	----	----	----	----	----	----
14	.99	1.05	1.21	----	----	----	----	----	----
15	1.08	1.18	1.29	1.42	1.42	1.39	1.25	1.13	1.04
16	1.08	1.18	1.27	1.40	1.42	1.37	1.21	1.08	.98
17	.99	1.09	1.20	1.35	1.38	1.33	1.17	1.04	.97
19	.95	1.09	1.22	1.35	1.37	1.30	(1.15)	(1.02)	----
20	(.98)	(1.09)	(1.12)	(1.25)	----	----	(1.02)	----	----
21	1.01	1.11	1.21	1.34	(1.34)	(1.28)	----	----	----
22	(.99)	(1.09)	(1.22)	----	(1.38)	(1.28)	(1.15)	(1.01)	(.85)
23	(1.02)	(1.09)	1.29	1.42	----	----	----	----	(1.00)
24	.85	.98	1.19	1.37	1.47	1.43	1.30	1.18	1.09
26	----	----	----	----	----	(1.30)	(1.07)	----	----
27	----	----	----	----	----	(1.38)	(1.20)	1.09	1.01
28	1.07	1.15	1.25	1.37	1.41	(1.21)	(1.15)	(1.04)	(.95)
29	(.95)	(.95)	(1.15)	1.35	1.38	----	1.18	1.07	.95
30	.95	1.06	1.17	1.34	1.37	1.32	1.15	1.05	.95
31	.92	1.01	1.16	1.31	1.36	1.28	1.13	1.00	.92
Averages	1.01	1.11	1.23	1.37	1.39	1.35	1.20	1.02	0.98

TUCSON, ARIZ.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	P. M 60.0°	70.7°	75.7°	78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jan.									
1	0.95	----	----	1.33	----	1.34	1.16	1.06	0.96
2	1.04	1.14	1.25	1.41	1.45	1.40	----	----	----
3	----	.98	1.13	1.29	1.39	----	----	----	----
4	1.07	1.18	1.29	1.43	1.48	1.41	1.28	1.15	1.03
5	1.13	1.22	1.34	1.48	1.49	1.44	1.28	1.13	1.01
6	.98	1.08	1.21	1.37	1.43	1.41	1.22	1.09	.95
7	1.06	1.15	1.25	1.40	----	----	----	----	----
8	----	----	----	1.37	----	----	----	----	----
9	.91	1.01	1.16	1.34	1.36	1.34	1.17	1.03	.89
10	.79	.90	1.07	1.27	1.36	1.30	1.06	.90	.77
11	.78	.92	1.07	1.26	1.32	1.23	1.05	.95	.84
12	.96	1.08	1.20	1.39	1.43	1.36	1.21	1.10	.99
13	----	----	----	1.30	1.41	1.32	1.18	1.06	.98
14	.96	1.07	1.16	1.33	1.40	1.32	1.08	.91	.79
15	1.04	1.14	1.25	1.39	1.44	1.33	1.15	1.03	.92
16	----	----	----	1.37	1.43	1.33	1.16	1.03	.91
17	.90	.99	1.14	----	----	----	----	----	----
18	.99	1.04	1.16	1.35	1.42	1.33	1.17	1.01	.91
19	.88	.99	1.14	1.32	1.36	1.29	1.12	.95	.84
20	.85	.95	1.09	1.27	----	----	----	----	----
21	.93	1.02	1.15	1.32	1.37	----	----	----	----
22	.98	1.08	1.21	----	----	----	----	----	----
23	1.07	1.15	1.28	1.42	1.49	1.39	1.22	1.10	1.00
24	.93	1.04	1.14	1.32	1.40	1.26	1.14	1.01	.91
25	.98	1.10	1.22	1.39	1.47	1.37	1.26	1.16	1.05
26	----	----	1.18	1.31	----	----	----	----	----
27	----	----	H .97	H 1.20	H 1.30	1.35	1.14	1.02	.91
28	----	----	----	1.31	1.41	1.33	----	----	----
29	.95	1.06	1.18	1.35	1.46	1.36	----	----	----
31	.80	.93	1.09	1.30	1.33	1.32	1.19	1.06	.96
Averages	0.95	1.05	1.17	1.34	1.41	1.34	1.17	1.04	0.93

OMAHA, NEBR.

Date	A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.01	2.87	3.82	4.78
4	----	----	----	----	----	----	HS1.16	HS0.98	HS0.88
6	----	----	----	----	1.20	----	----	----	----
7	0.94	1.03	1.10	----	----	----	----	----	----
9	.94	----	1.16	----	1.28	----	----	----	----
10	----	HS1.08	HS1.18	----	----	----	----	----	----
11	----	----	----	----	----	----	1.12	----	----
13	HS1.00	HS1.16	HS1.22	----	HS1.30	----	----	----	----
15	1.02	----	----	----	----	----	----	----	----
17	----	1.05	1.18	----	1.33	----	1.12	.97	.84
25	.83	.97	1.09	----	----	----	----	----	----
28	.95	1.03	1.17	1.26	----	----	----	.70	----
29	1.00	1.10	1.19	1.34	1.32	1.24	----	.86	.66
30	.93	1.05	1.17	1.34	1.34	1.32	----	.50	.35
31	.97	1.06	1.18	1.33	1.34	1.30	.52	.35	----
Averages	0.95	1.06	1.16	1.32	1.30	1.29	0.98	0.73	0.68

MADISON, WIS.

Date	A M 78.7°	75.7°	70.7°	60.0°	*	P. M 60.0°	70.7°	75.7°	78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
7	----	S 0.97	S 1.07	----	S 1.14	----	S 1.05	S 0.91	S 0.82
9	----	----	S 1.17	----	S 1.20	----	----	----	----
14	----	----	----	----	S 1.29	----	S 1.17	S 1.03	----
15	S 0.92	S 1.00	S 1.16	----	S 1.27	----	S 1.16	S 1.04	S .94
23	----	----	----	----	----	----	S 1.08	S .96	S .86
25	S 1.00	S 1.16	S 1.21	----	----	----	----	----	----
28	----	----	----	----	----	----	S 1.14	S 1.00	S .85
29	M .84	M .92	M 1.08	----	S 1.21	----	M 1.04	M .92	M .80
30	S .96	S 1.07	S 1.19	----	S 1.33	----	----	----	----
Averages	0.93	1.02	1.15	----	1.24	----	1.11	0.98	0.85

( ) Clouds Present
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze

HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1972

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	280	294	208	317	308	303	274	271	305	305	292	258	293	279	315	314	308	201	309	294	307	314	272	347	307	275	287	342	332	354	354	297
AMES IOWA	---	---	---	---	---	230	234	173	---	---	241	---	274	---	---	---	---	---	---	131	129	96	164	117	242	145	92	352	334	356	327	0
ANNETTE ALASKA	74	77	12	12	36	47	52	27	63	20	68	63	17	9	39	31	40	50	76	48	95	74	116	122	123	129	110	33	39	83	140	62
APALACHICOLA FLORIDA	230	84	132	204	186	153	352	347	247	218	124	230	287	11	138	368	280	331	271	168	61	113	321	370	112	242	187	307	354	325	351	229
ARGONNE NAT. LAB.	140	207	35	76	239	196	210	178	171	182	65	111	156	238	252	136	221	40	97	61	63	34	72	27	260	80	54	297	287	310	263	153
ASTORIA OREGON	21	---	144	31	19	28	---	17	---	25	1	30	113	57	133	28	26	14	0	---	18	99	63	13	133	134	137	201	202	209	55	72
ATLANTA GEORGIA	84	80	72	24	203	275	293	294	49	28	119	289	55	175	300	310	316	273	163	91	129	97	126	155	331	335	254	63	45	60	348	175
BARROW ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	---	---	---	---	---	---	---	---	---
BETHEL ALASKA	15	22	13	16	30	24	67	62	64	69	73	41	---	79	81	70	85	94	107	104	112	112	86	31	20	16	29	51	43	48	87	58
BISMARCK N.DAK.	179	177	191	198	182	201	141	162	111	207	135	---	124	196	123	184	152	199	142	139	74	132	152	216	189	283	112	280	276	166	224	175
BLUE HILL MASS.	157	31	199	30	44	166	169	215	86	192	61	215	68	108	93	206	105	195	186	154	202	83	144	190	93	239	242	90	253	162	264	150
BOISE IDAHO	150	182	227	156	131	118	81	180	175	99	22	121	218	232	257	247	45	28	84	53	24	43	194	145	94	75	189	---	242	---	147	136
BROOKINGS S. D.	205	179	155	236	210	208	180	207	184	188	219	132	137	235	224	173	237	157	112	191	119	155	226	159	186	217	159	256	248	229	242	192
BROWNSVILLE TEXAS	295	140	181	49	244	392	252	329	364	214	353	266	---	104	125	399	134	157	173	217	303	442	437	387	94	228	396	---	248	56	54	242
BURLINGTON VERMONT	105	32	120	53	183	212	105	205	65	219	165	157	151	272	69	182	105	245	136	125	---	90	212	213	163	266	230	175	231	200	275	165
CAPE HATTERAS N.C.	263	99	272	185	70	87	293	294	62	131	122	133	45	10	15	182	313	322	301	285	78	52	132	158	182	346	306	211	131	54	314	176
CARIBOU MAINE	103	61	133	91	147	173	89	157	85	143	40	123	43	167	110	168	80	126	99	176	209	193	62	133	36	166	199	137	223	151	205	130
CHARLESTON S.C.	248	118	204	116	119	171	310	311	192	260	61	63	149	44	131	354	328	234	296	264	153	98	302	299	190	349	232	305	74	201	244	207
CLEVELAND OHIO	166	57	171	20	140	213	133	204	13	206	193	129	22	241	232	262	228	37	196	28	88	41	89	92	194	112	135	141	237	164	222	142
COLUMBIA MISSOURI	50	237	13	91	295	267	259	137	262	254	267	209	196	266	306	280	279	170	170	51	29	82	80	98	315	285	17	342	312	334*	331	203
DAVIS CALIFORNIA	139	145	241	266	262	250	208	269	206	84	70	58	176	276	211	148	89	69	104	104	74	144	238	209	218	251	206	234	346	347	105	185
DODGE CITY KANSAS	225	304	48	351	331	303	316	302	332	327	---	165	254	145	---	351	346	299	346	235	138	322	336	338	345	200	180	---	372	407	403	286
EL CENTRO CALIF. NPF	300	313	268	325	334	321	178	313	318	317	315	298	304	315	324	329	331	325	317	319	265	284	338	348	286	178	360	328	345	374	382	311
EL PASO TEXAS	259	283	193	318	---	341	352	259	310	348	344	358	354	347	366	341	326	369	367	369	370	354	388	388	377	315	205	383	298	255	166	323
ELY NEVADA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	150	243	229	272	299	163	318	287	330	332	318	---
EPPLEY NEWPORT R.I.	148	17	198	18	16	182	177	220	80	117	41	207	47	56	61	212	147	204	189	150	139	51	81	211	72	240	218	42	251	141	262	135
FAIRBANKS ALASKA	4	4	2	2	3	13	5	5	8	8	5	11	6	8	4	10	3	16	22	31	24	---	49	53	54	13	14	10	15	25	11	15
FLAMING GORGE UTAH	292	180	175	125	69	238	241	181	269	228	115	102	250	294	300	301	283	231	191	190	142	175	271	323	---	159	240	332	229	362	357	236
FORT WORTH TEXAS	---	293	55■	78	328	300	306*	24	---	109	316	307	305■	294	308	339	120	227*	292	311	78	250	331	275	345	65	44	201	112	318	206	225
FRESNO CALIFORNIA	72	67	51	272	266	254	216	73	86	44	48	69	51	97	212	112	158	181	102	85	135	153	241	317	208	253	92	266	79	131	154	147
GENEVA NEW YORK	173	50	145	46	130	175	114	196	33	203	174	92	177	220	158	150	204	40	137	35	185	63	98	47	112	177	180	183	220	112	256	138
GLASGOW MONTANA	145	131	149	83	149	74	78	165	100	99	71	---	156	188	120	95	133	164	127	126	92	125	135	210	122	197	178	222	193	228	137	140
GLOUCESTER POINT VA	198	80	275	47	37	211	272	270	161	58	38	200	74	55	105	307	296	293	230	218	67	55	196	251	214	312	206	59	298	64	328	177
GRAND JUNCTION COLO.	273	274	186	---	185	288	281	174	292	239	240	197	274	300	270	270	313	234	133	255	154	229	278	337	98	108	299	191	355	366	365	249
GREAT FALLS MONTANA	95	111	172	86	143	97	114	108	179	110	53	101	205	182	111	141	187	118	126	183	212	161	114	203	133	176	227	168	211	228	109	147
GREENSBORO N.C.	156	45	279	52	168	214	297	280	137	35	66	250	74	115	227	322	290	288	247	145	220	27	173	73	307	320	193	87	208	46	340	183
INDIANAPOLIS INDIANA	158	213	227	27	270	236	261	205	25	180	210	200	59	290	271	230	276	23	148	44	124	54	59	48	304	238	46	301	326	319	333	184
ITHACA NEW YORK	174	20	170	35	123	216	154	192	55	218	160	99	221	218	139	139	225	92	129	60	185	31	169	107	192	203	198	190	256	194	236	155
LAKE CHARLES LA.	178	203	140	66	222	351	349	245	177	128	254	319	263	352	358	370	343	138	200	40	108	163	282	199	260	189	198	136	73	41	283	214
LAKELAND FLORIDA	288	246	298	274	278	137	359	359	314	287	265	274	262	215	110	346	368	268	339	319	183	145	345	379	339	325	301	361	345	369	130	285
LANDER WYOMING	180	86	182	207	205	194	227	217	209	149	185	122	254	249	215	264	200	219	234	215	187	176	147	268	192	203	265	288	206	289	300	211
LARAMIE WYOMING	218	114	131	263	187	164	242	217	173	106	113	46	209	270	263	271	266	208	161	225	94	117	250	291	168	213	251	237	227	313	320	204
LAS VEGAS NEVADA	262	238	269	276	---	---	226	282	278	278	283	277	310	294	319	301	303	310	---	276	173	197	295	313	176	220	330	264	339	350	349	278
LITTLE ROCK ARKANSAS	18	281	34	25	303	301	293	179	159	145	288	295	181	304	298	315	228	156	56	150	41	184	273	265	357	335	72	119	64	204	374	203
LOS ANGELES CALIF.	292	287	264	277	304	295	193	209	268	254	288	205	217	258	299	311	270	195	167	217	144	242	190	320	223	310	285	310	275	339	347	260
LOS ANGELES CALIF.U	303	299	270	297	299	298	189	215	287	273	289	229	241	274	311	321	276	211	166	235	178	186	134	316	216	322	274	324	301	355	361	266
MADISON WISCONSIN	157	209	141	150	174	184	217	157	209	180	93	130	224	245	251	110	221	33	88	141	123	79	164	39	232	150	83	298	285	302	267	172
MANHATTAN KANSAS	78	228	26	269	271	263	262	207	287	269	279	182	285	173	252	282	285	253	74	53	75	163	63	272	316	220	60	359	295	348	336	219
MATANUSKA ALASKA	24	9	20	11	13	14	15	15	39	26	---	32	20	18	26	22	44	57	47	48	51	55	55	78	33	17	11	15	52	41	20	31
MEDFORD OREGON	28	56	237	173	212	177	68	86	121	157	97	54	177	108	107	90	61	45	157	78	27	25	150	216	136	195	156	293	284	294	201	138
MIAMI FLORIDA	135	234	249	338	342	334	309	263	268	347	343	274	319	349	314	272	149	271	194	278	323	146	224	319	351	337	319	398	396	400	321	294
MIDLAND TEXAS	309	323	51	210	---	358	357	176	265	353	350	350	273	354	374	366	312	365	337	365	362	---	375	356	381	---	---	---	159	---	---	312
NASHVILLE TENNESSEE	102	120	259	28	95	259	257	209	22	126	169	271	135	205	299	276	279	225	79	34	93	147	113	180	315	312	29	25	59	144	326	167
NEW YORK CENTRAL PRK	185	10	220	14	41	205	165	249	50	86	73	231	49	179	110	218	209	139	185	79	47	39	153	267	205	280	228	85	241	228	297	154
NORTH OMAHA NEBRASKA	120	153	79	255	203	235	235	167	246	247	242	149	234	267	194	211	257	259	120	71	128	126	127	226	293	167	84	329	321	326	323	206

SOLAR RADIATION TOTALS Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1972

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	70	76	227	18	193	277	263	252	15	94	172	275	122	159	298	299	291	260	99	61	167	90	82	207	322	310	75	62	101	173	339	176
OKLAHOMA CITY OKLA.	32	314	136	274	316	285	282	137	271	303*	246*	239	266	85	316	357	388	291	388	54	56	269	285	280	329	56	67	311	332	422	409	251
PALMER AAFS ALASKA	21	6	12	8	12	11	14	11	32	29	27	20	17	16	22	35	37	43	38	39	40	50	46	54	33	16	11	11	36	39	19	26
PHOENIX ARIZONA	280	286	276	306	291	278	200	282	287	286	290	287	284	285	307	300	302	302	296	288	264	264	321	326	312	112	331	311	326	314	348	298
PORTLAND MAINE	149	29	---	57	94	199	155	206	83	175	26	172	37	154	66	205	47	170	151	127	207	83	165	85*	---	236	242	99	228	187	257	141
RAPID CITY S.DAK.	162	77	183	221	177	113	211	159	180	127	136	100	132	278	187	230	197	95	140	140	72	134	81	140	140	169	227	216	229	254	217	165
RENO NEVADA	118	133	172	242	189	203	79	232	207	202	183	147	162	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RICHLAND 25 NW WASH.	166	84	186	65	56	142	187	110	106	144	98	131	185	176	155	68	119	62	81	50	174	209	79	104	103	118	178	226	249	211	136	134
RIVERSIDE CALIFORNIA	342	335	311	341	350	340	203	266	332	330	348	295	320	352	359	364	350	322	141	195	294	276	96	385	330	270	384	368	345	422	414	316
RUSTON LOUISIANA	---	143	54	24	200	314	---	---	---	---	301	302	233	321	331	325	323	135	138	---	80	148	291	304	356	---	---	51	35	121	---	206
SAINT CLOUD MINN.	181	176	167	228	125	109	186	73	172	149	173	71	143	178	215	147	197	131	95	152	93	201	169	78	224	237	122	253	252	245	233	167
SALT LAKE CITY	185	93	235	241	73	207	195	180	223	50	47	23	231	244	245	250	214	96	55	143	44	46	141	265	159	137	247	297	257	311	324	176
SAN ANTONIO TEXAS	43	282	31	56	380	368	360	64	57	216	350	346	361	350	391	289	50	114	267	306	369	361	389	118	397	64	271	115	65	138	123	229
SANTA MARIA CALIF.	290	291	293	290	298	293	231	281	287	292	299	276	305	298	305	312	275	161	101	290	291	297	266	334	206	304	279	274	281	340	350	280
SAULT STE MARIE MICH	122	139	147	125	114	126	92	73	154	80	168	58	92	71	117	102	65	20	146	66	119	---	---	---	---	---	---	---	---	---	---	---
SEATTLE TACOMA WASH.	26	116	152	54	30	66	66	25	135	30	53	145	101	37	126	14	49	28	27	13	92	100	15	69	94	172	219	173	170	251	---	96
SEATTLE WASH. UNIV.	39	160	164	63	41	52	115	55	138	75	44	90	89	30	111	40	73	54	57	36	114	148	62	56	103	195	219	185	148	220	95	99
SPOKANE WASHINGTON	118	167	178	51	96	94	107	120	176	149	80	---	143	70	155	80	194	64	109	40	191	139	76	101	105	195	222	175	196	216	117	131
STERLING VIRGINIA	---	---	---	---	---	---	---	244	47	48	91	259	---	208	205	299	283	283	187	43	56	30	120	200	288	257	---	95	165	184	335	178
SWAN ISLAND W.I.	376	---	---	---	---	218	372	217	273	373	333	201	373	386	334	282	---	---	279	322	371	392	287	382	---	457	453	455	401	396	469	350
TAMPA FLORIDA	335	197	285	312	270	120	349	356	321	321	319	275	295	124	63	365	376	349	349	362	181	151	360	354	301	285	350	391	376	393	---	296
TUCSON ARIZONA	---	---	---	356	---	325	253	285	324	324	328	337	321	331	341	325	307	342	340	319	342	304	362	357	342	172	355	367	358	280	382	325
UPPER MARBORO MD.	229	28	245	31	38	---	261	224	61	72	90	249	47	---	---	---	---	---	---	---	67	---	---	---	---	---	---	---	---	---	---	0
WAKE ISLAND PACIFIC	445	431	434	442	393	444	410	420	471	343	466	468	411	470	437	436	360	457	377	330	470	451	344	423	472	404	390	451	492	503	365	426

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

U Indicates Urban sites

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

JANUARY 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	**Avg.**
Langleys. . .	-125	-50	-61	-44	-55	-48	-75	-65	-123	-99	-120	-61	-50	-43	-153	-216	-152	-203	-171	-168	-126	-160	-129	-88	2	-22	-1	-56	-107	-28	-9	-91

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These date are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	3.55	5.08	4.87	6.60	6.09	6.50	6.19	4.57	5.48	5.28	5.68	4.26	5.89	6.60	6.40	5.79	6.40	6.09	4.06	4.57	4.57	3.55	7.51	4.57	8.22	5.89	4.16	10.05	9.95	10.26	9.85	6.08

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λs Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm. ozone implies an ozone layer 0.350 centimeter thick. The code λ s designates the type of measurement made.

DESCRIPTION OF CHARTS

CHART I. A. NORMAL DAILY AVERAGE TEMPERATURE (°F. 1931-60) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN (°F. 1931-60) FOR MONTH. Chart I-A is reproduced from Environmental Data Service Publication "Climatic Maps of the United States." Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin," a publication of Environmental Data Service.

CHART II. TOTAL PRECIPITATION. Chart II is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART III. PERCENTAGE OF NORMAL PRECIPITATION. Chart III is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND. Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by the National Weather Service and selected cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each National Weather Service station having at least 10 years of record. The depth of snow on ground is that reported by both the National Weather Service and selected cooperative stations as of 7:00 a.m., e.s.t., on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

Isolines for Charts I, II, III, IV, and V are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. Chart VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for the National Weather Service stations having at least 10 years of record.

CHART VII. A. AVERAGE DAILY VALUES OF SOLAR RADIATION LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm.cal.cm.-2) for all National Weather Service and selected cooperative stations which record this element. The analyses include adjustments required to bring station records to approximately the same level of calibration. Adjusted numbers are in parentheses. Chart VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

CHART VIII. TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

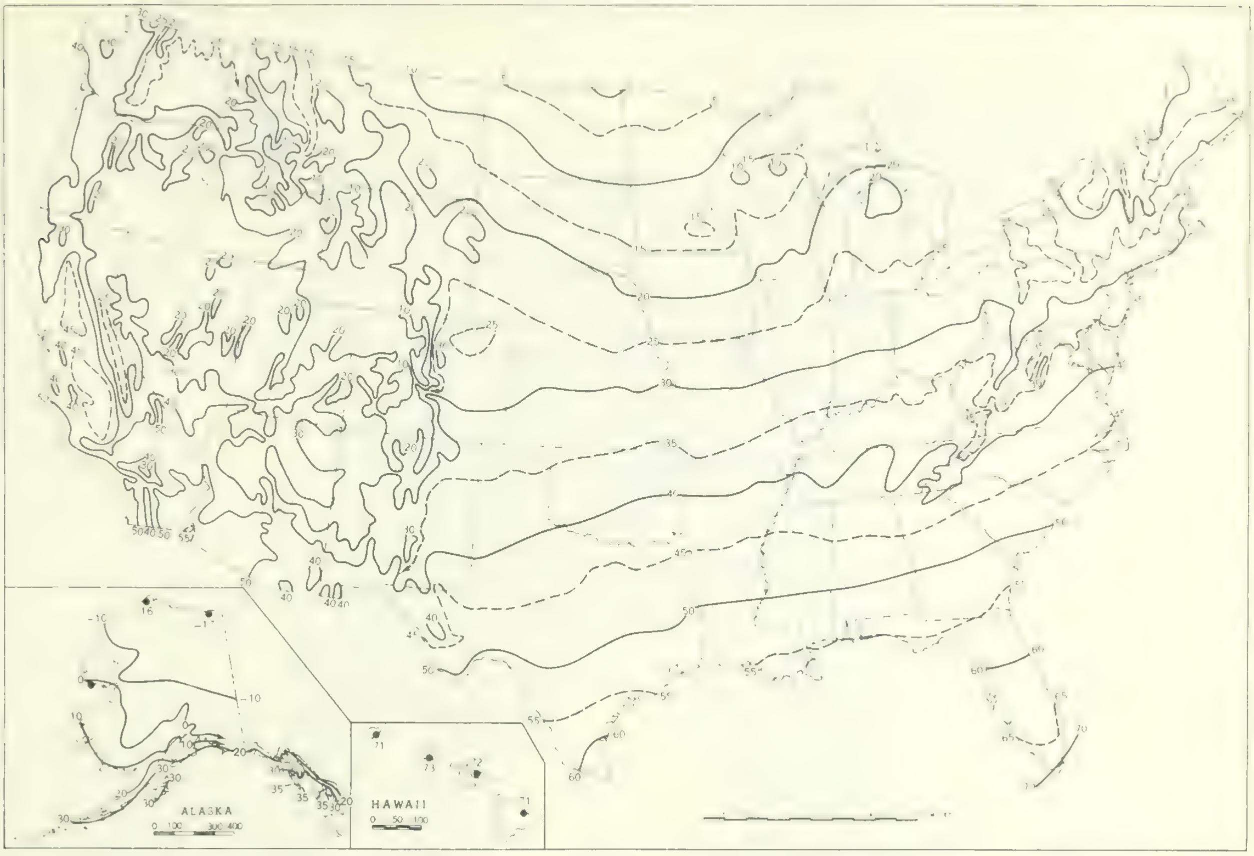
CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. Centers which can be identified for 24 hours or more are tracked in these charts. Semipermanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m., e.s.t., positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND RESULTANT SURFACE WIND. The average monthly sea level pressures are obtained from eight daily 3-hourly observations reported at National Weather Service stations. Resultant surface wind directions (to 36 points of the compass) for the month are shown by arrows. Resultant speeds are in miles per hour and are indicated by the length of arrow shafts. Constancy ratios (resultant surface wind divided by average surface wind for month) are shown to two decimal places. The inset shows the departure of the average pressure based on 30-year normals for first-order National Weather Service stations, other stations having at least 10 years of record, and for each 10° intersection in a diamond grid over the oceans.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mbs. Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 G.m.t. radiosonde reports. Wind speeds are given in meters per second; flag represents 25 m.p.s., full feather 5 m.p.s., and half feather 2-1/2 m.p.s. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 G.m.t.

CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 G.m.t.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), January



B. Temperature Departure from 30 - Year Mean (°F 1931-60), January 1972.

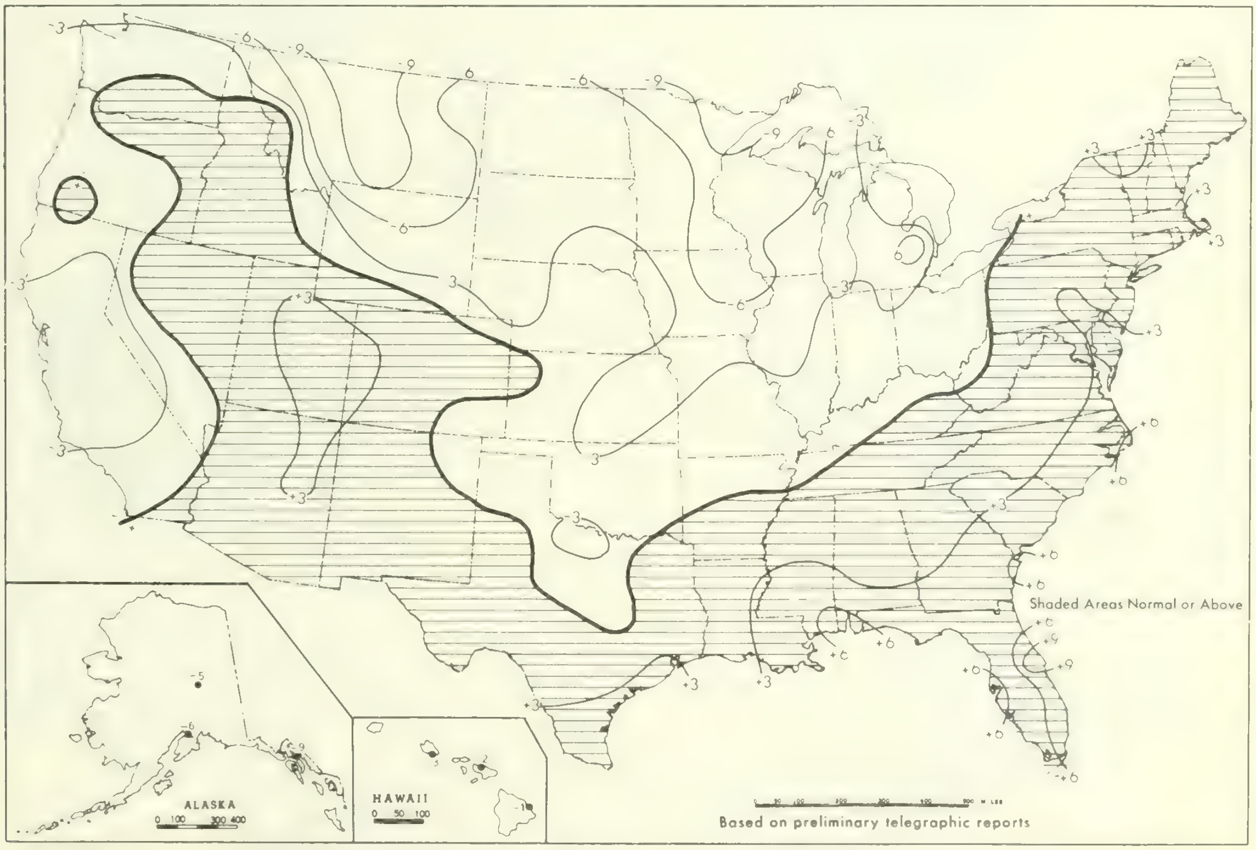

-3
-6
-9
+3
+6
+9
Shaded Areas Normal or Above
ALASKA
0 100 300 400
-5
-6
-9
HAWAII
0 50 100
-1
Based on preliminary telegraphic reports

Chart II. Total Precipitation (Inches), January 1972.

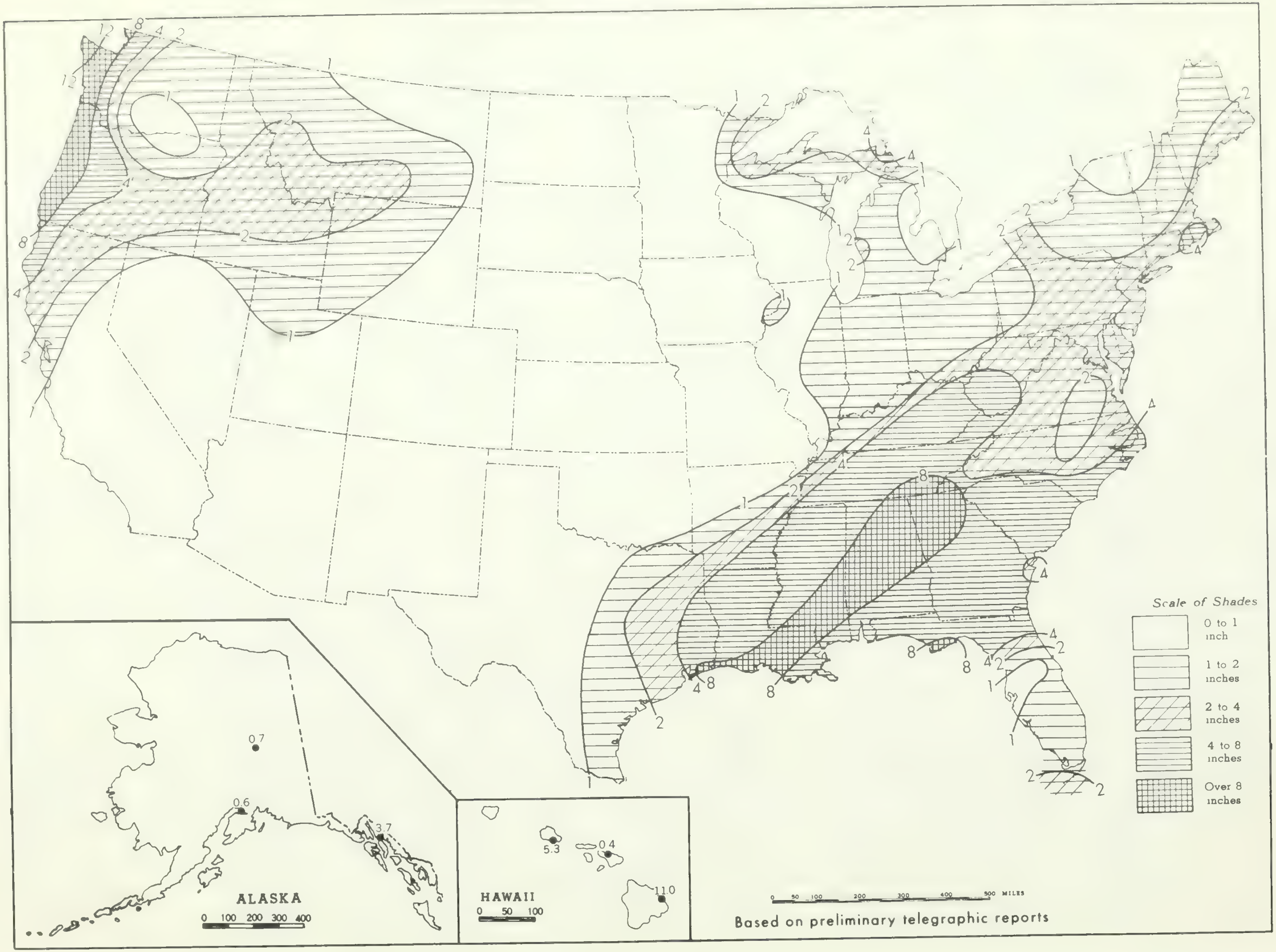
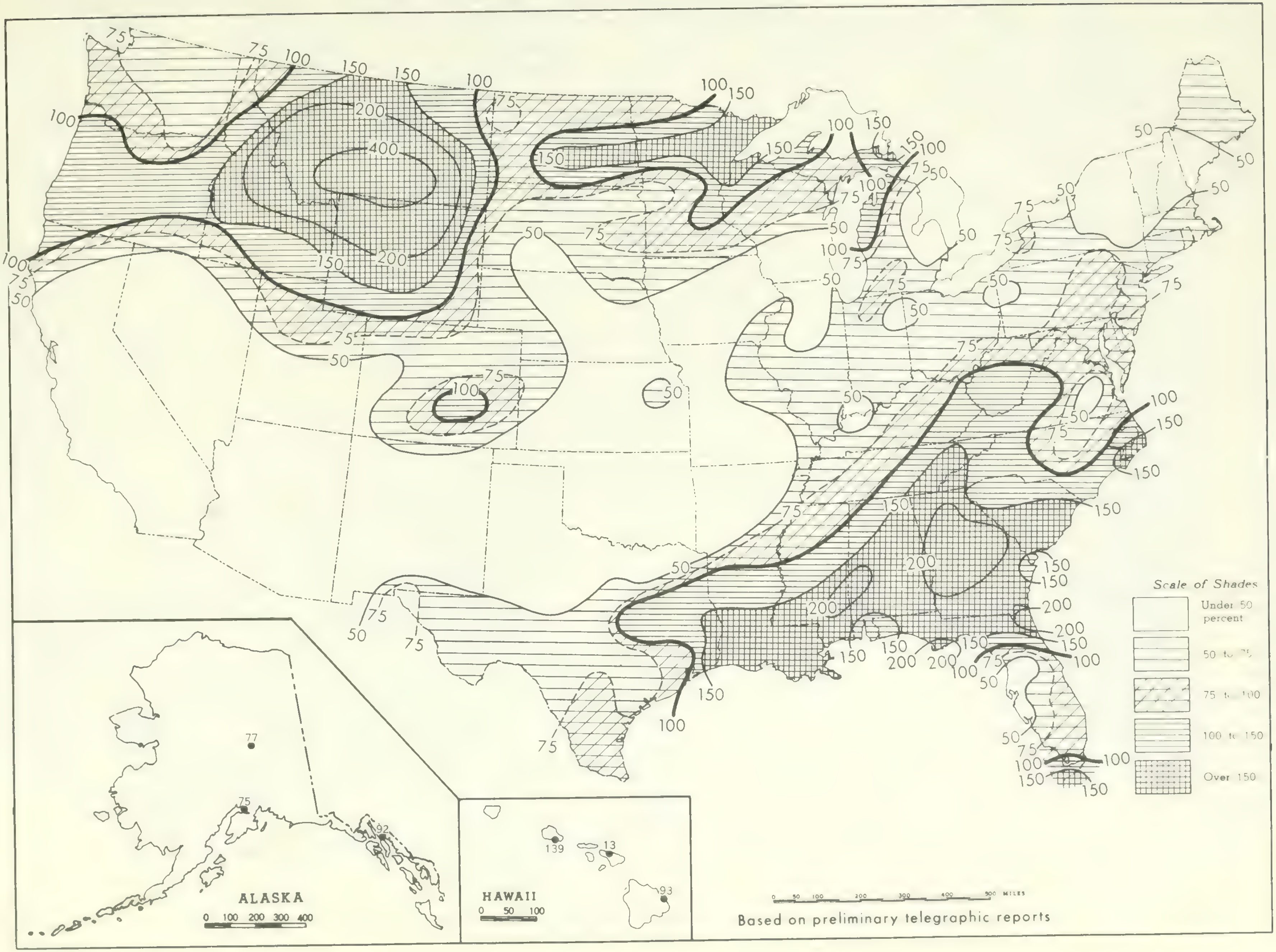
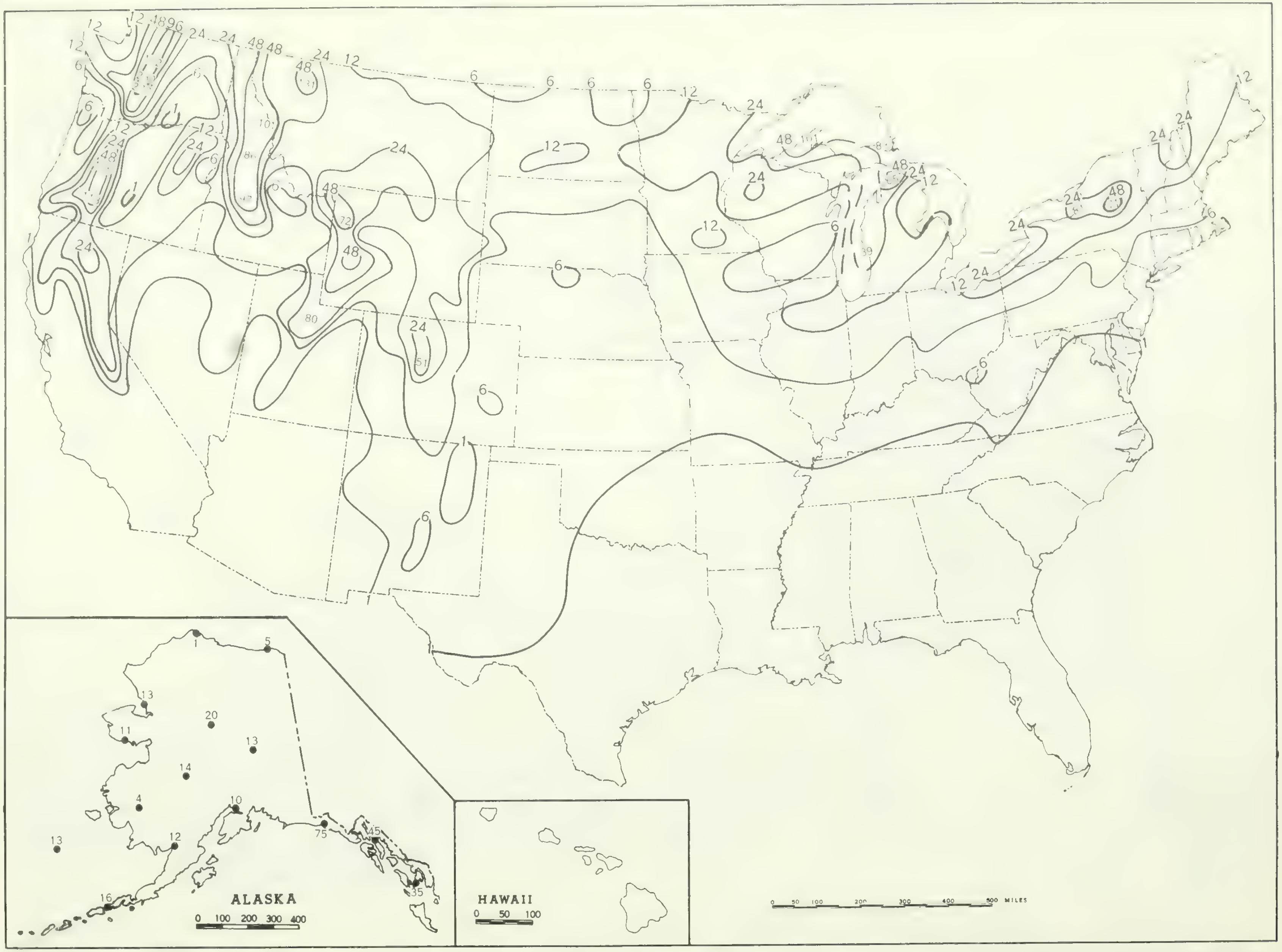


Chart III. Percentage of Normal Precipitation, January 1972.



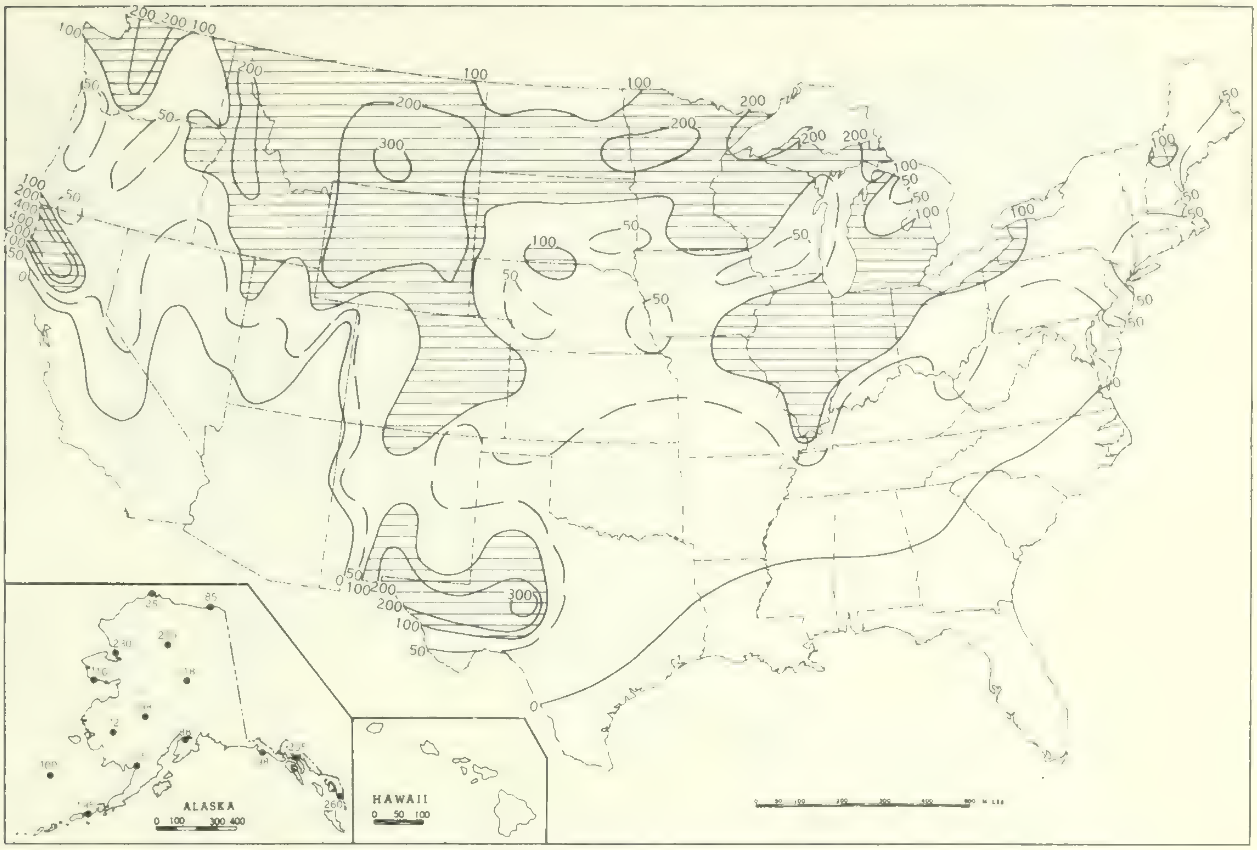
Based on preliminary telegraphic reports

Chart IV Total Snowfall (Inches), January 1972.

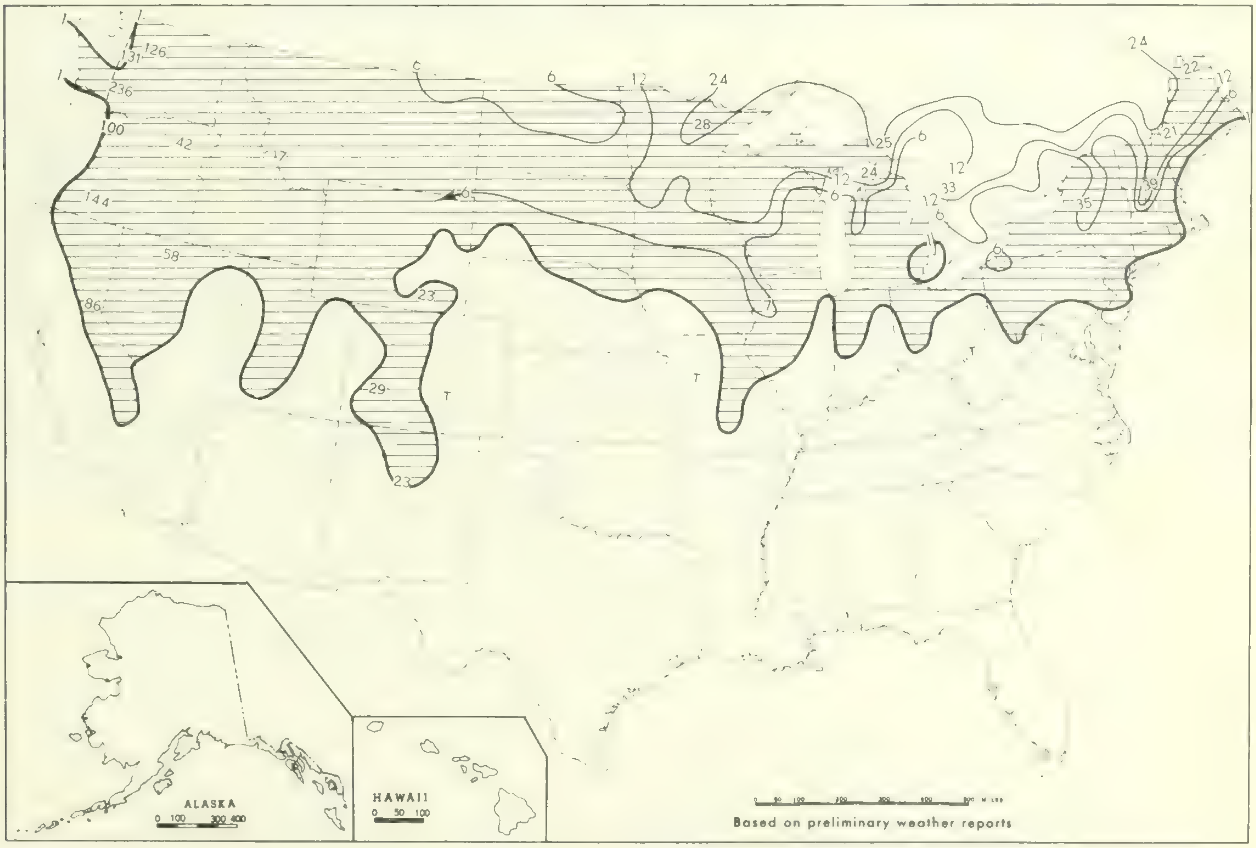


This is the total of unmelted snowfall recorded during the month at **National Weather Service** and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the Far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, January 1972.



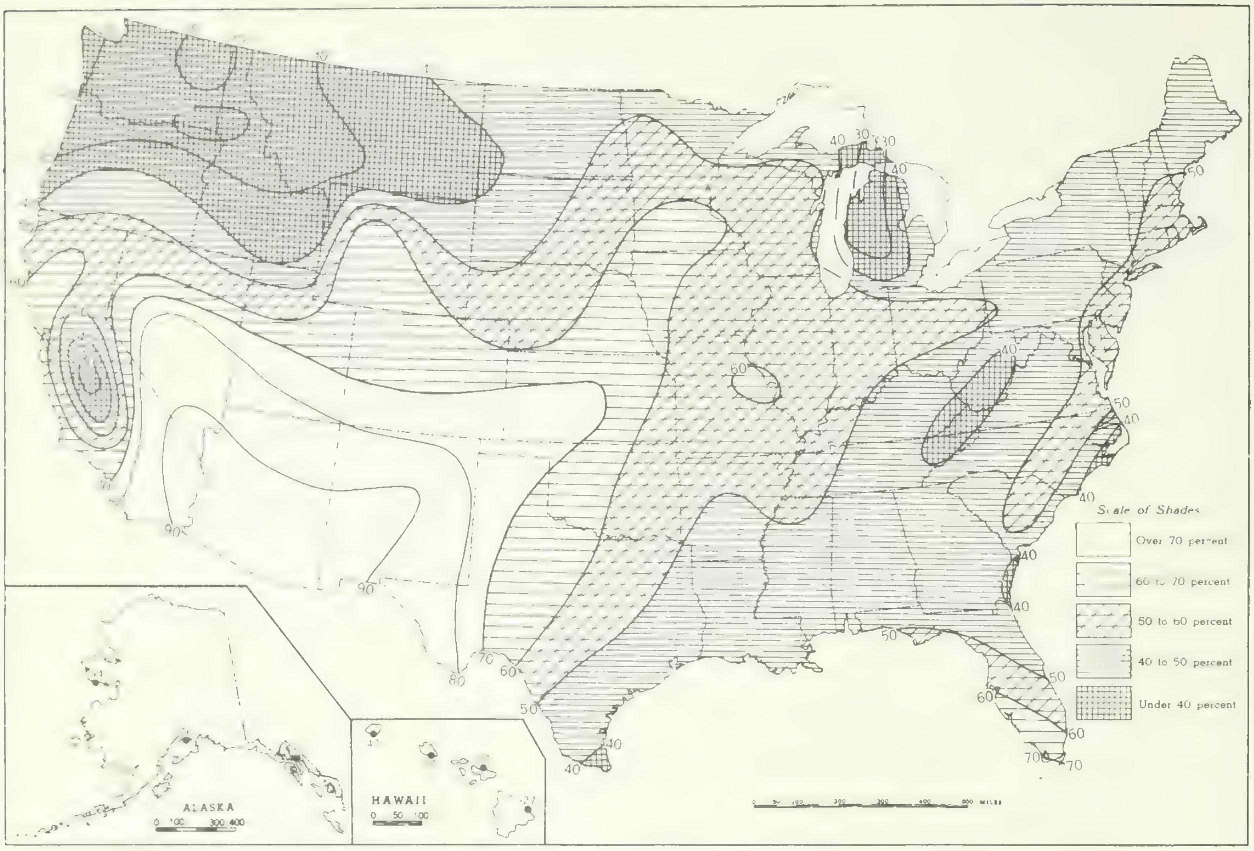
B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., January 31,1972.



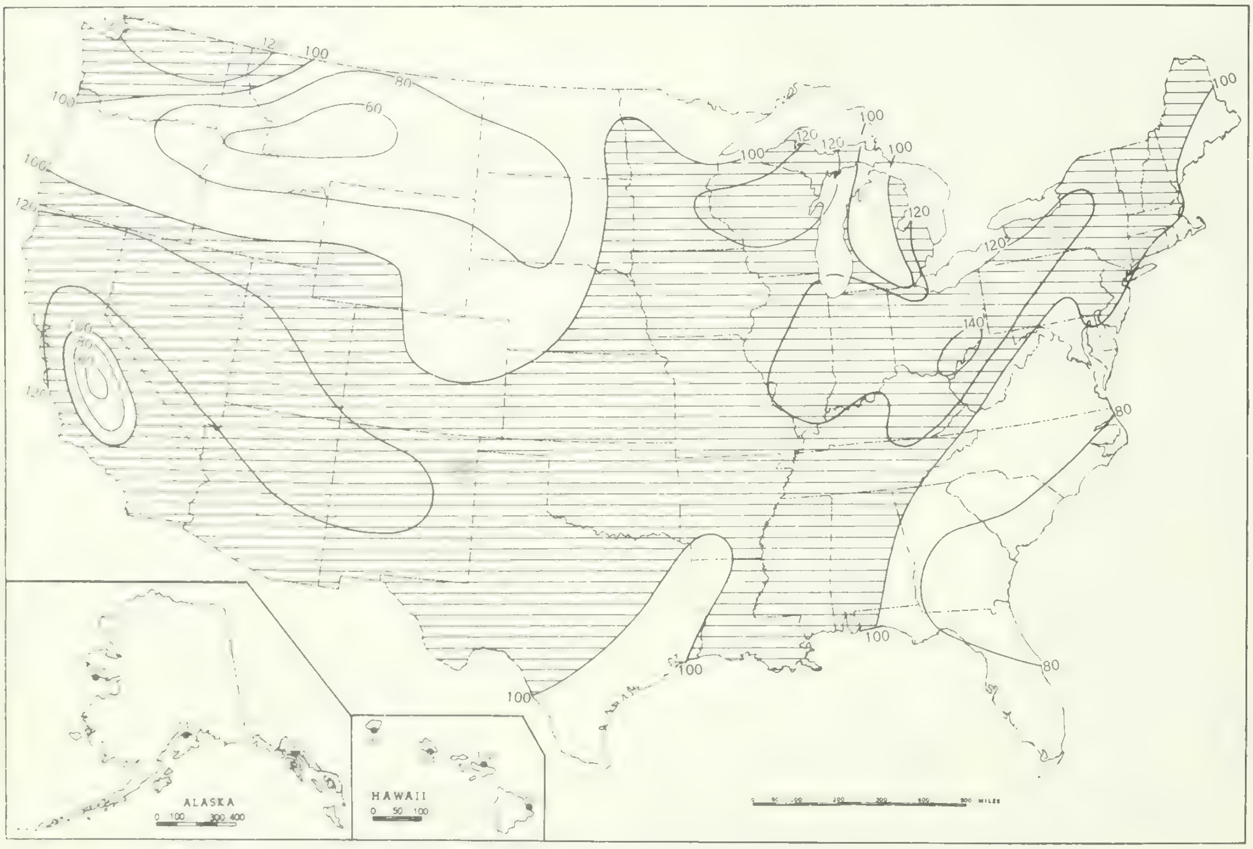
Based on preliminary weather reports

A. Amount of mean monthly snowfall is computed for **National Weather Service** stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. e.s.t., of the Monday nearest the end of the month.
It is based on reports from **National Weather Service** and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, January 1972.

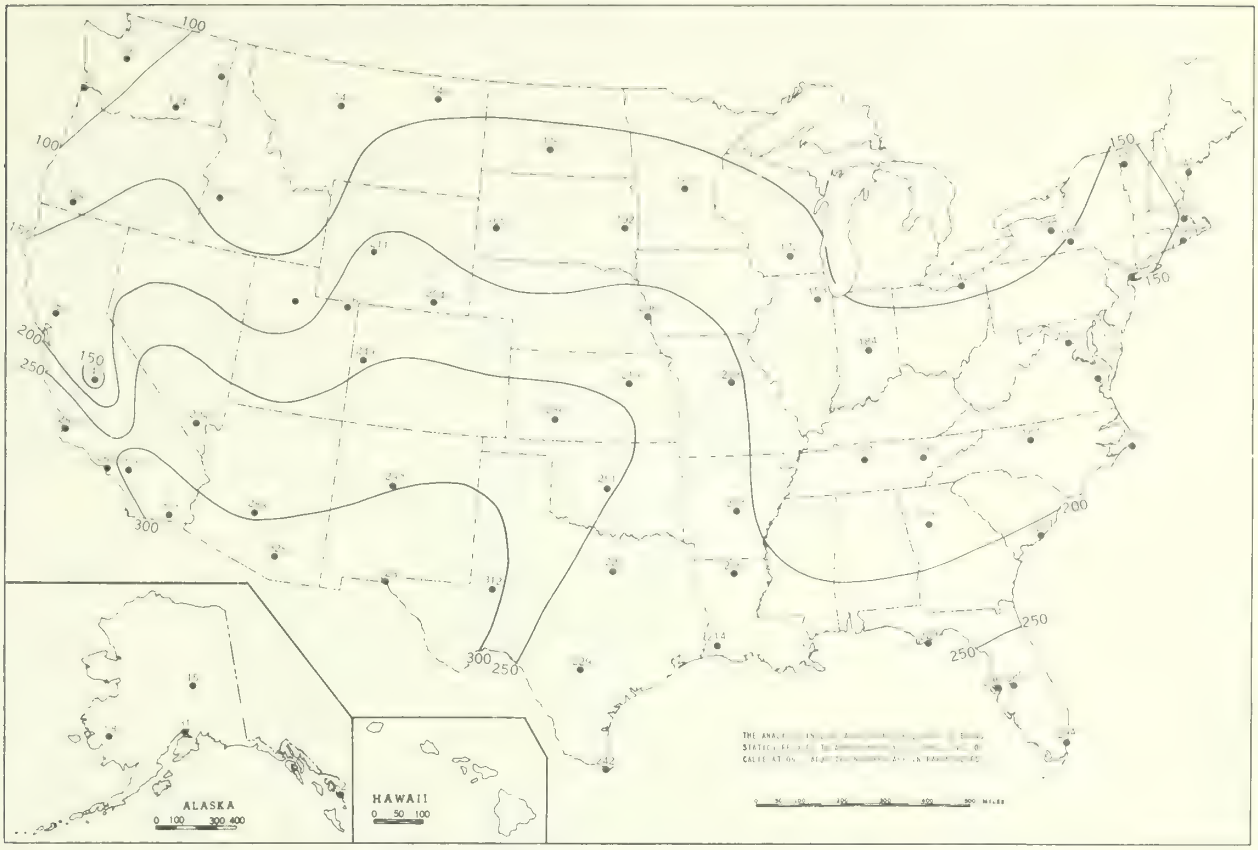


B. Percentage of Mean Monthly Sunshine, January 1972.

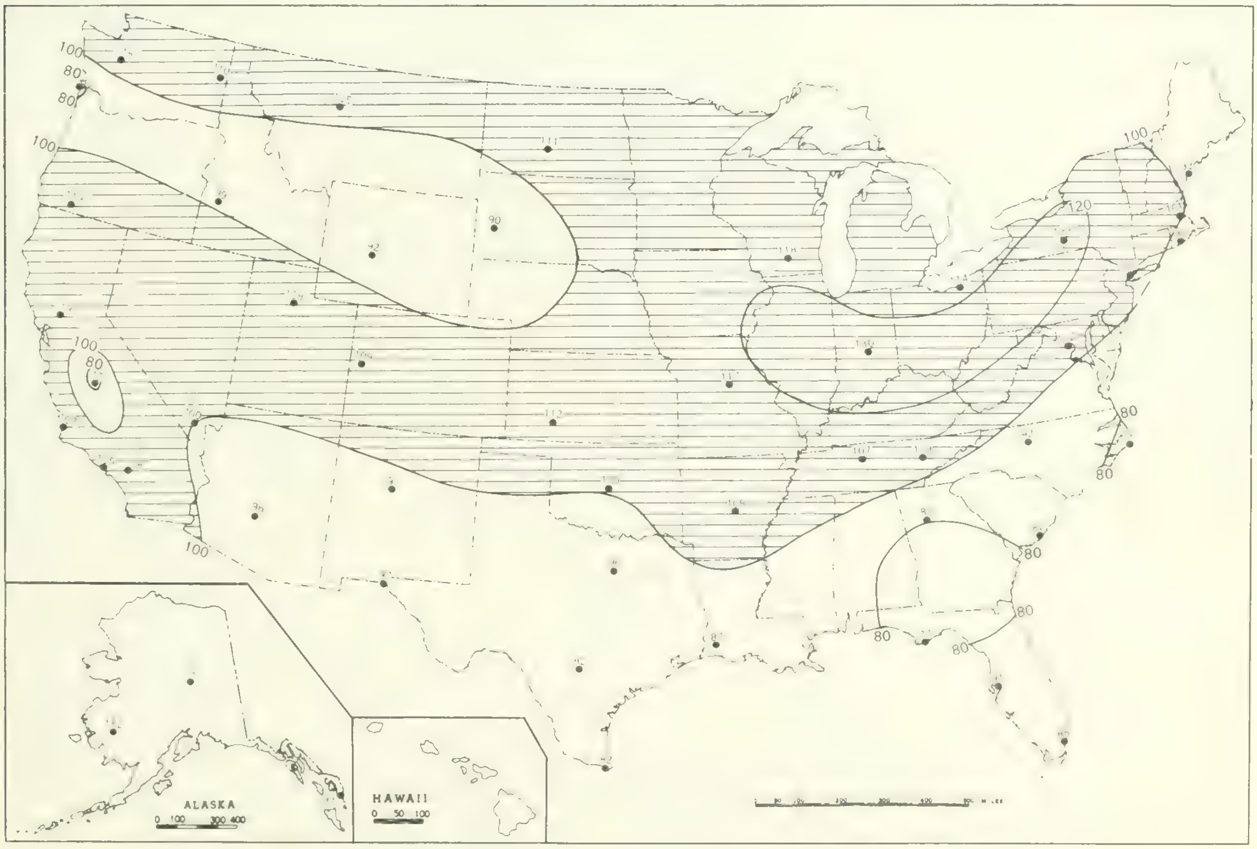


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, January 1972.

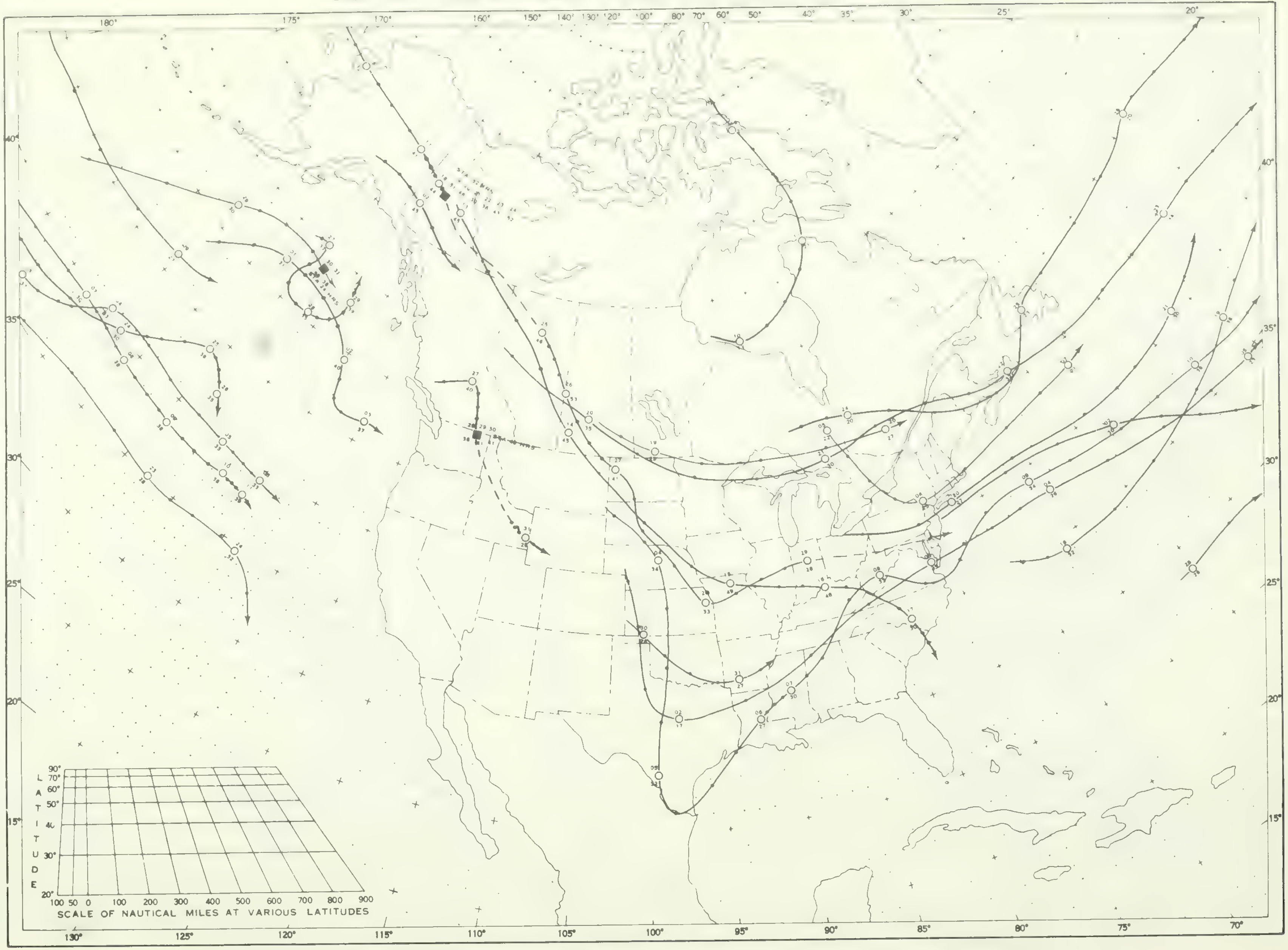


B. Percentage of Mean Daily Solar Radiation, January 1972.



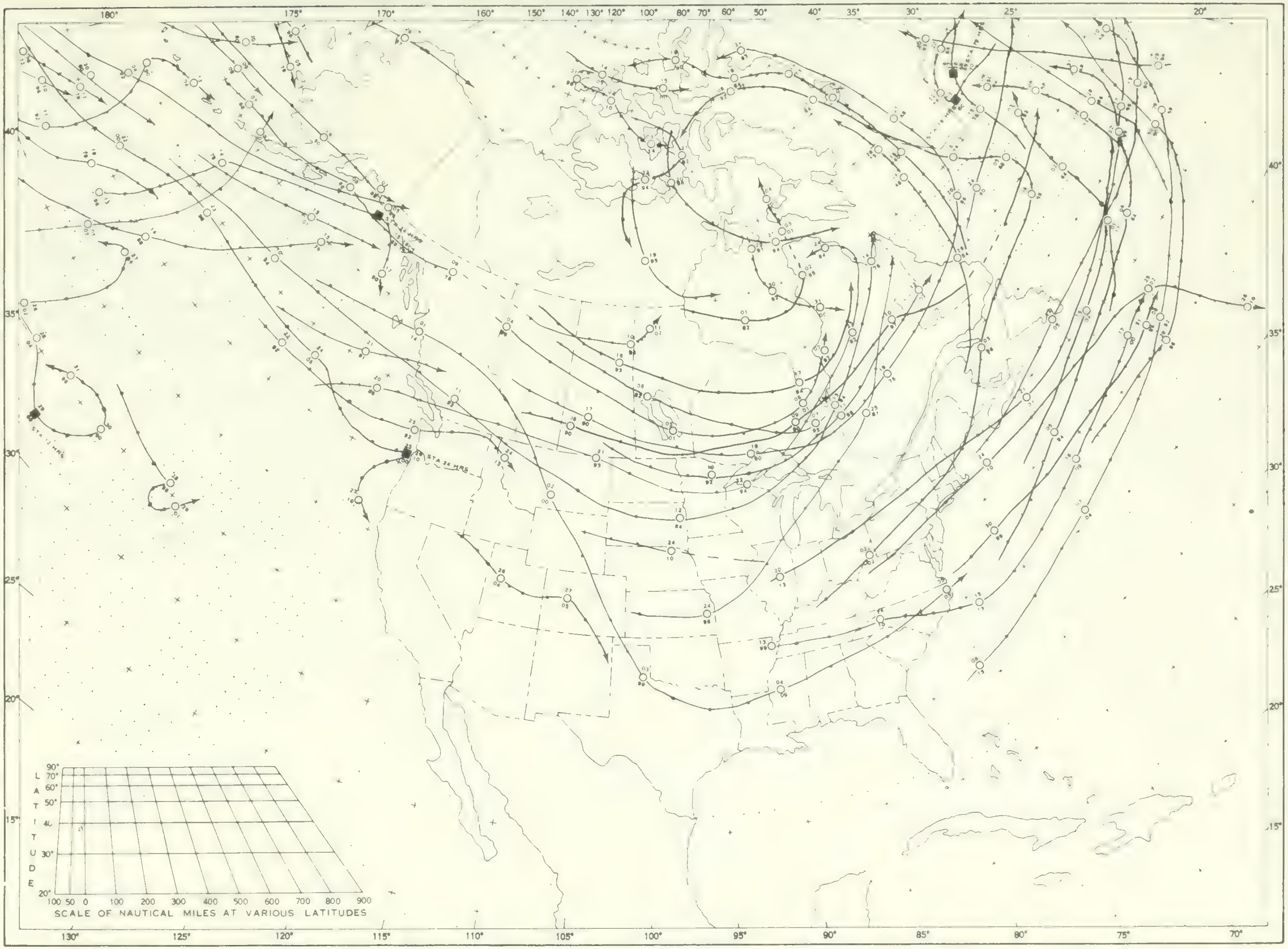
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, January 1972.



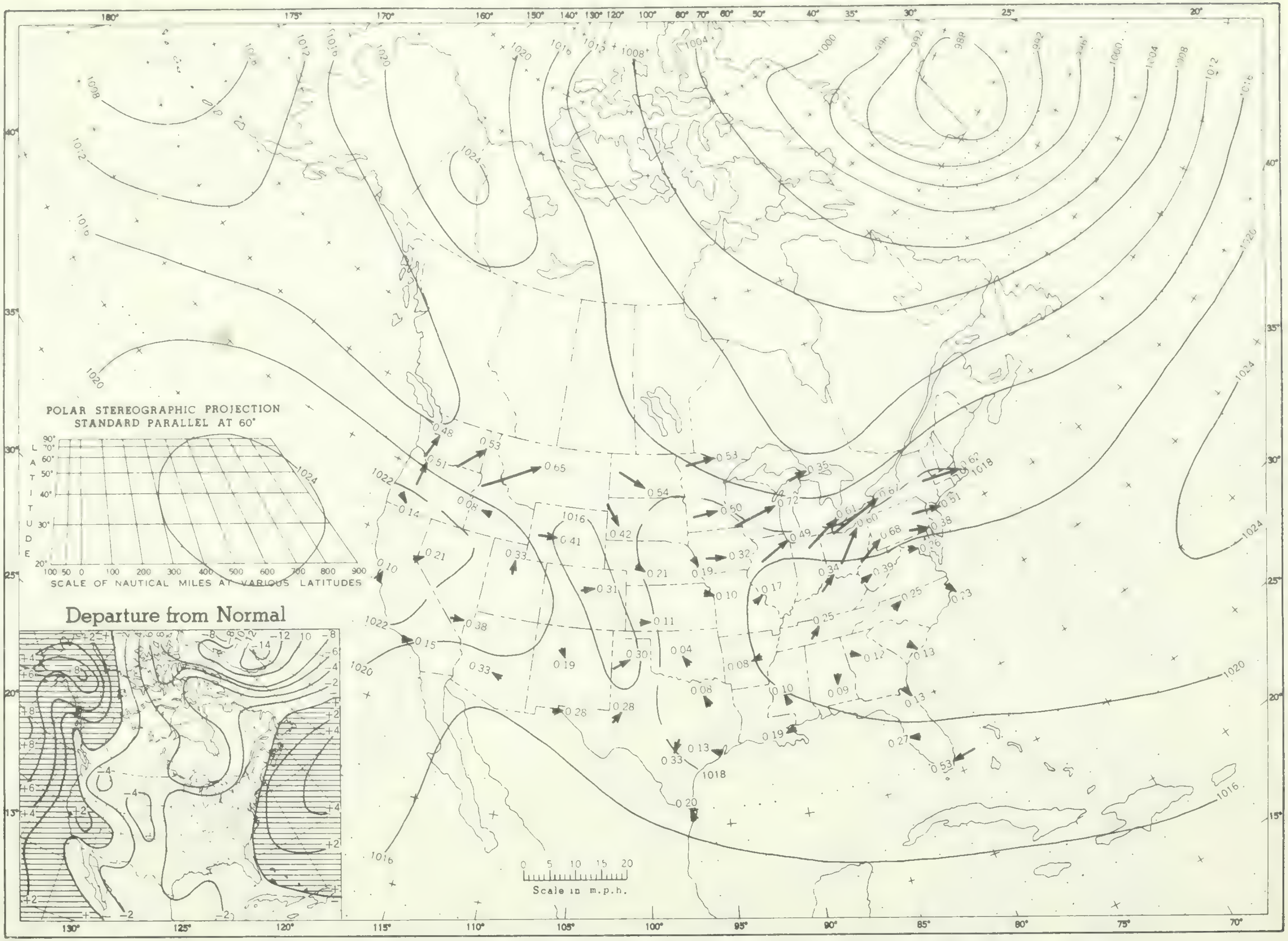
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, January 1972.



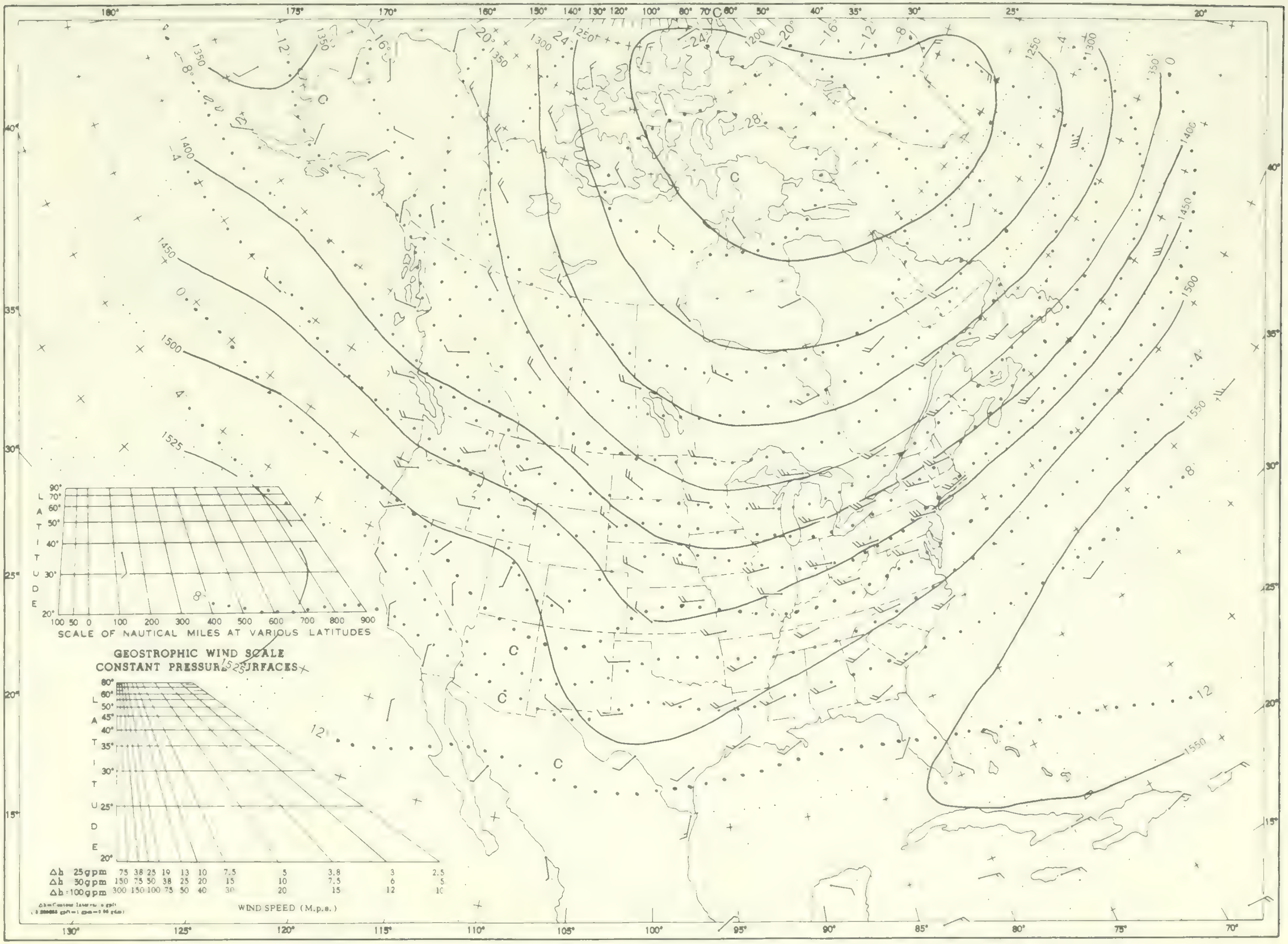
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, January 1972 Inset Departure of Average Pressure (mb) from Normal, January 1972.



Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

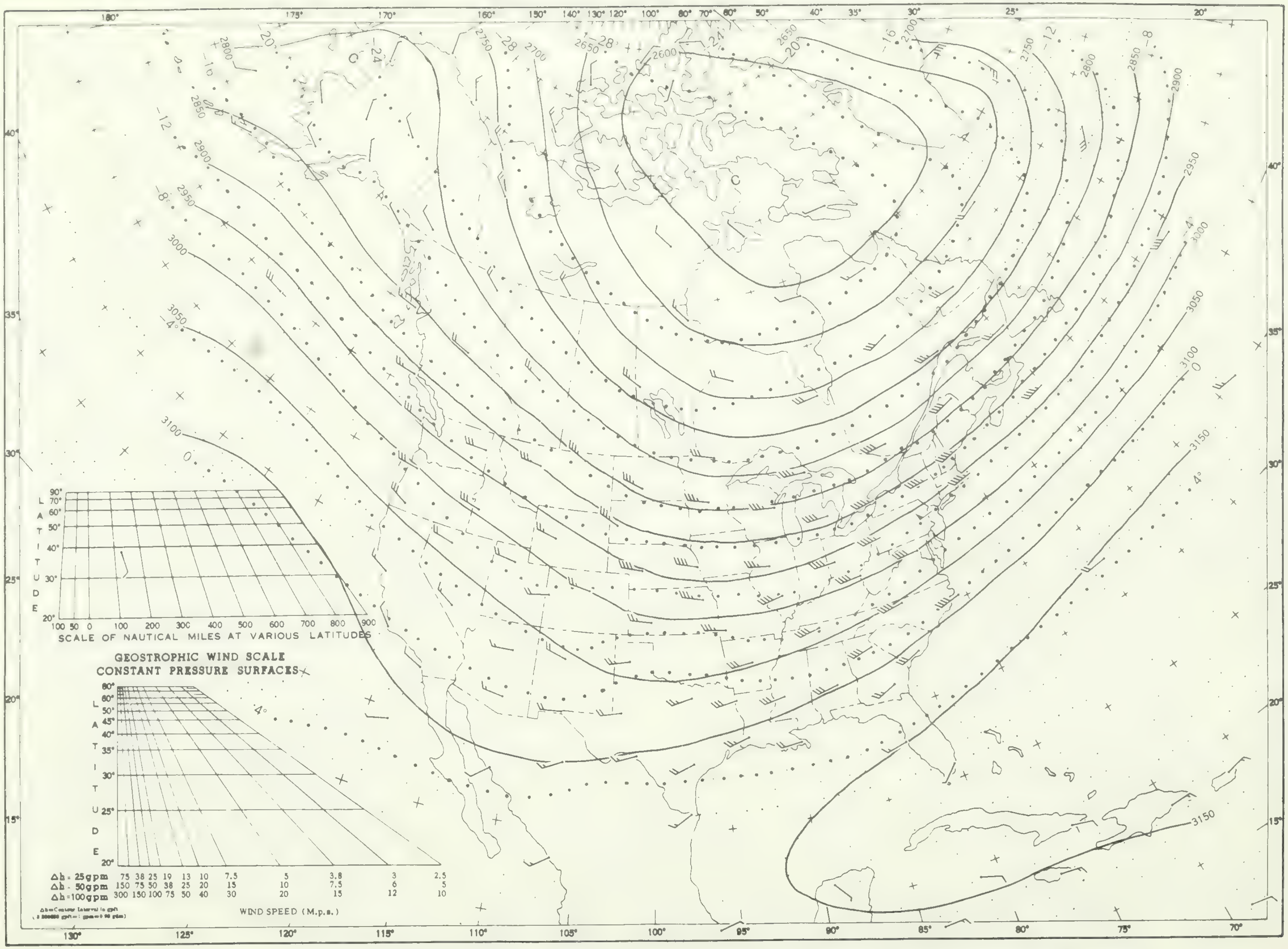
Chart XI 350-mb Surface, 1200 G.m.t., January 1972. Average Height and Temperature, and Resultant Winds



1200
1250
1300
1350
1400
1450
1500
1525
1550
-28°
-24°
-20°
-16°
-12°
-8°
-4
0
4
8°
12
C
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
GEOSTROPHIC WIND SCALE CONSTANT PRESSURE SURFACES
LATITUDE
Δh 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh 30gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

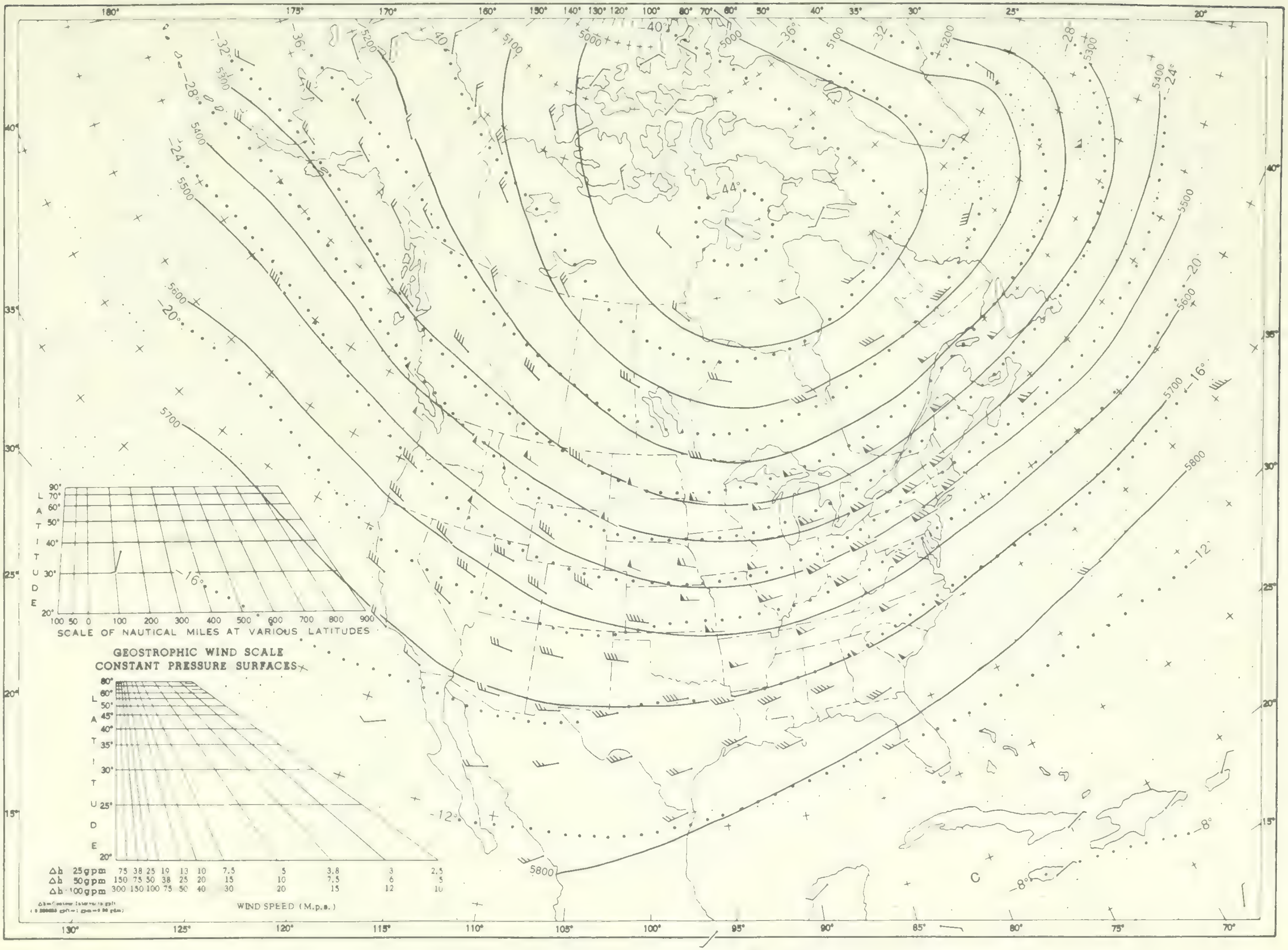
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700 mb Surface, 1200 G.m.t., January 1972. Average Height and Temperature, and Resultant Winds



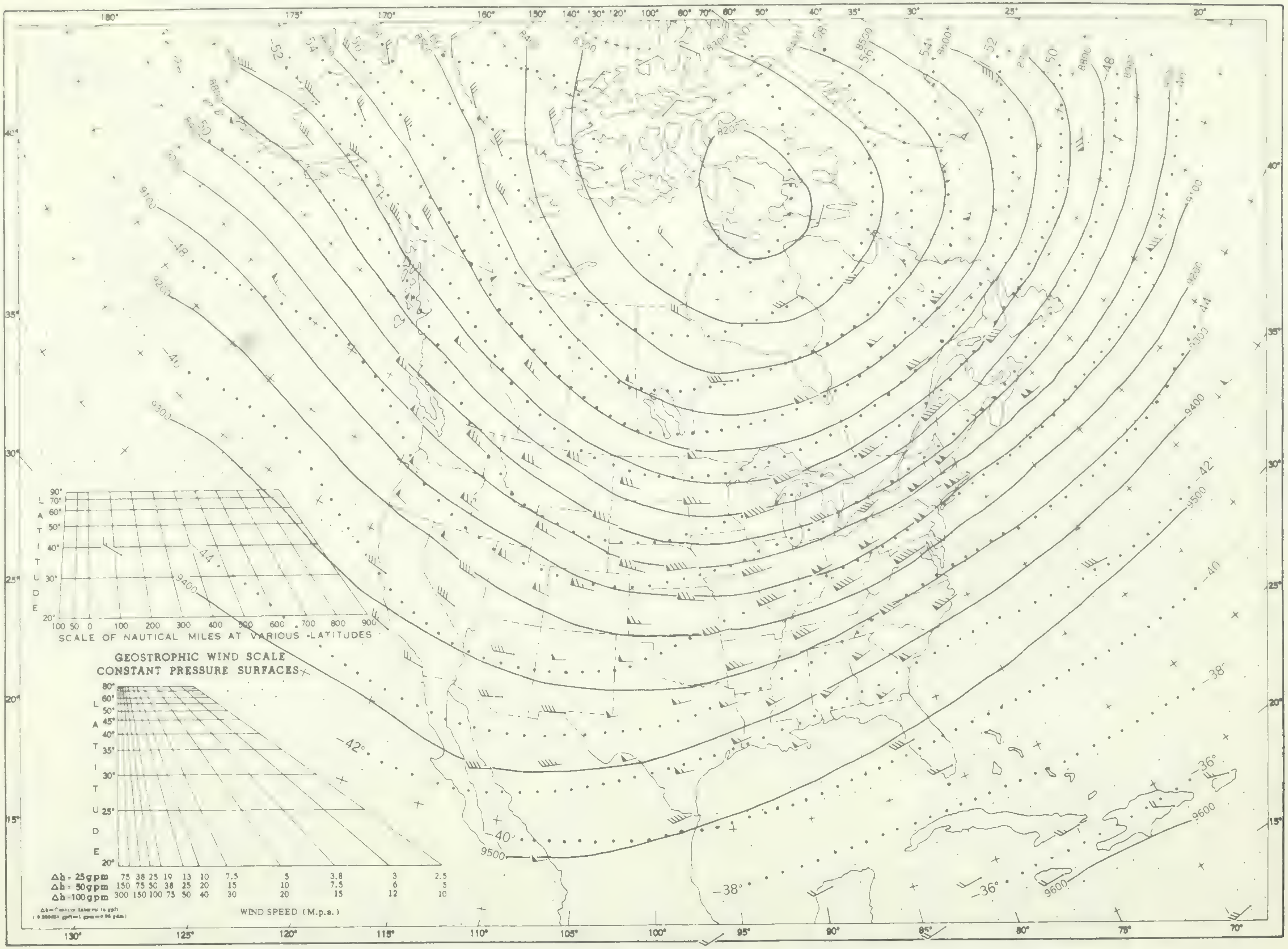
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb. Surface, 1200 G.m.t., January 1972. Average Height and Temperature, and Resultant Winds



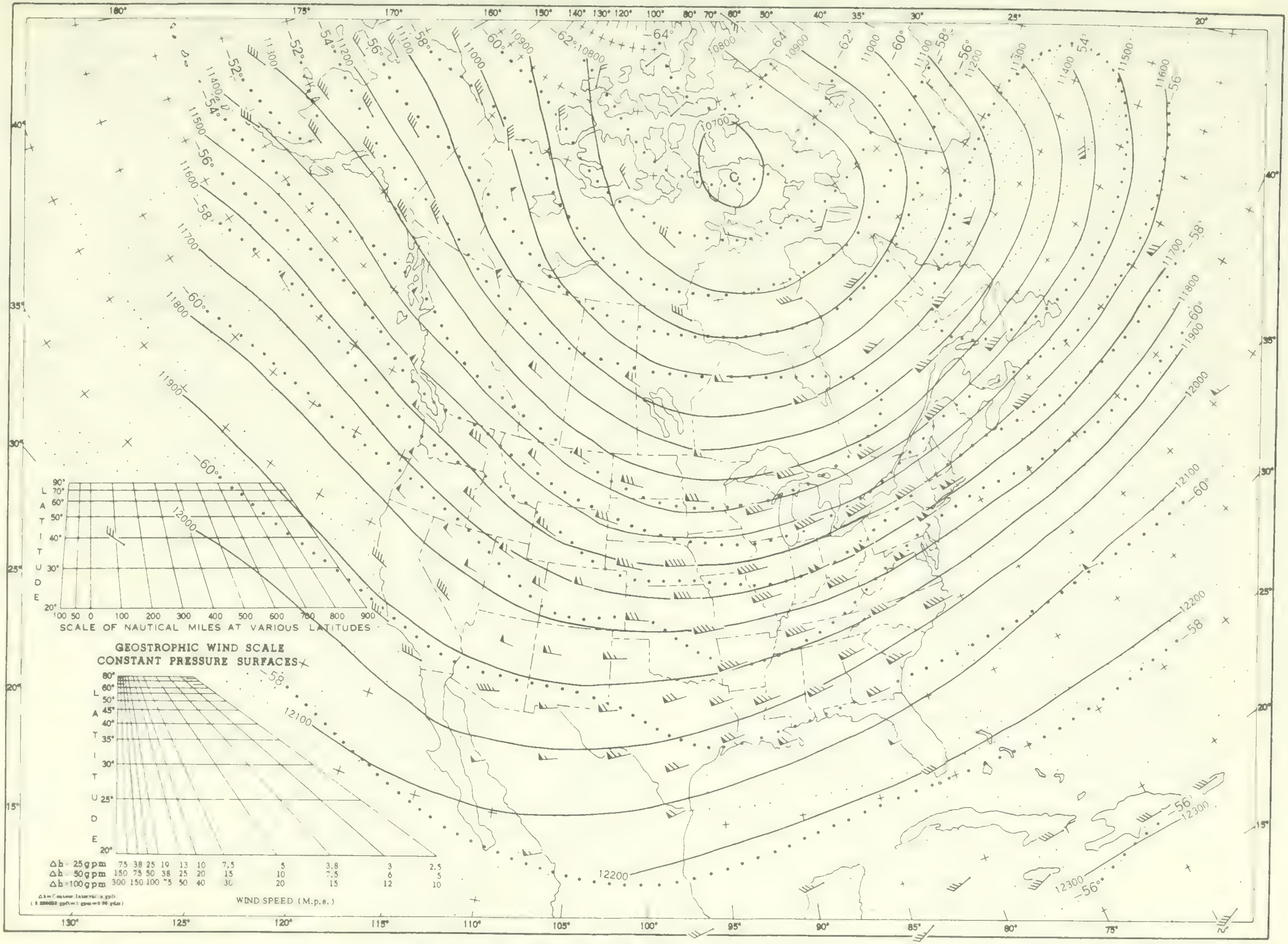
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300 mb Surface, 1200 G m.t., January 1972. Average Height and Temperature, and Resultant Winds



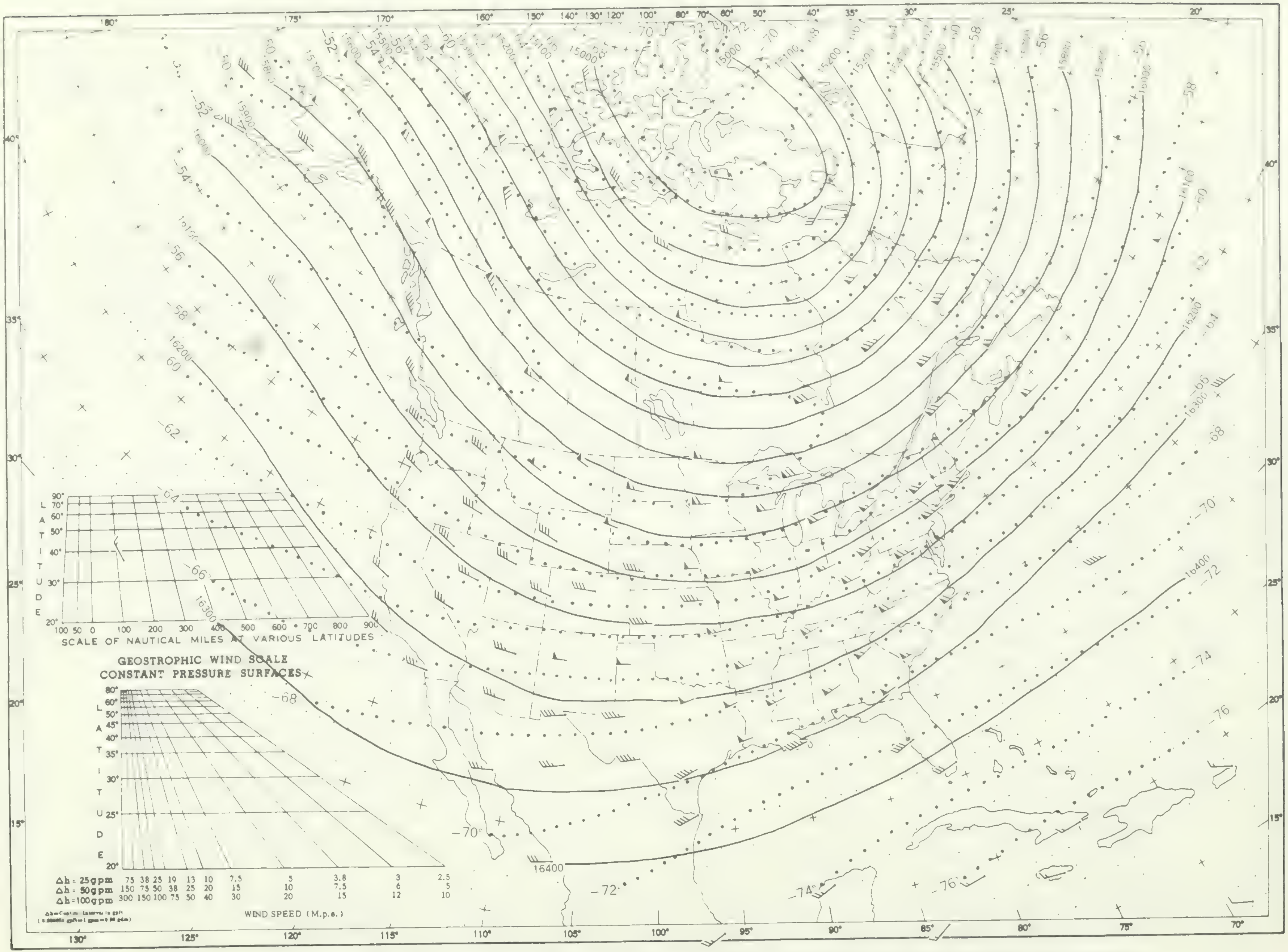
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb. Surface, 1200 G.m.t., January 1972. Average Height and Temperature, and Resultant Winds



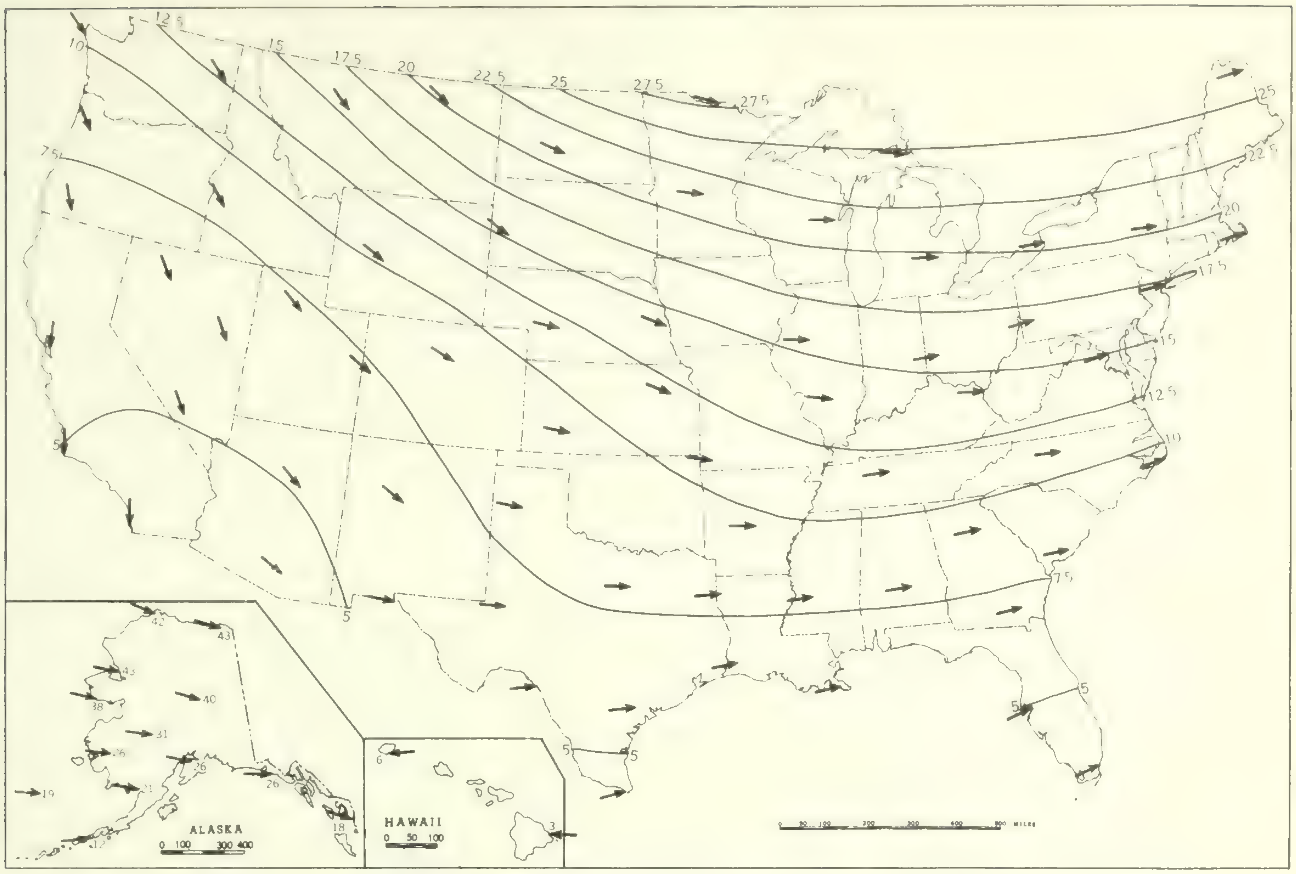
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb Surface, 1200 G.m.t., January 1972. Average Height and Temperature, and Resultant Winds

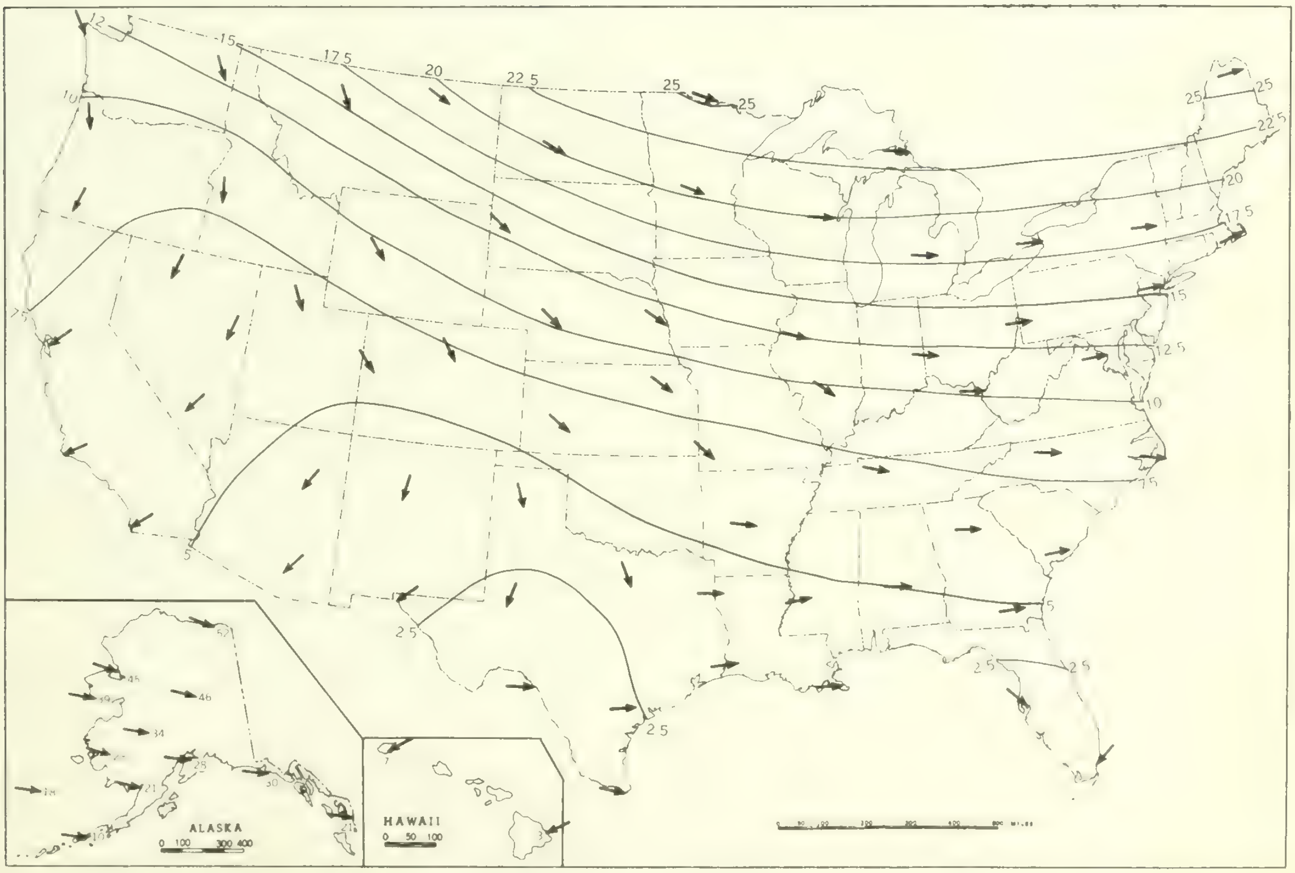


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., January 1972. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., January 1972. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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National Oceanic and Atmospheric Administration
Environmental Data Service

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 23 No. 2

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

FEBRUARY 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Temperatures averaged above normal over the southwestern half of the nation and cooler than normal over the northeastern half.
2. Heavy snow fell in the Cascades, and in parts of the Rocky Mountains, the northern Great Plains, and the Appalachians.
3. Only widely scattered light sprinkles fell in the southwestern quarter of the nation.

TEMPERATURE (°F.)--Cold weather gripped almost the entire nation in the first week of February. An arctic outbreak in the north dropped temperatures far below zero. Big Piney, Wyo., registered -34° early February 2 and maximums in North Dakota in the afternoon ranged generally from 0° to 7°. On the morning of the 4th, subzero weather was common from eastern Washington to Minnesota and, in the Great Plains, as far south as northern Kansas. The severe cold penetrated the Deep South; Tampa, Fla., recorded 44° on February 5. Almost the entire nation averaged colder than normal during the first week of the month.

The Far West and the northern and central Rocky Mountains warmed in the second week but bitter cold continued over much of the Great Plains, the Great Lakes Region, and the Ohio River Valley. The Far Southwest was pleasantly mild. Phoenix, Ariz., registered 73° on the 11th and 74° on the 12th. Southern Florida was comfortably warm with afternoon temperatures in the high seventies on most days. The cold pushed southward over the Great Plains reaching the Gulf of Mexico about February 8. The 9th was slightly warmer and the warming trend continued for several days under the influence of southerly breezes. On the 14th, St. Louis, Mo., with 72° was 2° warmer than Key West, Fla., and only 1° cooler than Phoenix, Ariz.

Most of the nation averaged warmer than normal in the third week of February. Temperatures over the southern Great Plains were especially mild. Maximums exceeded 80° on 1 or more days along the Lower Colorado River, over the southern Rio Grande Valley, and in southern Florida. Northerly winds late in the third week, behind an intense northward-moving storm off the Atlantic Coast, brought subfreezing weather to the Deep South. New Orleans, La., and Tallahassee, Fla., registered 31° on the morning of February 20.

The West and South were mild in the last week of February but bitter cold prevailed from the northern Great Plains to the Atlantic Ocean. Messina, N. Y., recorded -34° on February 23 and zero weather came to New York City. The southland enjoyed pleasant temperatures. Maximums reached the seventies and eighties from southern California to Florida almost every afternoon in the last week of the month.

PRECIPITATION -- Two major storms were in progress in the first week of February. The first, centered over the central Great Plains and moving toward the Great Lakes, caused snow over an eight-state area from Colorado and New Mexico to the middle Mississippi River Valley while an Atlantic storm soaked the Atlantic seaboard with heavy rain accompanied by gales. Snow fell in the higher elevations of the central Appalachians and north of the rain belt. The Washington, Oregon, and northern California coast received generous rains on many days in February. Snow fell in the nearby Cascades and Sierras and flurries occurred eastward across the northern border states to New England. The Pacific Coast was frequently battered by winds reaching gale velocities. A storm over the eastern states produced widespread precipitation in the second week of February. Several inches of snow fell in parts of the Appalachians.

Twelve to 14 inches of snow buried Canaan Valley, W. Va., and 9 inches fell at Mt. Washington, N. H. A large storm brought miserable weather to the eastern third of the nation shortly after midmonth. Large waves pounded the coast. One to 2 feet of snow fell in the northern and central Appalachians. Blizzards raged in many areas. Winds gusted to 60 m.p.h. or more. Deep snowdrifts blocked highways and byways and stranded hundreds of motorists. A series of winter storms paraded across the northern states in the last week of February. Rain continued along the northern Pacific Coast. Snow at Stampede Pass, Wash., accumulated to 16 feet. Flurries occurred across the northern Great Plains and several inches of snow fell in the northern Appalachians. Heavy rains fell in eastern Kentucky, southern West Virginia, and western North Carolina. This storm and several others during February caused local flash flooding. This storm was especially damaging because of the failure of a coal-slag dam in Logan County, W. Va. Water rushed down Buffalo Creek carrying away houses, automobiles, and people. Dozens of persons were drowned, hundreds are still missing and other hundreds are homeless.

Frequently during February, when snow fell in one area and rain nearby, a belt of mixed precipitation occurred between the snow and the rain areas. The mixture included snow and rain and sometimes sleet and freezing rain. These mixtures made highway travel hazardous.

Most of the southwest quarter of the nation received less than 0.25 inch of precipitation during the entire month. Much of this same area received less than 0.25 inch in January. Some localities in the Southwest have had no rain or only light sprinkles since late in December.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

FEBRUARY 1972

STATE	Temperature: Monthly extremes: Station	Highest	Date	Station	Lowest	Date	Precipitation: Monthly extremes: Station	Greatest	Station	Least
		°F			°F			In		In
Alabama	4 Stations	82	29	Florence	11	4	Gulf Shores P O	6.36	Russellville 2	.98
Alaska	Sitkinak	49	[illegible]	Chandalar Lake	-64	17	Little Port Walter	16.96	7 Stations	.00
Arizona	3 Stations	[illegible]	[illegible]	Sunrise Mountain	-15	[illegible]	2 Stations	.23	173 Stations	.00
Arkansas	Lead Hill	[illegible]	[illegible]	Gravette	[illegible]	4	West Memphis	1.77	Washita	1
California	4 Stations	[illegible]	29	Boca	-25	[illegible]	Honeydew 2 WSW	11.74	44 Stations	.00
Colorado	[illegible]	[illegible]	29	Taylor Park	-33	1	Berthoud Pass	4.03	15 Stations	.00
Connecticut	3 Stations	[illegible]	29	[illegible] Pwr Ltl Plt	-15	23	Bakersville	6.72	Cream Hill	3.32
Delaware	3 Stations	72	29	Wilmgton Porter Resvr	5	9	Milford 2 WSW	6.03	Newark University Farm	1.74
Florida	[illegible]	[illegible]	27	Fountain 3 SSE	18	[illegible]	[illegible] 5 NE	9.94	Loxahatchee	1.28
Georgia	Brunswick	8[illegible]	26	3 Stations	12	5	Atlanta Bolton	7.52	Summerville 1 SSW	1.64
Hawaii	Haina 214	86	6	Mauna Loa Slope Obs	25	11	Mount Waialeale 1047	49.50	Kona Village 93.8	1.01
Idaho	[illegible]	69	28	[illegible]	-10	2	Powell	9.95	Leadore No 2	.00
Illinois	2 Stations	81	29	Moline WSO AP	-19	9	Golconda Dam 51	5.30	Jerseyville 2 SW	D .39
Indiana	2 Stations	79	29	[illegible] Wtr Wks 2 NNE	-16	8	Evans Landing Dam 43	5.61	Rensselaer	.27
Iowa	Sidney	82	29	2 Stations	-33	9	Tipton	4.29	Beaconsfield 1 N	.08
Kansas	2 Stations	89	29	Oskaloosa	-15	[illegible]	Le Roy	1.23	8 Stations	00
Kentucky	Pikeville	82	29	Covington WSO AP	- 3	8	Frenchburg	8.53	Covington WSO AP	2.20
Louisiana	3 Stations	85	29	Homer Exp Station	11	4	Diamond 4 NW	8.63	Hosston	.49
Maine	Sanford 2 NNW	[illegible]	15	Fort Kent	-37	2[illegible]	Brunswick	7.34	Fort Fairfield	1.70
Maryland	Solomons	79	29	Oakland 1 SE	-13	9	Blackwater Refuge	7.11	Savage River Dam	3.32
Msssachusetts	6 Stations	68	29	Chester 2	-24	23	Woods Hole	8.75	Lanesboro	2.70
Michigan	4 Stations	62	29	Champion Van Riper PK	-34	8	Whitefish Point	3.48	Monroe Sewage Plant	32
Minnesota	Luverne	46	28	Detroit Lakes 1 NNE	-43	7	Tower	1.61	2 Stations	15
Mississippi	Wiggins 4 SE	85	26	Corinth 5 WSW	13	4	Vancleave	6.65	Greenville	.41
Missouri	5 Stations	85	29	[illegible]	- 9	9	Sikeston Pwr Plt	4.93	Waverly	.00
Montana	[illegible]	66	28	West Yellowstone	-38	2	Haugan 3 E	7.03	Toston 3 SW	00
Nebraska	2 Stations	84	29	Niobrara	-20	10	Homer	.82	2 Stations	.00
Nevada	Sunrise Manr Las Vegas	87	28	Mountain City RS	-20	2	Vya	2.33	26 Stations	.00
New Hampshire	Plymouth 1 E	59	16	Colebrook 2 E	-38	23	Mount Washington	13.37	Lancaster	1.90
New Jersey	[illegible]	72	29	2 Stations	- 6	23	Mays Landing 1 W	6.10	Shiloh	2.38
New Mexico	Jal	89	29	2 Stations	-12	5	Cloudcroft Lodge	D .56	48 Stations	.00
New York	[illegible] WSO AP	65	29	Old Forge	-16	23	[illegible] 1 N	9.59	Battenville	1.46
North Carolina	5 Stations	81	29	Grandfather Mountain	- 3	4	Morehead City 2 WNW	9.14	Fletcher 2 NE	2.01
North Dakota	2 Stations	52	21	3 Stations	-33	7	Rolla	2.14	Gackle	.05
Ohio	Ironton	79	29	Danville 2 W	-21	8	Ironton	5.13	Grover Hill	.40
Oklahoma	Hollis	89	29	Mannford 6 NW	0	3	Smithville 3 NNW	1.99	2 Stations	.00
Oregon	Hermiston 2 [illegible]	74	28	Seneca	-32	3	Tillamook 13 ENE	23.95	Metolius 1 W	.16
Pennsylvania	Ebensburg Sewage Pl	71	29	3 Stations	-20	23+	South Mountain	7.03	Titusville Water Wks	1.78
Puerto Rico	San Sebastian, P.R.	91	19	Adjuntas Substation, P.R.	47	18	Guavate Camp, P.R.	9.31	2 Stations, P.R.	.00
Rhode Island	Newport	57	29	North Scituate 4 W	- 9	23	North Scituate 4 W	6.81	Providence WSO AP	5.19
South Carolina	Beaufort 7 SW	84	26	3 Stations	12	8	Walterboro 2 SW	6.39	Cleveland 4 S	2.35
South Dakota	Wood	76	28	Flandreau	-32	9	Wagner	1.42	Mission	.03
Tennessee	Centerville Water Pl	80	29	Crossville Exp Sta	2		Lenoir City	6.22	Selmer	1.73
Texas	Junction	96	25	2 Stations	3	5	Kingsville	5.47	35 Stations	.00
Utah	Saint George	79	28	2 Stations	-28	3	Alta	3.92	58 Stations	00
Vermont	Rutland	55	15	2 Stations	-34	23	Mays Mill	6.06	Mc Indoe Falls	1.50
Virginia	2 Stations	81	29	Chilhowie 1 S	- 7	8	Vuena Vista	D 7.92	Washington	1.62
Washington	Richland	71	28	Mazama	-21	3	Baring	29.25	Prosser 4 NE	.08
West Virginia	2 Stations	78	29	Seneca State Forest	-21	8	Pickens 1	9.33	New Cumberland	2.58
Wisconsin	Reedsburg	48	28	Drummond 6 W	-39	8	New London	2.17	Mondovi	.16
Wyoming	Yoder	72	28	Kendall	-47	2	Snake River	3.78	7 Stations	T

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
ALABAMA	Ft.	Mb	Mb.	F.	F.	F.	F.	F		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
BIRMINGHAM	620	997.0	1020.1	57	36	46.9	- 1.8	79	25	21	5	0	11	33	62	2.15	- 3.13	0.58	12	3	T	0	1.0	26	29	NW	19	5	8	16	7.0	43
HUNTSVILLE	624	996.3	1019.8	55	33	44.3	- 0.8	75	25	19	5	0	12	32	65	2.58	- 2.64	0.62	11	2	T	T	1.3	28	32	29	12	7	6	16	6.6	
MOBILE	211	1011.9	1019.7	66	44	55.0	- 0.2	81	26	27	4	0	5	44	72	4.46	- 0.13	1.64	11	4	0.0	0	0.6	4	29	32	19	6	7	16	6.6	
MONTGOMERY	183	1012.9	1020.4	60	39	49.7	- 0.6	81	25	23	5	0	7	38	69	3.98	- 0.38	1.66	10	2	0.0	0	1.3	33	34	NW	19	5	10	14	6.9	47
ALASKA																																
ANCHORAGE	114	1004.1	1009.3	22	5	13.5	- 5.2	32	24	-13	18	0	29	5	67	0.63	- 0.08	0.64	3	0	8.9	18	5.9	1	37	1	24+	16	2	11	4.1	72
ANNETTE	110	1003.7	1007.7	35	25	30.1	- 5.0	44	19	10	29	0	23	23	76	8.41	- 0.13	1.64	18	0	25.4	12	4.7	11	29	13	12	2	7	20	8.2	
BARROW	31	1030.1	1030.8	-11	-27	-19.2	- 0.9	23	22	-42	15	0	29			0.19	0.02	0.16	4	0	2.3	8	1.3	25	36	25	22	15	9	5	3.9	
BARTER ISLAND	39	1027.8	1029.8	-13	-26	-19.8	- 0.2	24	22	-47	14	0	29	-28	65	0.16	- 0.19	0.09	7	0	2.1	18	11.5	28	61	27	16	12	5	12	5.0	
BETHEL	125	1011.5	1017.5	5	- 5	0.0	- 8.2	22	24	-21	16	0	29	- 7	73	0.03	- 1.09	0.03	1	0	0.3	4	15.7	2	38	3	6	22	2	5	2.6	
BETTLES	644			-10	-30	-19.8		7	28	-53	17	0	29			0.11		0.11	2	0	1.1	60			21	6	13	20	4	5	2.8	
BIG DELTA	1268			1	-19	- 9.0		19	24	-46	17	0	29			0.28		0.21	5	0	3.4	13			37	11	8	13	8	8	4.2	
COLD BAY	96	1006.8	1010.5	28	15	21.4	- 6.6	41	24+	0	18	0	29	17	81	1.09	- 2.08	0.57	14	0	9.8	5	10.1	34	38	33	14	10	3	16	6.0	
FAIRBANKS	436	1003.7	1022.4	0	-20	-10.1	- 7.2	22	1	-44	17	0	29	-22	54	0.16	- 0.36	0.10	5	0	4.5	29	3.7	2	24	2	27	15	3	11	4.4	
GULKANA	1572			6	-19	- 6.7		30	2+	-46	18	0	29			0.11		0.06	4	0	1.8	42			29	4	19	15	2	12	4.4	
HOMER	67			28	10	19.1		42	24	- 5	19+	0	29			1.03	- 0.41	0.45	9	0	12.2	14			29	4	25+	13	6	10	4.6	
JUNEAU	12	1009.5	1010.2	26	13	19.5	- 7.3	36	13	- 2	21	0	29	9	65	2.71	- 0.35	0.65	13	0	31.1	33	6.1	9	28	12	9	7	4	18	6.9	45
KING SALMON	49	1007.5	1009.4	15	- 2	6.2	-11.2	37	3+	-30	18	0	29	- 1	70	0.21	- 0.74	0.06	7	0	2.1	5	9.1	2	44	8	8	15	5	9	4.1	
KOTZEBUE	10	1025.7	1026.3	- 2	-15	- 8.6	- 4.6	21	23	-33	18+	0	29	-16	69	0.02	- 0.28	0.01	2	0	0.1	36	5.6	5	36	12	21	18	3	8	3.3	
MC GRATH	344	1005.8	1019.3	5	-19	- 7.2	- 7.3	27	24	-48	19	0	29	-13	74	0.05	- 1.09	0.03	2	0	1.1	32	4.2	36	17	1	27+	18	4	7	3.3	
NOME	13	1022.7	1023.6	13	- 5	4.2	- 1.3	32	4	-26	19	0	29	- 8	55	T	- 0.94	T	0	0	T	20	6.9	5	38	5	8	17	6	6	3.3	73
ST. PAUL ISLAND	22	1016.9	1017.7	20	9	14.6	- 8.7	34	21	-13	16	0	29	12	87	0.80	- 0.43	0.57	7	0	9.3	12	14.5	4	46	36	8	10	8	11	5.1	
SHEMYA	122	1007.8	1011.4	35	31	33.3	2.5	41	22	16	14	0	15	27	76	0.77	- 1.51	0.34	9	0	1.1	T	9.2	11	39	19	20+	0	3	26	9.4	
SUMMIT	2401	931.9	1018.0	7	- 8	- 0.8		27	23	-24	18	0	29	- 9	66	0.10		0.13	3	0	4.1	38	15.4	5	31	8	24+	17	7	5	3.3	
TALKEETNA	345			24	- 6	9.0	- 6.5	42	23	-25	16	0	29			0.79	- 0.93	0.68	3	0	11.4	60			24	3	27	21	0	8	3.0	
UNALAKLEET	15	1021.0	1021.6	9	- 4	2.8		27	23	-24	12	0	29	- 7	64	0.01		0.03	1	0	0.1	18	9.1	6	47	8	8	19	5	5	2.8	
YAKUTAT	28	1005.8	1006.9	29	11	19.7	- 8.9	37	9	-10	5	0	29	13	76	4.66	- 3.54	1.51	12	0	41.7	100	5.5	9	40	13	8	9	5	15	6.1	
ARIZONA																																
FLAGSTAFF	7006	788.0	1020.7	49	14	31.8	2.2	61	28	- 7	3	0	29	8	42	0.02	- 1.76	0.02	1	0	0.4	T	2.5	22	21	21	20	13	9	7	4.3	
PHOENIX	1117	977.0	1016.2	75	43	59.1	5.6	86	28+	31	3	0	3	20	25	T	- 0.85	T	0	0	0.0	0	2.2	12	23Y	ENE	3	10	9	10	5.1	85
TUCSON	2584	927.2	1015.9	72	40	55.8	2.9	83	28+	30	2	0	4	18	27	0.00	- 0.84	0.00	0	0	0.0	0	3.0	16	26	SE	4	11	10	8	4.9	83
WINSLOW	4875	853.0	1021.2	59	22	40.3	2.8	73	20	5	4	0	27	11	35	T	- 0.48	T	0	0	T	0	3.4	24	37	25	29	11	7	11	5.1	
YUMA	194	1009.1	1016.4	77	46	61.2	3.9	89	28	36	1	0	0	29	34	0.00	- 0.36	0.00	0	0	0.0	0	2.5	36	34	NW	2	13	7	9	4.5	85
ARKANSAS																																
FORT SMITH	447	1002.4	1019.5	56	31	43.6	- 0.1	79	28	14	4	0	15	30	65	1.01	- 2.42	0.47	8	1	0.5	T	2.2	5	30	NW	14	9	5	14	6.3	57
LITTLE ROCK	257	1009.8	1019.6	59	34	46.7	2.3	78	28	19	4	0	10	32	63	1.55	- 2.78	0.73	8	2	0.3	T	0.6	31	34	NW	18	11	4	14	5.7	55
CALIFORNIA																																
BAKERSFIELD	475	1002.7	1020.4	66	44	54.9	2.9	77	19	27	3	0	2	43	70	0.27	- 0.87	0.22	2	0	0.0	0	1.8	1	23	34	29	9	10	10	5.3	
BISHOP	4108	875.7		64	25	44.8	4.6	76	28	10	3+	0	24			0.00	- 0.98	0.00	0		0.0	0						8	15	6	5.0	
BLUE CANYON	5280			45	33	39.2	2.1	61	17	20	2+	0	12			9.34	- 0.85	3.03	11		60.3	47			30	21	28	3	6	20	7.9	
EUREKA U	43			55	43	49.0	0.8	63	27+	31	1	0	2			5.93	0.40	1.56	17		0.0	0			35	SW	28	2	3	24	8.7	37
FRESNO	328	1008.8	1020.6	65	40	52.5	2.0	75	27	26	3	0	3	44	80	0.67	- 1.52	0.51	3	0	0.0	0	1.2	32	26	NW	29	7	9	13	6.2	68
LONG BEACH	25	1017.6	1019.0	67	46	56.4	2.0	80	12	37	3	0	0	43	68	0.03	- 2.28	0.03	1	0	0.0	0	0.9	23	17	8	2	5	13	11	6.4	
LOS ANGELES	97	1014.6	1018.3	65	49	56.9	1.7	75	11	46	13+	0	0	46	74	0.16	- 2.72	0.16	1	0	0.0	0	1.8	25	21Y	NW	29+	7	12	10	6.3	
LOS ANGELES U	270			70	50	60.3	3.2	81	27	44	1	0	0			0.13	- 3.20	0.13	1		0.0	0			15	SW	6	10	13	6	4.8	70
MT SHASTA R	3544	894.0	1020.0	48	30	38.9	1.9	61	18+	6	2	0	20	30	75	2.14	- 3.77	1.03	14		10.2	9	2.1	12								
OAKLAND	6	1021.0	1021.2	59	47	53.0	2.3	71	17	38	2	0	0	47	81	1.31	- 1.90	0.70	10	0	0.0	0	1.7	22	21	19	21	3	9	17	7.3	
RED BLUFF	342	1007.1	1020.1	60	40	50.2	0.5	71	16	30	1	0	2	40	74	0.93	- 2.38	0.29	10	0	0.0	0	0.6	30	38	SE	22	5	4	20	7.5	63
SACRAMENTO	17	1020.0	1020.8	61	42	51.4	2.2	70	27	26	2	0	3	43	77	1.28	- 1.71	1.06	9	0	0.0	0	1.8	23	24	SW	28	3	10	16	7.5	64
SANDBERG R	4517	864.9		55	39	46.7	5.3	72	27	23	2	0	4	23	47	0.16	- 2.42	0.13	2		T	T	6.9	1	46	33	14	7	10	12	6.2	
SAN DIEGO	13	1017.6	1018.6	66	50	57.8	1.6	75	12+	40	3	0	0	43	65	0.10	- 2.05	0.10	1	0	0.0	0	3.2	31	19	NW	22+	5	11	13	6.3	74
SAN FRANCISCO	8	1020.3	1021.2	59	45	52.0	1.1	66	17	35	2	0	0	46	82	1.35	- 2.13	0.73	8	0	0.0	0	2.4	25	29	28	13	2	10	17	7.5	
SAN FRANCISCO U	52			59	49	54.0	1.0	67	27	42	2	0	0			2.13	- 1.53	1.22	13		0.0	0			23	SW	21					55
SANTA MARIA	236			65	41	53.0	1.2	75	27+	29	3	0	2			0.31	- 2.19	0.20	3		0.0	0						9	12	8	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 90 F or above	No. of days: Min 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	[illegible]
CALIFORNIA	Ft	Mb	Mb	F	F	F	F	F		F				F	%	In	In	In			In	In	Mph		Mph							
STOCKTON	22	[illegible]	[illegible]	62	41	[illegible]	[illegible]	73	27	[illegible]	2	0	3	45	62	[illegible]	- 1.76	[illegible]	6	0	T	0	2.1	27	18	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
COLORADO																																
ALAMOSA	7536	[illegible]		45	[illegible]	[illegible]	4.4	[illegible]	[illegible]	[illegible]	3	0	29			[illegible]	- [illegible]	[illegible]	2		2.0	1						11	11	[illegible]	[illegible]	
COLORADO SPRIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.6	71	28	[illegible]	3+	0	26	11	40	[illegible]	- [illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	36	[illegible]	[illegible]	14	6	14	[illegible]	[illegible]	
DENVER	[illegible]	[illegible]	[illegible]	52	[illegible]	[illegible]	[illegible]	74	28	- 2	3	0	26	18	54	[illegible]	- [illegible]	[illegible]	[illegible]	0	[illegible]	5	[illegible]	[illegible]	47	NE	[illegible]	4	12	14	[illegible]	68
GRAND JUNCTION	4843	[illegible]	1019.6	51	22	36.6	[illegible]	64	28+	8	4+	0	28	13	41	T	- 0.69	T	[illegible]	[illegible]	T	1	1.5	[illegible]	35	W	24	7	[illegible]	[illegible]	[illegible]	74
PUEBLO	4684	[illegible]	[illegible]	57	[illegible]	38.6	4.7	79	28	- 2	3	0	27	14	42	0.13	- [illegible]	[illegible]	3	0	[illegible]	[illegible]	[illegible]	[illegible]	41	N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CONNECTICUT																																
BRIDGEPORT	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	- [illegible]	57	29	[illegible]	23	0	25	18	64	[illegible]	3.69	[illegible]	[illegible]	0	14.9	5	6.5	[illegible]	48	19	20	7	[illegible]	13	[illegible]	
HARTFORD	169	1009.1	1015.9	[illegible]	17	26.0	- 1.1	52	15	- [illegible]	23+	0	[illegible]	15	64	5.12	2.15	1.72	14	0	14.9	13	[illegible]	31	[illegible]	N	4	7	9	15	[illegible]	56
DELAWARE																																
WILMINGTON	74	1014.2	[illegible]	[illegible]	24	32.6	- 1.2	65	29	11	21+	0	25	22	66	5.43	2.48	1.62	11	0	7.0	3	[illegible]	32	40	[illegible]	19	[illegible]	[illegible]	14	6.2	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	[illegible]	1005.4	1017.7	43	22	32.6		75	29	7	21	[illegible]	25	23	71	5.44		1.66	[illegible]	0	[illegible]	7	3.7	29	36	28	4	7	6	16	6.6	
WASHINGTON NATIONAL	[illegible]	[illegible]	[illegible]	45	28	36.5	- 1.[illegible]	77	[illegible]	14	8	0	18	23	63	5.27	2.80	1.58	[illegible]	0	14.4	3	3.7	31	34	NW	20+	7	8	14	6.4	54
FLORIDA																																
APALACHICOLA U	13			62	47	54.7	- 2.1	[illegible]	26	[illegible]	5+	0	0			4.38	[illegible]	1.29	11	2	0.0	0			38	NW	[illegible]	7	6	16	6.7	75
DAYTONA BEACH	31	1017.6	1019.2	68	50	[illegible]	- 1.6	84	26	32	21	0	1	48	72	3.47	1.72	1.12	[illegible]	[illegible]	0.0	0	3.5	31	26	28	19+	7	8	14	6.2	
FORT MYERS	15	1018.6	[illegible]	77	55	66.0	0.8	86	28+	39	21	0	0	55	[illegible]	2.14	- [illegible]	1.06	8	2	0.0	0	1.8	35	30	[illegible]	[illegible]	8	12	8	5.6	
JACKSONVILLE	26	1018.6	[illegible]	65	45	55.1	- 2.4	83	26	28	5	0	[illegible]	45	75	3.40	[illegible]	0.93	11	4	0.0	0	3.4	32	38	NW	19	6	[illegible]	14	6.7	47
KEY WEST	4	1017.6	1018.2	76	67	71.9	1.5	91	3+	56	21	0	0	62	71	[illegible]	[illegible]	1.45	7	[illegible]	0.0	0	4.4	7	30	NW	[illegible]	[illegible]	5	8	4.7	[illegible]
LAKELAND U	214			70	52	61.2	- 1.9	83	27	35	5	0	0			3.36	2.55	1.06	9		0.0	0						[illegible]	9	9	[illegible]	[illegible]
MIAMI	7	1018.0	1018.2	76	61	68.4	0.5	83	28+	42	20	0	0	59	71	2.71	.84	[illegible]	[illegible]	[illegible]	0.0	0	.8	35	30	24	[illegible]	[illegible]	14	5	5.0	
ORLANDO	108	1014.6	1019.1	72	52	62.0	0.1	87	[illegible]	37	21+	0	0	50	70	4.96	[illegible]	[illegible]	10	3	0.0	0	3.4	31	37	29	[illegible]	8	5	16	[illegible]	
PENSACOLA	112	1015.6	[illegible]	64	46	[illegible]	- 1.0	82	26	[illegible]	4	0	2	43	70	3.48	- [illegible]	0.84	13	2	0.0	0	1.5	1	25	35	19+	7	8	14	6.5	
TALLAHASSEE	55	1017.3	1019.7	65	42	[illegible]	- 2.2	81	26	21	5	0	7	43	72	7.05	2.87	[illegible]	11	2	0.0	0	1.5	36	23	32	[illegible]	5	7	17	6.9	
TAMPA	19	[illegible]	1019.2	71	50	60.7	- 2.0	83	27	34	21	0	0	50	72	4.44	1.60	1.50	9	4	0.0	0	2.8	36	35	31	19	9	9	11	6.0	[illegible]
WEST PALM BEACH	15	1017.3	1018.0	77	57	67.0	- 0.6	86	16+	43	20	0	0	57	71	2.55	0.20	1.17	12	[illegible]	0.0	0	1.0	30	38	28	19	7	10	12	6.1	
GEORGIA																																
ATHENS	802	989.5	1019.2	53	33	43.3	- 2.8	78	29	21	5	0	13	31	67	2.94	- 1.76	0.79	11	1	T	T	2.7	31	29	31	19	5	8	16	6.9	
ATLANTA	1010	981.4	1019.1	52	33	42.6	- 3.5	75	29	21	5+	0	14	30	66	3.16	- 1.35	0.77	10	2	T	T	1.9	33	39	NW	19	3	9	17	7.4	44
AUGUSTA	136	1013.9	1019.3	57	37	46.8	- 2.5	79	29	[illegible]	5	0	10	34	67	3.08	- [illegible]	0.81	10	3	0.0	0	2.9	29	29	28	19	4	9	16	7.1	
COLUMBUS	385	1005.4		58	40	48.8	- [illegible]	78	25	24	5	0	7	37	70	3.92	- 0.71	1.31	12	2	0.0	0	2.2	36	31	32	19	3	9	17	7.5	
MACON	354	1007.1	1020.4	57	39	47.9	- [illegible]	78	25	25	5	0	6	37	70	4.31	0.05	1.26	9	[illegible]	0.0	0	3.1	33	44	NW	19	4	6	19	7.6	42
ROME	637			53	31	41.8	- 2.6	75	29+	15	5	0	16			3.52	- 1.78	0.90	14		T	0										
SAVANNAH	46	1017.6	1019.4	61	41	51.3	- 1.8	82	26	24	5	0	6	38	67	4.61	0.93	1.09	11	2	0.0	0	3.1	32	34	NW	19+	4	6	19	7.8	48
HAWAII																																
HILO	27	1014.2	1015.5	79	63	70.7	0.1	85	29	57	2+	0	0	64	84	10.13	- 2.81	3.20	21	6	0.0	0	2.4	14	26	SE	22+	[illegible]	7	22	8.5	21
HONOLULU	7	1014.6	1014.9	77	64	70.6	- 1.8	80	15+	54	2	0	0	62	75	5.00	1.70	3.06	8	2	0.0	0	6.4	8	27	NE	13+	7	15	9	6.0	56
KAHULUI	48	1012.5	1014.8	79	62	70.4	- 1.3	84	21+	53	1	0	0	62	77	8.31	5.77	4.98	10	3	0.0	0	4.9	6	32	S	4	10	7	12	6.3	57
LIHUE	103	1010.5	1015.7	76	66	70.9	0.2	80	29+	57	26	0	0	64	80	7.77	2.45	4.19	15	2	0.0	0	4.4	8	34	SW	4	0	17	12	7.2	40
IDAHO																																
BOISE	2838	917.7	1020.4	44	29	36.5	2.0	61	19	4	2	0	18	26	70	0.91	- 0.42	0.38	12	1	3.5	1	3.2	13	37	S	22	2	6	21	8.2	42
LEWISTON	1413			45	30	37.6	1.7	65	28	2	2	0	13			1.47	0.50	0.53	18		2.6	2			64Y		16	2	3	24	8.7	
POCATELLO	4454	863.9	1020.9	38	20	29.0	1.8	56	19	-11	2	0	26	19	67	0.92	0.00	0.38	10	0	6.9	3	7.6	23	41	W	22	5	3	21	7.7	44
ILLINOIS																																
CAIRO U	314			48	32	39.8	- 0.9	75	29	15	4	0	13			4.69	1.02	2.56	11		T	T			33	SW	14	9	11	9	5.4	55
CHICAGO O HARE	658	992.9	1018.2	32	15	23.6	- 2.6	62	29	-12	7	0	28	14	65	0.73	- 0.78	0.21	14	0	7.7	4	4.2	27	35	19	27	6	3	20	7.2	
CHICAGO MIDWAY	607	994.9	1018.6	34	17	25.5	- 2.2	65	29	- 5	7	0	27	16	67	0.92	- 0.68	0.20	13	0	14.7	5	3.5	26	27	S	27	5	1	23	7.5	48

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 90 F or above	Min. 32 F or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
	Ft	Mb	Mb	F.	F.	F.	F.	F		F.				F.	%	In	In	In			In	In	M.p.h		M p h							%
ILLINOIS																																
MOLINE	582	997.5	1020.0	34	11	22.7	- 5.0	67	29	-19	9	0	29	13	70	1.24	- 0.11	0.40	14	0	13.7	12	3.0	28	36	NW	18	7	5	17	7.0	53
PEORIA	652	994.2	1019.3	34	15	24.5	- 3.9	70	29	- 7	7+	0	28	18	77	0.74	- 0.97	0.14	11	0	6.2	4	2.0	28	33	NW	18	6	6	17	7.0	55
ROCKFORD	724	991.5	1018.7	29	12	20.5	- 3.9	62	29	-16	7	0	28	14	74	0.6[illegible]	- 0.84	0.22	10	0	7.9	6	2.6	30	29	26	17	6	6	17	7.1	
SPRINGFIELD	588	996.3	1019.3	38	20	29.0	- 2.6	74	29	0	5	0	25	21	73	0.82	- 1.00	0.23	12	0	6.0	4	1.9	28	36	NW	18	9	4	16	6.3	52
INDIANA																																
EVANSVILLE	381	1005.1	1019.7	44	25	34.1	- 3.5	77	29	10	5	0	25	25	71	3.05	- 0.13	1.03	12	1	1.5	1	1.3	29	30	NW	19	6	7	16	6.7	53
FORT WAYNE	791	988.2	1019.2	34	16	25.1	- 3.2	62	29	-10	8	0	29	17	71	0.59	- 1.65	0.16	13	0	5.8	3	4.2	26	36	N	19	3	10	16	7.6	55
INDIANAPOLIS	792	988.8	1019.0	38	19	28.4	- 2.7	74	29	- 2	8	0	28	21	73	1.15	- 1.13	0.28	15	0	6.4	3	2.2	24	30	NW	19	7	5	17	6.9	52
SOUTH BEND	773	988.8	1018.[illegible]	34	19	26.5	- 0.3	60	29	- 3	8	0	27	19	74	1.39	- 0.49	0.40	14	0	21.2	10	3.4	23	26	30	4	1	5	23	8.6	
IOWA																																
BURLINGTON	692			34	14	23.8	- 4.0	72	29	- 8	7	0	28	15	67	0.95	- 0.44	0.19	13	0	5.6	8	2.6	32	29	32	21+	7	7	15	6.6	
DES MOINES	938	983.7	1020.3	30	10	19.9	- 3.5	73	29	-18	9	0	28	13	75	0.63	- 0.47	0.19	9	0	9.[illegible]	9	2.5	34	40	W	17	6	8	15	6.9	57
DUBUQUE	1056	978.[illegible]		26	8	17.2	- 4.8	47	29	-13	7	0	28			0.99	- 0.41	0.2[illegible]	10		12.4	6						6	9	14	6.7	
SIOUX CITY	1095	978.3	1020.3	29	8	18.3	- 3.9	66	28	-15	9	0	28	7	61	0.89	0.00	0.38	9	0	9.1	7	3.2	36	44	NW	17	5	11	13	6.4	65
WATERLOO	868	986.5	1020.2	23	1	11.9	- 9.5	44	28	-26	9	0	29	7	75	1.13	[illegible]	0.3[illegible]	[illegible]	[illegible]	15.4	7	3.3	33	32	32	18	7	10	12	6.6	
KANSAS																																
CONCORDIA	1470	963.8	1018.6	45	18	31.4	- 0.2	86	29	- 3	3	0	26	19	64	0.3[illegible]	- 0.61	0.25	3	[illegible]	2.6	2	0.6	25	38	NW	21+	8	7	14	6.3	80
DODGE CITY	2582	924.1	1017.2	52	21	36.5	1.8	85	29	3	3+	0	26	16	50	0.07	- 0.63	0.04	2	0	0.[illegible]	T	1.0	27	43	N	21	7	8	14	[illegible]	65
GOODLAND	3654	880.[illegible]	1016.4	52	19	35.1	4.2	80	29	- 1	3	0	27	15	52	0.06	- 0.45	0.06	2	[illegible]	1.[illegible]	1	4.5	27	35	36	21	5	15	9	5.8	
TOPEKA	877	980.[illegible]	1019.[illegible]	44	20	31.8	- 1.3	84	29	- 4	4	0	26	21	67	0.56	- 0.49	0.22	[illegible]	0	6.[illegible]	3	1.3	33	33	SW	5	9	6	14	6.2	61
WICHITA	1321	967.[illegible]	1018.[illegible]	47	22	34.8	- 1.5	82	29	1	3	0	25	23	65	0.28	- 0.64	0.12	4	0	4.4	3	0.7	5	37	S	5	7	7	15	6.1	63
KENTUCKY																																
COVINGTON	869	986.1	1018.7	39	20	29.5	- 3.6	73	29	- 3	8	0	27	20	67	2.20	- 0.71	0.56	15	0	10.8	5	3.1	26	29	23	28+	5	5	19	7.6	
LEXINGTON	966	983.7	1019.4	43	23	33.2	- 2.6	75	29	4	5	0	26	25	76	5.60	2.18	2.12	15	2	6.3	2	2.5	23	24	22	28+	4	9	16	7.3	
LOUISVILLE	477	1001.0	1019.2	44	25	34.9	- 0.9	77	29	10	5	0	25	24	67	3.94	0.65	1.49	16	1	3.4	1	1.9	29	31	W	3	3	7	19	7.2	52
LOUISIANA																																
ALEXANDRIA	92	1015.2	1019.6	65	41	52.8	[illegible]	81	25	23	4	0	8			2.10	- 2.07	0.75	7	2	0.0	0	0.8	19	28	21	24	7	9	11	5.7	
BATON ROUGE	64	1016.9	1019.8	66	44	55.3	- 0.1	80	25	27	4	0	4	44	72	3.43	- 0.49	1.0[illegible]	4	6	0.0	0	0.8	11	23	34	17+	6	9	14	6.4	
LAKE CHARLES	9	1018.6	1019.7	66	46	56.3	0.0	83	26	28	4	0	4	48	80	2.24	- 2.27	1.0[illegible]	4	3	0.0	0	2.0	11	23	18	23	7	7	15	6.5	
NEW ORLEANS	4	1019.[illegible]	1020.[illegible]	67	45	56.1	- 1.0	85	26	31	20	0	3	47	73	6.05	2.04	1.21	12	7	0.0	0	0.9	7	23	33	3	6	9	14	6.3	
SHREVEPORT	254	1009.8	1019.2	64	40	51.9	1.6	80	28+	19	4	0	8	41	72	0.94	- 3.15	0.48	5	2	0.0	0	1.3	17	23	18	14+	9	5	15	6.2	51
MAINE																																
CARIBOU	624	989.5		18	- 5	6.4	- 5.1	41	15	-25	23	0	29			2.38	0.36	0.66	12	0	25.1	26						10	4	15	6.1	
PORTLAND	43	1012.9	1015.1	31	11	21.1	- 1.7	47	4	-18	23	0	29	11	65	5.14	1.34	1.48	1[illegible]	0	35.0	2[illegible]	4.4	31	42	E	4	7	11	11	5.8	65
MARYLAND																																
BALTIMORE	148	1012.2	1018.0	43	26	34.3	- 1.4	74	29	11	9	0	21	22	63	6.02	3.12	1.72	13	[illegible]	11.4	4	4.6	29	38	NW	19+	8	8	13	6.2	5[illegible]
MASSACHUSETTS																																
BLUE HILL OBS'R	629			34	17	25.5	- 2.1	54	15	- 5	23	0	27			6.59	2.86	2.75	1[illegible]		24.1	16			68	SSE	4					51
BOSTON	15	1014.2	1015.[illegible]	37	22	29.6	- 0.7	56	15	0	23	0	26	17	60	5.29	1.9[illegible]	1.43	1[illegible]	0	15.5	9	5.7	30	47	NW	20+	6	1[illegible]	13	6.4	49
WORCESTER	986	977.0	1015.4	32	15	23.3	- 1.6	53	15	- 9	23	0	27	12	62	4.7[illegible]	[illegible]	[illegible]	12	0	[illegible].0	26	6.4	30	37	4	19	6	9	14	6.7	
MICHIGAN																																
ALPENA	689	[illegible]	1017.[illegible]	26	7	16.4	- 2.2	43	12	-11	8	0	29	9	71	1.06	- 0.53	0.46	13	0	15.9	10	[illegible].5	26	28	NW	21	6	6	[illegible]	7.3	[illegible]
DETROIT	619			31	17	25.4	- 1.8	47	12	5	8+	0	27	15	64	0.77	[illegible]	0.22	11	0	[illegible]		3.1	28	35	32	19					
DETROIT METRO	633	992.[illegible]	1017.4	32	17	24.6	- 1.1	46	12	- 3	8+	0	26	16	63	[illegible]	[illegible]	0.21	13	0	9.3	3	[illegible]	29	42	NW	19	5	7	17	7.2	4[illegible]
FLINT	771	988.[illegible]	1017.[illegible]	30	15	22.5	- 2.3	44	21+	- 9	10	0	28	14	68	1.81	[illegible]	0.19	11	0	12.9	7	[illegible]	26	32	34	19	7	5	16	6.9	
GRAND RAPIDS	784	987.1	1017.5	30	14	21.9	- 2.4	44	28	-11	10+	0	29	14	69	[illegible]	- [illegible].85	[illegible]	14	0	[illegible]	6	[illegible]	[illegible]	39	SW	[illegible]	4	[illegible]	[illegible]	7.8	3[illegible]
HOUGHTON LAKE	1149	973.2	1017.1	26	7	16.4	[illegible]	39	12	-17	8	0	29	[illegible]	[illegible]	[illegible]	[illegible]	0.28	14	0	[illegible]	11	[illegible]	27	[illegible]	34	[illegible]	3	13	13	7.1	
LANSING	841	984.8	1017.6	30	14	21.8	[illegible]	45	12	-14	10+	0	29	15	73	[illegible]	- [illegible].76	[illegible]	13	0	14.5	3	3.2	25	33	NW	4	[illegible]	7	17	7.3	32
MARQUETTE	677			22	8	14.9	- 4.8	37	14	- 8	5	0	29			1.43	- 0.22	0.24	[illegible]		13.2	38			27	NW	18	3	8	18	7.7	48

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F or above	No. of days: Min 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb	F	F	F.	F	F		F				F	%	In	In	In			In	In	M.p.h		M.p.h							%
MICHIGAN																																
MUSKEGON	625	993.9	1018.0	29	16	22.4	- [illegible]	44	28	- 7	10	0	29	14	72	1.01	- 0.79	0.14	17	0	19.4	8	1.9	[illegible]	28	[illegible]	19+	[illegible]	[illegible]	[illegible]	8.6	[illegible]
SAULT STE MARIE	721	988.8	1016.7	[illegible]	[illegible]	10.7	- 5.0	34	14	-17	22	0	29	6	79	2.98	1.48	0.59	[illegible]	0	41.4	41	1.2	[illegible]	31	W	4	3	4	22	6.0	[illegible]
MINNESOTA																																
DULUTH	1428	964.4	1019.1	16	- 3	6.4	- 4.4	32	14	-29	9	0	29	- 2	68	1.47	0.51	0.76	12	0	20.7	28	[illegible]	31	36	NW	18	[illegible]	4	18	6.8	[illegible]
INTERNATIONAL FALLS	1179	973.[illegible]	1022.1	13	-11	1.3	- 5.8	35	13	-31	6	0	29	- 8	63	0.71	1.00	0.29	8	0	14.2	29	2.8	[illegible]	[illegible]	[illegible]	21+	5	8	13	6.0	
MINNEAPOLIS	834	987.8	1020.2	20	1	10.5	- 5.2	37	14	-24	7	0	29	2	67	0.49	- 0.29	0.31	6	0	7.6	16	[illegible]	31	29	W	23+	9	6	14	6.2	[illegible]
ROCHESTER	1297	964.2	1019.[illegible]	22	3	12.4	- 3.8	38	28	-21	7	0	29	7	78	0.29	- 0.51	0.13	6	[illegible]	3.5	10	4.2	29	35	30	23+	8	9	12	6.[illegible]	
ST CLOUD	1034	98[illegible].4	1021.[illegible]	18	- 4	6.8	- 6.6	37	14	-27	9+	0	29			0.47	- 0.33	0.29	6		6.7	14						8	7	14	6.0	
MISSISSIPPI																																
JACKSON	310	1007.8	1020.0	63	39	51.2	0.7	82	25	21	5	0	9	41	73	3.09	- 1.87	1.58	10	2	T	0	0.8	[illegible]	30	[illegible]	29	7	8	14	6.4	49
MERIDIAN	290	1009.1	1020.3	65	39	51.1	0.6	81	29	23	5	0	10	39	68	3.91	- 1.18	1.55	8	[illegible]	0.0	0	0.6	28	21	27	3	7	4	18	6.9	
MISSOURI																																
COLUMBIA REGIONAL	887	986.1	1019.5	43	24	33.6	0.0	82	29	6	7+	0	24	23	69	0.42	- 1.39	0.12	10	0	3.2	2	1.2	27	35	NW	18	7	7	15	6.7	57
KANSAS CITY	742	991.2	1019.0	43	23	33.2	- 2.6	83	29	2	3	0	23	21	64	0.41	- 0.83	0.20	7	[illegible]	2.9	1	1.5	34	32	SW	5	8	7	14	6.4	59
ST JOSEPH	811			42	20	31.0	- 0.1	79	29	[illegible]	3	0	28			0.20	- 0.89		4		0.0		1.5	32	29	29	17	8	4	17	6.4	
ST LOUIS	535	998.6	1019.6	46	23	34.5	- 0.4	85	29	6	7+	0	25	25	74	0.72	- 1.32	0.26	12	0	1.9	2	1.9	27	40	NW	18	7	7	15	6.5	60
SPRINGFIELD	1268	972.2	1018.9	50	27	38.3	1.2	81	29	7	4+	0	23	26	66	1.23	- 0.89	0.53	9	1	3.1	1	2.1	18	31	NW	18	9	6	14	6.3	53
MONTANA																																
BILLINGS	3567	888.6	1016.1	36	16	26.2	0.5	61	28	-13	2	0	27	15	65	0.81	0.21	0.30	9	0	7.6	11	6.4	26	50	W	16	1	8	20	8.1	38
GLASGOW	2284	933.3	1019.5	19	2	10.5	- 3.1	47	20	-23	2	0	29	3	71	0.59	0.18	0.23	1[illegible]	0	10.6	8	4.2	8	37	29	16	3	10	16	7.6	
GREAT FALLS	3662	884.9	1017.1	34	11	22.5	- 1.3	61	19	-12	2+	0	28	13	68	0.62	- 0.12	0.36	8	0	6.3	5	7.4	23	47	SW	16	0	10	19	8.2	35
HAVRE	2584	921.8	1018.3	22	3	12.5	- 3.8	52	20	-21	2+	0	29	5	72	0.49	0.06	0.26	7	0	8.5	10	2.2	25	52	SW	16	1	10	18	8.1	64
HELENA	3828	878.1		36	17	26.8	3.6	57	28	-20	2	0	27	17	67	0.54	0.11	0.21	6	0	3.3	7	4.6	27	46	W	16	1	8	20	8.2	41
KALISPELL	2965	909.6	1017.0	34	18	26.2	1.7	47	28+	-16	2	0	27	20	77	1.57	0.57	0.44	16	0	13.3	11	4.7	18	25	15	12	1	4	24	8.9	
MILES CITY	2629	920.8	1017.9	26	9	17.4	- 2.9	50	20	-18	2	0	29			0.73	0.36		12	0	6.0		3.9	33								
MISSOULA	3190	903.5	1018.7	36	20	28.1	3.1	53	28	-13	2	0	27	23	82	1.82	0.95	0.54	18	0	15.2	9	1.5	29	29	W	16	2	4	23	8.7	36
NEBRASKA																																
GRAND ISLAND	1841	950.2	1019.3	41	14	27.2	1.1	77	28	- 8	3	0	28	12	56	0.17	- 0.57	0.15	4	0	2.6	2	1.8	31	35	32	17	6	8	15	6.3	
LINCOLN U	1150			40	17	28.7	0.0	83	29	- 3	3	0	26			0.25	- 0.84	0.22	4		4.0	3			38	NW	17	7	[illegible]	13	6.2	64
NORFOLK	1544			34	10	21.6	- 1.3	71	28	-11	11	0	28			0.14	- 0.64	0.11	5		2.5	5						8	8	13	6.2	
NORTH PLATTE	2775	917.0	1018.1	46	13	29.9	2.0	76	28	- 4	3+	0	29	14	59	0.08	- 0.44	0.06	2	0	1.9	1	2.6	31	36	N	21	6	5	18	7.0	62
OMAHA	977	982.7	1019.4	38	13	25.4	- 1.1	78	29	- 6	9+	0	28	15	67	0.36	- 0.59	0.27	7	0	5.0	4	2.7	35	46	NW	17	7	11	11	6.1	67
SCOTTSBLUFF	3957	877.4	1016.6	49	18	33.4	4.4	73	28	- 6	11	0	26	16	57	0.25	- 0.15	0.24	2	0	2.3	2	6.8	30	38	28	27	7	6	16	7.0	
VALENTINE	2587			37	11	24.0	1.0	73	28	-10	2	0	28			0.13	- 0.43	0.11	3		2.0	4			46	S	22	9	8	12	6.2	61
NEVADA																																
ELKO	5050	846.3	1020.8	45	20	32.4	4.4	61	19	- 5	2	0	28			0.57	- 0.32	0.40	4	0	9.1	5	2.7	25	29	27	29	6	5	18	7.0	
ELY	6253	809.3	1019.8	47	18	32.5	5.9	63	27	-11	2	0	29	17	59	0.01	- 0.69	0.01	1	0	0.1	T	4.6	22	27	W	29	7	11	11	6.0	83
LAS VEGAS	2162	941.4	1018.8	66	38	52.0	4.2	82	28	19	3	0	7	15	25	T	- 0.44	T	0	0	0.0	0	3.1	25	33	SW	22	14	8	7	4.4	92
RENO	4404	867.6	1019.7	53	27	40.2	4.6	69	27	4	2	0	23	23	57	0.14	- 0.88	0.07	4	0	0.7	2	2.3	24	37	SW	28	2	6	21	7.9	61
WINNEMUCCA	4301	870.3	1019.8	51	23	36.9	4.6	68	19	- 1	2	0	26	25	67	0.61	- 0.33	0.48	4	0	6.2	6	3.1	22	29	SW	22	5	6	18	7.6	47
NEW HAMPSHIRE																																
CONCORD	342	1002.0	1015.3	32	11	21.2	- 1.5	54	15+	-10	23+	0	28	11	66	2.60	0.12	0.77	11	0	29.8	19	4.6	31	34	NW	20+	7	8	14	6.2	48
MT WASHINGTON OBS	6262			11	- 8	1.3	- 4.3	27	15	-36	23+	0	29			13.37	8.16	3.95	21	0	79.1	20			166Y	E	4	2	6	21	8.1	32
NEW JERSEY																																
ATLANTIC CITY	64	1013.9	1016.5	42	23	32.5	- 2.2	66	29	7	1	0	25	23	72	4.31	1.18	1.04	12	1	5.9	2	4.6	30	35	30	20+	6	9	14	6.4	42
ATLANTIC CITY U	11			44	30	36.6	0.9	68	29	17	8	0	15			3.76	0.38	0.97	11						59	SE	13					
NEWARK	7	1015.6	1016.6	39	23	31.3	- 1.4	63	29	9	21+	0	25	22	70	4.01	1.21	1.25	11	0	12.3	4	4.8	30	31	28	22+	6	10	13	6.3	
TRENTON U	56			39	24	31.7	- 1.7	64	29	11	23+	0	24			4.25	1.66	1.09	12		9.8	3			41	E	19	8	9	12	5.9	55

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10		
												Max. 90 F. or above	Min. 32 F or below						.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
NEW MEXICO	Ft	Mb.	Mb	F.	F.	F	F.	F.		F.				F.	%	In.	In.	In.			In.	In	M p.h		M.p.h.							%
ALBUQUERQUE	5311	837.8	1016.8	59	26	42.5	2.6	75	29	11	11	0	24	13	36	0.12	- 0.26	0.12	1	0	1.1	1	1.2	32	42	E	22	11	8	10	5.0	85
CLAYTON	4969			57	23	39.9	3.9	78	29	5	3	0	25			0.01	- 0.36	0.01	1		0.3	T						11	13	5	4.6	
ROSWELL	3612			65	26	45.7	3.6	84	28	3	3	0	22			0.00	- 0.42	0.00	0		0.0	0			34	NW	16					79
NEW YORK																																
ALBANY	275	1006.1	1017.2	32	10	21.1	- 2.6	52	15	-16	23	0	29	12	67	3.04	0.84	1.00	11	0	24.8	12	4.3	30	42	NW	20	5	10	14	7.0	56
BINGHAMTON	1590	955.3	1016.3	28	13	20.6	- 3.2	46	15	- 5	23	0	29	13	73	3.74	1.56	1.11	17	0	44.3	24	3.9	26	34	NW	20+	1	7	21	8.5	39
BUFFALO	705	990.2	1016.8	30	14	22.0	- 2.1	44	12	0	23	0	28	17	80	3.44	0.72	1.22	20	0	31.4	12	6.3	25	41	W	4	1	5	23	8.6	41
NEW YORK C	132	1012.5	1016.0	39	24	31.4	- 2.0	62	29	9	23	0	23	20	67	5.90	3.06	1.65	12	0	17.8	5	3.7	30	40	NE	19					46
NEW YORK KENNEDY	13	1015.9	1016.6	41	26	33.5	1.9	65	29	14	23+	0	20	23	67	4.89	1.96	1.52	11	0	10.5	3	6.0	31	41	26	4	6	8	13	6.4	
NEW YORK LA GUARDIA	11	1015.2	1016.4	37	24	30.6	- 3.0	60	29	10	23+	0	23	16	57	4.80	1.71	1.71	12	0	17.2	5	5.3	33	54	W	4	5	10	14	6.7	
ROCHESTER	547	995.9	1016.9	31	15	23.4	- 1.5	45	15	- 3	23	0	27	15	71	3.96	1.43	1.32	21	0	35.7	15	5.4	25	37	W	4	2	6	21	8.1	44
SYRACUSE	410	1001.0	1016.4	31	15	22.9	- 1.4	46	15	- 6	23	0	28	15	72	2.87	- 0.26	1.04	16	1	50.0	20	3.7	26	38	W	4	0	6	23	8.8	37
NORTH CAROLINA																																
ASHEVILLE	2140	940.7	1018.4	47	26	37.6	- 1.3	77	29	16	5	0	25	28	74	2.02	- 2.01	0.80	10	0	7.4	3	3.2	34	60	34	19	8	7	14	6.3	67
CAPE HATTERAS R	7	1017.3	1017.7	55	39	47.0	0.5	66	26	22	6	0	5	39	75	5.66	1.73	2.70	14	3	T	T	5.6	33	37	14	13	7	6	16	6.2	51
CHARLOTTE	736	990.5	1018.8	50	30	40.4	- 3.8	76	29	15	5	0	19	27	63	3.21	- 0.34	0.92	13	0	0.5	1	1.5	31	27	N	20	7	8	14	6.3	53
GREENSBORO	897	986.1	1018.6	48	28	37.8	- 3.2	77	29	11	5	0	22	24	62	3.71	0.41	1.08	11	0	4.8	2	2.8	28	34	NW	19	7	9	13	6.4	55
RALEIGH	434	1002.4	1018.7	50	30	40.0	- 3.0	78	29	15	5	0	16	25	60	4.13	0.90	1.31	13	1	1.4	1	3.0	29	26	34	20	7	7	15	6.5	57
WILMINGTON	28	1017.3	1018.5	57	37	47.0	- 1.7	79	26	24	5	0	11	36	70	4.57	1.15	1.53	11	1	T	0	2.7	31	37	SW	3	6	8	15	6.5	52
NORTH DAKOTA																																
BISMARCK	1647	957.0	1020.3	19	- 1	9.1	- 4.4	45	20+	-25	8	0	29	1	68	0.41	- 0.02	0.14	9	0	5.8	8	2.1	1	59	NW	17	5	8	16	7.3	47
FARGO	896	986.5	1021.5	14	- 5	4.1	- 6.6	36	13	-27	7	0	29	- 3	69	0.61	0.10	0.19	12	0	10.9	9	2.1	35	50	NW	17	6	6	17	7.1	48
WILLISTON	1899	947.5	1019.9	18	- 2	8.2	- 4.2	43	20	-20	9+	0	29	4	80	1.37	0.89	0.31	13	0	16.5	12	1.4	36	52	NW	17	5	9	15	7.0	60
OHIO																																
AKRON	1208	971.2	1017.6	32	16	24.0	- 4.7	57	29	- 7	8	0	28	18	77	2.35	0.05	0.62	14	0	14.7	7	3.4	25	29	30	13	3	7	19	7.8	
CINCINNATI ABBE OB	761			41	23	31.9	- 3.2	77	29	3	8	0	26			1.72	- 1.08	0.51	13		6.8	5			30	NW	19					40
CLEVELAND	777	987.8	1018.2	34	18	25.7	- 2.8	58	29	- 7	10	0	28	17	69	2.01	- 0.32	0.56	14	0	14.8	7	4.1	23	33	SW	15	4	5	20	7.8	39
COLUMBUS	812	987.5	1018.7	36	19	27.7	- 3.4	68	29	- 6	8	0	28	17	66	1.74	- 0.57	0.61	11	0	6.6	4	3.3	26	32	NW	19+	3	6	20	7.8	35
DAYTON	1002	981.4	1018.6	37	19	28.2	- 2.7	67	29	- 3	8	0	28	19	67	0.85	- 1.47	0.29	14	0	9.6	4	3.6	25	36	SW	28	5	8	16	7.2	48
MANSFIELD	1295			36	18	27.3	- 2.3	65	29	- 3	8	0	28	20	74	1.15	- 1.45	0.42	12	0	9.9	5	4.6	24	32	33	19	2	10	17	7.8	
TOLEDO	669	991.9	1017.9	34	15	24.4	- 2.9	55	28	- 9	7	0	29	16	69	0.77	- 1.11	0.25	11	0	7.6	2	3.6	26	40	W	4	3	8	18	7.8	38
YOUNGSTOWN	1178	973.2	1017.7	31	16	23.5	- 4.1	52	29	- 7	10	0	27	17	78	2.28	- 0.22	0.56	14	0	19.0	6	3.1	25	29	26	4	2	6	21	8.2	
OKLAHOMA																																
OKLAHOMA CITY	1285	971.2	1018.7	55	29	42.1	0.8	81	29+	8	3	0	19	29	66	0.43	- 0.94	0.37	4	0	4.9	4	1.4	18	34	NE	25	11	6	12	5.4	64
TULSA	650	993.9	1018.8	54	30	41.8	1.2	82	29+	8	3	0	18	29	66	0.49	- 1.28	0.41	3	0	4.9	4	1.4	18	33	S	29	9	6	14	5.9	55
OREGON																																
ASTORIA	8	1015.6	1016.4	49	37	43.2	0.4	57	9	25	3	0	4	38	82	8.58	- 1.31	1.15	24	0	T	T	6.3	19	44	24	29	2	4	23	8.8	
BURNS	4151	873.7	[illegible]	41	20	30.7	1.0	57	28	-12	2	0	25	24	78	0.97	- 0.30	0.43	10		8.9	7	2.6	24				3	6	20	7.8	
EUGENE	359	1004.7	1018.6	51	36	43.5	0.9	62	28	20	2	0	10	39	86	6.52	1.55	1.33	22	0	T	T	5.2	18	31	21	28	1	3	25	8.8	
MEACHAM	4050	875.4	1018.6	37	25	31.2	2.1	53	28	- 2	2	0	23			4.03	0.03	1.01	20		26.5	45			31	26	29	3	5	21	8.1	
MEDFORD	1298	971.2	1019.8	52	34	43.2	3.1	66	19	20	2	0	8	35	77	2.49	0.09	0.65	18	0	0.9	T	0.7	30	25	15	19	2	4	23	8.8	
PENDLETON	1482	963.4	1018.4	44	30	37.4	0.0	68	28	[illegible]	2	0	12	27	63	1.08	- 0.10	0.35	17	0	6.2	[illegible]	4.8	24	39	26	16	0	6	23	8.9	
PORTLAND	21	1016.3	1017.6	51	37	43.8	1.8	62	28	18	1	0	6	36	76	4.08	- 0.14	1.17	18	1	T	T	6.3	16	39	SW	29	2	3	24	8.7	27
SALEM	196	1010.5	1018.0	51	35	43.2	1.3	61	28	17	3	0	9	37	81	4.68	- 0.63	1.02	19	0	T	T	5.9	19	29	20	28	2	3	24	8.7	
SEXTON SUMMIT R	3836	884.2	1019.1	42	32	36.9	0.8	55	18	16	1	0	16			7.07	2.95	2.08	18		32.8	23			53	19	22					
PACIFIC AREA																																
GUAM TAGUAC R	361	997.6	1010.2	83	70	76.5	- 1.8	86	10+	64	17	0	0	71	82	6.4	2.91	2.34	18	0	0.0	0	9.7	8	29	E	26					76
JOHNSTON	7	1011.9	1012.3	79	73	76.2	- 0.8	82	29+	70	11+	0	0	68	78	2.71	1.18	1.30	11	1	0.0	0	11.1	9	29	NE	8	9	15	5	5.0	79
KOROR R	94	1004.4	1008.1	87	74	80.5	0.2	90	15	71	19	1	0	74	84	10.83	3.70	2.77	20	1	0.0	0	6.3	7	23	E	18	0	4	25	9.0	55
KWAJALEIN	8	1007.5	1008.3	86	77	81.3	1.3	87	26+	74	15+	0	0	74	80	6.21	4.05	1.82	21	0	0.0	0	13.9	6	32	8	15	3	8	18	7.7	
MAJURO	10	1008.1	1008.5	85	77	80.9	0.5	86	26+	73	5	0	0	74	81	7.11	- 1.44	1.41	22	1	0.0	0	11.5	7	33	E	16	0	8	21	8.2	53

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station		Pressure		Temperature								No. of days				Precipitation			No. of days		Snow, Ice pellets		Wind		Fastest mile			No. of days (sunrise to sunset)				
	Elevation ground	Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 90 F or above	Min 32 F or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
PACIFIC AREA	Ft	Mb	Mb	F	F	F	F	F.		F				F	%	In	In	In			In	In	Mph		Mph							
PAGO PAGO	12	[illegible]	[illegible]	[illegible]	[illegible]	79.7		89	[illegible]	71	[illegible]	0	0	74	83	11.17		3.35	22	3	0.0	0	[illegible]	[illegible]	23	[illegible]	18	1	11	17	7.4	47
PONAPE R	[illegible]	[illegible]	1007.3	[illegible]	75	[illegible]	[illegible]	[illegible]	21+	72	21+	0	[illegible]	74	[illegible]	11.79	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44
TRUK MOEN ISLAND	[illegible]	[illegible]	[illegible]	[illegible]	76	[illegible]	- [illegible]	87	[illegible]	74	[illegible]	0	[illegible]	74	[illegible]	[illegible]	4.36	2.85	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NE	[illegible]	[illegible]	1	18	[illegible]	[illegible]
WAKE	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	- [illegible]	81	26+	65	4	0	0	65	74	[illegible]	-0.60	[illegible]	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]	NE	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YAP R	44			[illegible]	[illegible]	[illegible]	- [illegible]	88	[illegible]	[illegible]	22+	0	0			10.42	5.78	3.47	20	0	[illegible]	[illegible]			22	E	22	[illegible]	[illegible]	14	7.6	[illegible]
PENNSYLVANIA																																
ALLENTOWN	387	1002.4	[illegible]	[illegible]	18	26.8	-2.4	59	[illegible]	2	[illegible]	0	28	19	74	4.05	1.41	1.15	11	1	14.8	[illegible]	4.2	31	45	32	[illegible]	[illegible]	7	13	[illegible]	
ERIE	731	989.8	1017.8	[illegible]	[illegible]	[illegible]	-1.[illegible]	47	[illegible]	- [illegible]	10+	0	28	17	78	2.77	[illegible]	0.91	17	0	42.1	11	4.7	[illegible]	52	29	4	[illegible]	8	19	8.0	
HARRISBURG	338	1004.4	1017.4	[illegible]	[illegible]	[illegible]	-2.4	64	29	[illegible]	8	0	27	[illegible]	67	[illegible]	2.69	1.74	[illegible]	0	21.5	15	[illegible]	[illegible]	39	W	4	9	6	14	[illegible]	50
PHILADELPHIA	5	1015.9	1017.1	[illegible]	25	33.4	-0.8	69	[illegible]	[illegible]	21+	0	23	22	67	5.39	2.29	1.57	11	1	8.2	4	4.6	32	[illegible]	W	[illegible]	[illegible]	7	13	[illegible]	[illegible]
PITTSBURGH	1137	[illegible]	1017.7	34	19	26.5	-[illegible].7	61	[illegible]	-3	[illegible]	0	26	[illegible]	[illegible]	[illegible]	1.45	[illegible]	14	0	24.2	6	[illegible]	28	[illegible]	[illegible]	15	5	[illegible]	22	7.9	38
SCRANTON	[illegible]	981.0	1016.5	[illegible]	16	24.3	-4.[illegible]	54	[illegible]	- [illegible]	23	0	[illegible]	17	[illegible]	2.42	0.43	0.72	11	0	19.7	11	2.1	[illegible]	31	NW	[illegible]	5	5	19	7.4	[illegible]
WILLIAMSPORT	524	997.6	1017.4	33	15	24.2	-5.0	53	[illegible]	-6	23	0	29	16	71	4.84	2.33	1.99	13	0	34.3	22	2.8	30	30	26	4	7	6	16	7.0	
RHODE ISLAND																																
BLOCK ISLAND	11			38	24	[illegible]	[illegible]	[illegible]	[illegible]	6	23	0	24			5.85	2.56	2.86	16		[illegible]	3										
PROVIDENCE	51	1013.[illegible]	1015.8	37	19	28.[illegible]	1.[illegible]	54	29+	0	[illegible]	0	27	16	62	5.19	2.09	1.99	14	0	13.7	4	5.7	32	46	16	4	7	9	13	6.2	57
SOUTH CAROLINA																																
CHARLESTON	40	1016.[illegible]	1019.[illegible]	59	37	48.4	-[illegible]	78	29+	22	5	0	6	37	75	5.18	1.89	1.90	10	2	0.0	0	3.8	30	56Y	SW	3	4	9	16	7.2	54
CHARLESTON U	9			57	43	49.9	-[illegible].4	[illegible]	[illegible]	30	5	0	2			3.57	0.51	0.89	11		0.0	0			36	W	3					
COLUMBIA	213	1010.8	1019.2	56	35	45.7	-2.7	81	29	18	5	0	11	33	67	3.58	-0.16	0.88	12	1	0.0	0	2.7	30	31	30	19	4	10	15	7.0	54
GRNVLLE-SPRTNBRG	957	983.4	1018.8	52	30	40.9	-4.2	79	29	18	8	0	18	28	67	3.04	-1.03	1.05	12	0	3.9	1	2.0	33	37	NW	20	9	8	12	6.1	[illegible]
SOUTH DAKOTA																																
ABERDEEN	1296	970.9	1020.7	20	-1	9.6	-5.4	41	20	-23	9	0	29	2	67	0.39	-0.26	0.13	7	0	7.0	11	3.1	36	38	31	17	7	7	15	6.6	
HURON	1281	971.2	1020.2	23	3	12.9	-3.7	39	20+	-19	10	0	29	6	71	0.65	0.05	0.35	8	0	13.5	12	1.6	34	50	NW	17	6	7	16	6.8	80
RAPID CITY	3162	902.5	1017.1	36	12	24.0	-0.1	70	28	-7	2	0	29	14	67	0.44	-0.04	0.14	7	0	8.0	3	4.5	35	56	NW	16	6	10	13	6.4	56
SIOUX FALLS	1418	966.8	1021.1	24	-1	11.5	-7.6	46	28	-27	9	0	29	7	77	0.40	-0.53	0.11	8	0	10.6	12	2.2	35	44	30	17	9	6	14	6.1	
TENNESSEE																																
BRISTOL	1507	963.1	1018.7	46	26	35.7	-4.3	73	29	10	8	0	22	26	71	4.81	1.25	1.13	16	1	5.3	3	2.2	29	29	27	3	7	6	16	6.9	
CHATTANOOGA	665	994.2	1019.5	50	30	40.0	-4.4	75	29	16	5	0	19	31	73	4.53	-0.84	0.85	13	1	T	T	2.2	31	32	NW	19	8	5	16	6.6	47
KNOXVILLE	980	983.7	1019.5	49	30	39.4	-3.7	75	29	15	5	0	17	28	66	4.19	-0.62	0.77	16	2	4.2	T	3.5	30	40	W	3	7	4	18	6.8	40
MEMPHIS	258	1009.5	1019.9	56	34	44.7	0.6	75	25	19	8+	0	15	29	67	2.23	-2.46	0.93	9	2	0.1	T	1.5	24	28	30	3	8	8	13	6.1	64
NASHVILLE	590	997.0	1019.3	53	30	41.8	-0.2	79	29	14	5	0	15	30	67	3.45	-1.06	0.89	16	3	0.5	T	2.0	25	33	NW	19	10	4	15	6.3	53
OAK RIDGE R	905			47	28	37.4	-3.7	76	29	11	5	0	20			4.83	-0.97	0.89	16		5.0	3			30Y		19	9	4	16	6.4	
TEXAS																																
ABILENE	1784	954.3	1017.8	64	35	49.2	0.8	85	21	12	3	0	14	31	57	0.11	-0.98	0.11	2	0	0.0	T	3.6	20	33	S	5	14	5	10	4.4	80
AMARILLO	3604	890.3	1015.6	58	24	40.9	-0.4	81	29	5	3	0	24	15	42	0.11	-0.51	0.11	1	0	2.0	2	3.6	24	34	N	2	16	7	6	3.9	77
AUSTIN	597	996.3	1018.5	68	43	55.7	1.9	85	25+	24	4	0	6	42	66	0.31	-2.27	0.18	4	0	0.0	0	1.2	17	36	NW	2	7	11	11	5.8	67
BROWNSVILLE	19	1017.3	1018.0	74	55	64.7	0.7	85	17	34	4	0	0	56	77	2.72	1.24	1.80	5	1	0.0	0	3.2	13	38	N	3	7	6	16	6.7	52
CORPUS CHRISTI	41	1016.9	1018.4	71	51	61.1	0.7	86	17	28	4	0	2	54	81	3.41	1.71	2.49	6	3	0.0	0	4.6	9	38	N	2	9	6	14	6.2	61
DALLAS	481	1001.0	1018.6	63	39	51.2	1.7	82	28+	18	3	0	8	35	60	0.25	-2.30	0.23	2	0	T	T	2.6	17	33	S	14+	11	8	10	5.1	68
DEL RIO	1026	981.4	1017.6	72	44	58.[illegible]	1.9	91	25	24	3	2	3	39	56	0.08	-0.80	0.08	2	0	0.0	0	3.5	11	24	14	19+	11	5	13	5.6	
EL PASO	3918	883.2	1015.9	69	35	52.3	3.2	83	21+	18	3	0	11	18	29	T	-0.41	T	0	0	0.0	T	2.7	30	34	W	2	14	6	9	4.5	87
FORT WORTH	537	998.0	1018.9	65	38	51.5	2.3	84	28	20	3	0	9	38	65	0.26	-1.98	0.25	3	0	T	T	2.2	21	28	1	26+	11	7	11	5.3	
GALVESTON U	7			63	53	58.1	1.3	77	26	30	3	0	1			1.87	-1.01	1.33	6		0.0	0			31	NW	3					52
HOUSTON INTERCON	96	1015.9	1019.6	67	43	55.2	1.4	82	25	24	4	0	5	46	75	1.20	-2.45	0.70	8	1	0.0	0	1.3	14	25	19	21	6	6	17	7.3	50
LUBBOCK	3254	903.5	1015.8	64	28	45.9	2.8	84	29	4	3	0	18	18	41	0.13	-0.44	0.13	1	0	1.0	1	3.2	25	31	28	14	15	6	8	4.1	
MIDLAND	2851	916.7	1016.1	67	32	49.3	1.0	85	21	10	3	0	14	25	49	0.04	-0.56	0.04	1	0	T	1	3.4	23	29	4	26	15	6	8	4.0	
PORT ARTHUR	16	1019.0		66	45	55.3	-0.7	81	26	24	4	0	4	48	80	1.83	-2.62	1.00	5	2	0.0	0	1.8	14	32	NW	3	7	6	16	6.6	54
SAN ANGELO	1903	950.2	1017.4	69	35	52.4	1.9	87	24	18	3	0	13	31	52	0.09	-0.81	0.09	1	0	0.0	3	3.6	22	30	21	5	15	6	8	4.2	
SAN ANTONIO	788	990.2	1018.5	71	42	56.7	1.3	84	24	20	4	0	5	42	65	0.40	-1.25	0.33	3	0	0.0	0	0.8	11	33	N	2	7	9	13	6.3	66
VICTORIA	104	1014.9	1018.9	69	46	57.9	-0.1	83	17	26	4	0	3	48	75	0.72	-1.62	0.39	5	1	0.0	0	1.8	11	41Y	N	2	7	5	17	6.8	
WACO	501	1000.3	1018.6	65	41	52.9	1.4	85	24	23	4	0	8	42	72	0.17	-2.25	0.07	3	0	0.0	0	3.0	19	27	33	6	9	10	10	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No of days: Max 90 F or above	No of days: Min. 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No of days: .01 inch or more	No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
TEXAS	Ft	Mb	Mb.	F	F.	F	F	F		F.				F	%	In	In.	In			In	In	M.p.h.		M.p.h.							%
WICHITA FALLS	994	980.4	1017.9	60	31	45.2	- 1.6	85	28	14	3	0	19	35	74	0.44	- 0.94	0.42	3	0	1.9	T	1.6	18	33	32	2	11	6	12	5.1	
UTAH																																
MILFORD	5028	847.6		53	18	35.7	6.0	72	28	- 5	3	0	29			0.01	- 0.69	0.01	1		0.1	T						7	13	9	5.6	
SALT LAKE CITY	422	873.7	1020.6	48	27	37.8	5.3	69	28	9	2	0	21	24	64	0.48	- 0.70	0.36	4	0	7.6	5	1.1	18	33	W	29	5	5	19	7.2	71
WENDOVER	4237	875.0	1021.0	46	24	34.8	2.0	61	27+	4	3	0	23	22	62	0.56	0.26	0.52	3		5.8	6						8	6	15	6.3	
VERMONT																																
BURLINGTON	332	1003.4	1016.5	26	8	17.0	- 0.4	47	15	-22	23	0	28	6	63	1.69	- 0.10	0.56	11	0	25.1	16	2.4	26	40	SW	22	6	7	16	7.0	54
VIRGINIA																																
LYNCHBURG	916			46	27	36.3	- 2.6	77	29	11	8	0	24			5.70	3.05	1.96	12		15.2	7			26	W	15+	8	6	15	6.3	50
NORFOLK	24	1016.6	1017.6	51	35	43.2	1.6	78	29	24	5	0	13	30	63	3.50	0.29	1.25	13	0	1.8	T	4.5	31	48	SW	3	7	9	13	6.2	61
RICHMOND	164	1011.5	1018.1	47	28	37.6	- 2.3	79	29	13	8	0	18	26	65	5.15	2.25	1.53	13	0	13.7	5	2.6	28	29	SW	13	8	5	16	6.3	58
ROANOKE	1149	974.6	1017.8	46	26	36.0	- 3.2	78	29	9	8	0	24	21	57	4.80	1.94	1.53	12	0	12.8	3	4.8	29	40	31	19	7	7	15	6.4	
WALLOPS ISLAND	9			46	31	38.3		71	29	17	8	0	17			4.87		0.83	12		0.2	T			56Y	WNW	20					
WASHINGTON																																
OLYMPIA	195	1008.8	1016.1	47	30	38.8	- 2.1	58	27+	- 1	2	0	15	37	93	11.06	4.44	2.37	22	0	4.4	1	6.4	20	31	21	29+	3	1	25	8.7	
QUILLAYUTE	179	[illegible]	1014.4	47	34	40.1	- 0.3	54	9	15	3	0	9	36	86	15.51	3.23	2.64	24	0	1.0	2	3.8	17	35	SW	27	2	2	25	8.9	21
SEATTLE-TACOMA	400	998.6	1015.4	47	36	41.4	0.6	57	27+	19	2+	0	5	35	79	8.11	3.87	2.48	22	0	0.3	4	5.5	19	36	SW	29+	3	2	24	8.6	26
SPOKANE	2356	930.6	1016.4	38	24	30.7	0.7	57	27	-12	2	0	25			1.13	- 0.73	0.25	15	0	5.9	9	7.1	22	45	SW	29+	3	3	23	8.1	31
STAMPEDE PASS R	3958	875.7		31	22	26.5	- 0.1	42	28+	4	3	0	27			19.34	9.19	4.32	22		112.1	198						1	3	25	9.1	
WALLA WALLA U	949			44	31	37.6	- 0.3	68	27	0	2	0	12			1.61	0.09	0.29	18		6.2	6			34	W	16	0	4	25	9.2	14
YAKIMA	1052	978.7	1018.2	43	21	32.2	- 1.8	65	28+	-10	2	0	26	23	70	0.31	- 0.56	0.09	8	0	3.6	5	4.1	26	35	31	29	4	9	16	7.2	
WEST INDIES																																
SAN JUAN P.R.	13	1014.9	1017.6	84	72	77.8	3.4	87	27	68	15	0	0	65	66	2.00	- 0.90	0.51	11	0	0.0	0	8.4	9	27	SE	25	8	19	2	4.6	71
WEST VIRGINIA																																
BECKLEY	2504	926.9	1018.6	40	21	30.7	- 3.6	71	29	- 2	8	0	25	23	74	6.01	2.54	1.79	17	3	22.1	11	4.3	23	32	29	4+	4	8	17	7.5	
CHARLESTON	939	983.1	1018.3	44	26	35.2	- 2.3	75	29	6	8	0	21	24	67	5.51	1.98	1.39	17	2	9.8	3	3.2	26	25	26	4	3	6	20	7.7	
ELKINS	1948	944.8		41	17	28.8	- 4.2	71	29	-11	8	0	25			5.62	2.35	1.38	18		26.9	9						3	9	17	7.9	
HUNTINGTON	827	987.8	1018.7	44	25	34.6	- 3.1	76	29	6	8	0	23	24	68	4.90	1.86	1.44	16	2	6.6	1	2.6	25	23	25	4+	4	6	19	7.8	
PARKERSBURG U	615			41	24	32.7	- 2.8	75	29	2	8	0	24			3.02	0.19	0.75	15		7.8	3			29	W	3					34
WISCONSIN																																
GREEN BAY	682	991.9	1018.7	24	5	14.4	- 3.7	40	17	-16	9+	0	29	6	67	0.96	- 0.12	0.32	11	0	12.1	8	3.4	28	27	NE	29	7	7	15	6.6	47
LA CROSSE	651	994.6	1020.4	25	7	16.1	- 3.3	42	28	-21	9	0	29	7	68	0.50	- 0.55		7	0	8.0		2.0	32								
MADISON	858	985.4	1018.4	26	7	16.5	- 3.0	44	28	-19	9	0	29	11	75	0.42	- 0.71	0.17	8	0	6.3	4	3.2	28	34	NW	18	7	6	16	6.8	41
MILWAUKEE	672	992.2	1018.5	27	13	19.8	- 2.6	42	28	- 9	7	0	29	12	69	0.86	- 0.54	0.29	10	0	10.2	8	5.4	28	31	NW	21	7	2	20	7.2	53
WYOMING																																
CASPER	5338	834.4	1016.3	39	18	28.5	2.2	61	28	-17	2	0	25	17	64	0.41	- 0.18	0.11	7	0	7.2	2	13.6	22	43	27	16	3	11	15	6.9	
CHEYENNE	6126	808.3	1015.4	45	21	33.2	5.9	64	28	- 8	2	0	25	11	42	0.02	- 0.54	0.02	1	0	0.4	T	13.7	30	52	NW	16+	4	7	18	7.1	64
LANDER	5563	826.3	1017.2	42	15	27.5	3.4	60	28	-15	2	0	28	13	57	0.55	- 0.14	0.37	3	0	10.7	6	3.2	25	40	W	27	6	9	14	6.3	64
SHERIDAN	3964	875.7	1016.4	34	16	27.4	3.6	62	28+	-17	2	0	26			0.66	- 0.08	0.22	13	0	9.4	11	4.5	30	40	SW	27+	1	5	23	8.2	38

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust
+ And also on an earlier date or dates
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

FEBRUARY 1976

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometer): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days, sunrise to sunset: Clear	Partly cloudy	Cloudy	Sky cover, sunrise to sunset	Percent of possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							
ALABAMA																																
BIRMINGHAM	180	997.0	1020.1	13.9	2.2	8.3	-1.0	26.1	25	-6.1	5	0	11	0.6	62	55	-80	15	12	2	T	0	1.4	26	13.0	33	13	6	9	14	7.0	43
HUNTSVILLE	190	996.3	1019.8	12.8	0.6	6.8	-0.4	23.9	25	-7.2	5	0	12	0.0	65	66	-67	16	11	2	T	T	0.6	29	14.3	22	12	7	6	16	6.6	
MOBILE	64	1011.9	1019.7	18.0	6.7	12.8	-0.1	27.2	26	-2.8	4	0	5	6.7	72	113	-3	42	11	4	0	0	0.3	4	13.0	33	10	6	7	16	6.6	
MONTGOMERY	56	1012.9	1020.4	15.6	3.9	9.8	-0.3	27.2	26	-5.0	5	0	7	3.3	69	101	-10	42	10	2	0	0	0.6	33	15.2	NW	19	6	10	14	6.6	47
ALASKA																																
ANCHORAGE	35	1004.1	1009.3	-5.6	-15.0	-10.3	-2.0	0.0	24	-25.0	18	0	29	-15.0	67	16	-2	16	3	0	226	457	2.6	1	16.5	1	24+	16	2	11	4.1	72
ANNETTE	34	1003.7	1007.7	1.7	-3.9	-1.1	-2.8	6.7	19	-12.2	29	0	23	-5.0	76	214	-3	42	18	0	645	305	2.1	11	13.0	13	12	7	2	20	8.2	
BARROW	9	1020.1	1030.8	-23.9	-32.8	-28.4	-0.5	-5.0	22	-41.1	15	0	29			5	1	4	4	0	58	203	0.6	25	16.1	25	22	15	0	5	3.9	
BARTER ISLAND	12	1027.8	1029.8	-25.0	-32.2	-28.8	-0.1	-4.4	22	-43.9	14	0	29	-33.3	65	4	-5	2	7	0	53	457	5.1	28	27.0	27	16	12	6	10	5.0	
BETHEL	38	1011.5	1017.5	-15.0	-20.6	-17.8	-4.6	-5.6	24	-29.4	16	0	29	-21.7	73	1	-28	1	1	0	8	102	7.2	2	17.0	3	6	12	2	5	7.6	
BETTLES	196			-23.3	-34.4	-28.8		-13.9	28	-47.2	17	0	29			3		3	2	0	28	1524			9.4	6	13	20	4	5	2.8	
BIG DELTA	386			-17.2	-28.3	-22.8		-7.2	24	-43.3	17	0	29			7		5	5	0	86	330			16.5	11	9	13	8	8	4.7	
COLD BAY	29	1006.8	1010.5	-2.2	-9.4	-5.9	-3.7	5.0	24+	-17.8	18	0	29	-8.3	81	28	-53	14	14	0	249	127	4.5	34	17.0	33	14	10	3	16	6.0	
FAIRBANKS	133	1003.7	1022.4	-17.8	-28.9	-23.4	-4.0	-5.6	1	-42.2	17	0	29	-30.0	54	4	-9	3	5	0	114	737	1.7	0	10.7	2	27	15	3	11	4.4	
GULKANA	479			-14.4	-28.3	-21.5		-1.1	2+	-43.3	18	0	29			3		2	4	0	46	1067			13.0	4	19	15	2	12	4.4	
HOMER	22			-2.2	-12.2	-7.2		5.6	24	-20.6	18+	0	29			26	-10	11	9	0	310	356			13.0	4	25+	13	6	10	4.6	
JUNEAU	4	1009.5	1010.2	-3.3	-10.6	-6.9	-4.1	2.2	13	-18.9	21	0	29	-12.8	65	69	-9	17	13	0	790	838	2.7	9	12.5	12	9	7	4	18	6.9	45
KING SALMON	15	1007.5	1009.4	-9.4	-18.9	-14.3	-6.2	2.8	3+	-34.4	18	0	29	-18.3	70	5	-19	2	7	0	53	127	4.1	2	19.7	9	9	15	5	9	4.1	
KOTZEBUE	3	1025.7	1026.3	-18.9	-26.1	-22.6	-2.6	-6.1	23	-36.1	18+	0	29	-26.7	69	1	-7	T	2	0	T	914	2.5	5	16.1	12	21	18	3	8	3.3	
MC GRATH	105	1005.8	1019.3	-15.0	-28.3	-21.8	-4.1	-2.8	24	-44.4	19	0	29	-25.0	74	1	-28	1	2	0	28	813	1.9	36	7.6	1	27+	18	4	7	3.3	
NOME	4	1022.7	1023.6	-10.6	-20.6	-15.4	-0.7	0.0	4	-32.2	19	0	29	-22.2	55	T	-24	T	0	0	T	508	3.1	5	17.0	5	8	17	6	6	3.3	73
ST. PAUL ISLAND	7	1016.9	1017.7	-6.7	-12.8	-9.7	-4.8	1.1	21	-25.0	16	0	29	-11.1	87	20	-11	14	7	0	236	305	6.5	4	20.6	36	8	10	8	11	5.1	
SHEMYA	37	1007.8	1011.4	1.7	-0.6	0.7	1.4	5.0	22	-8.9	14	0	15	-2.8	76	20	-38	9	9	0	28	T	4.1	11	17.4	19	20+	0	3	26	9.4	
SUMMIT	732	931.9	1018.0	-13.9	-22.2	-18.2		-2.8	23	-31.1	18	0	29	-22.8	66	3		3	3	0	104	965	6.9	5	13.9	8	24+	17	7	5	3.3	
TALKEETNA	105			-4.4	-21.1	-12.8	-3.6	5.6	23	-31.7	16	0	29			20	-24	17	3	0	290	1524			10.7	3	27	21	0	8	3.0	
UNALAKLEET	5	1021.0	1021.6	-12.8	-20.0	-16.2		-2.8	23	-31.1	12	0	29	-21.7	64	T		1	1	0	T	457	[illegible]	6	21.0	8	8	19	5	5	2.8	
YAKUTAT	9	1005.8	1006.9	-1.7	-11.7	-6.8	-4.9	2.8	9	-23.3	5	0	29	-10.6	76	118	-90	38	12	0	1059	2540	2.5	9	17.9	13	8	9	5	15	6.1	
ARIZONA																																
FLAGSTAFF	2135	788.0	1020.7	9.4	-10.0	-0.1	1.2	16.1	28	-21.7	3	0	29	-13.3	42	1	-45	1	1	0	10	T	1.1	22	9.4	21	20	13	9	7	4.3	
PHOENIX	340	977.0	1016.2	23.9	6.1	15.1	3.1	30.0	28+	-0.6	3	0	3	-6.7	25	T	-22	T	0	0	0	0	1.0	12	10.7Y	ENE	3	10	9	10	5.1	85
TUCSON	788	927.2	1015.9	22.2	4.4	13.2	1.6	28.3	28+	-1.1	2	0	4	-7.8	27	0	-21	0	0	0	0	0	1.3	16	11.6	SE	4	11	10	8	4.9	93
WINSLOW	1492	853.0	1020.2	15.0	-5.6	4.6	1.6	22.8	20	-15.0	4	0	27	-11.7	35	T	-12	T	0	0	T	0	1.5	24	16.5	25	29	11	7	11	5.1	
YUMA	59	1009.1	1016.4	25.0	7.8	16.2	2.2	31.7	28	2.2	1	0	0	-1.7	34	0	-9	0	0	0	0	0	1.1	36	15.2	NW	2	13	7	9	4.5	85
ARKANSAS																																
FORT SMITH	136	1002.4	1019.5	13.3	-0.6	6.4	-0.1	26.1	28	-10.0	4	0	15	-1.1	65	26	-61	12	8	1	13	T	1.0	5	13.4	SW	14	9	6	14	6.3	57
LITTLE ROCK	78	1009.8	1019.6	15.0	1.1	8.2	1.3	25.6	28	-7.2	4	0	10	0.0	63	39	-71	19	8	2	8	T	0.3	31	15.2	NW	18	11	4	14	5.7	55
CALIFORNIA																																
BAKERSFIELD	145	1002.7	1020.4	18.9	6.7	12.7	1.6	25.0	19	-2.8	3	0	2	6.1	70	7	-22	6	2	0	0	0	0.8	1	10.3	34	29	9	10	10	5.3	
BISHOP	1252	875.7		17.8	-3.9	7.1	2.0	24.4	28	-12.2	3+	0	24			0	-25	0	0		0	0						8	15	6	5.0	
BLUE CANYON	1609			7.2	0.6	4.0	1.2	16.1	17	-6.7	2+	0	12			237	-22	77	11		1532	1194			13.4	21	28	3	6	20	7.9	
EUREKA U	13			12.8	6.1	9.4	0.4	17.2	27+	-0.6	1	0	2			151	10	40	17		0	0			15.6	SW	28	2	3	24	8.7	39
FRESNO	100	1008.8	1020.6	18.3	4.4	11.4	1.1	23.9	27	-3.3	3	0	3	6.7	80	17	-39	15	3	0	0	0	0.5	32	11.6	NW	29	7	9	13	6.2	68
LONG BEACH	8	1017.6	1019.0	19.4	7.8	13.6	1.1	26.7	12	2.8	3	0	0	6.1	68	1	-58	1	1	0	0	0	0.4	23	7.6	8	2	5	13	11	6.4	
LOS ANGELES	30	1014.6	1018.3	18.3	9.4	13.8	0.9	23.9	11	7.8	13+	0	0	7.8	74	4	-69	4	1	0	0	0	0.8	25	9.4Y	NW	29+	7	12	10	6.3	
LOS ANGELES U	82			21.1	10.0	15.7	1.8	27.2	27	6.7	1	0	0			3	-81	3	1		0	0			6.7	SW	6	10	13	6	4.8	70
MT SHASTA R	1080	894.0	1020.0	8.9	-1.1	3.8	1.1	16.1	18+	-14.4	2	0	20	-1.1	75	54	-96	26	14		259	229	0.9	12								
OAKLAND	2	1021.0	1021.2	15.0	8.3	11.7	1.3	21.7	17	3.3	2	0	0	8.3	81	33	-48	18	10	0	0	0	0.8	22	9.4	19	21	3	9	17	7.3	
RED BLUFF	104	1007.1	1020.1	15.6	4.4	10.1	0.3	21.7	16	-1.1	1	0	2	4.4	74	24	-60	7	10	0	0	0	0.3	30	17.0	SE	22	5	4	20	7.5	63
SACRAMENTO	5	1020.0	1020.8	16.1	5.6	10.8	1.2	21.1	27	-3.3	2	0	3	6.1	77	33	-43	27	9	0	0	0	0.8	23	10.7	SW	28	3	10	16	7.5	64
SANDBERG R	1377	864.9		12.8	3.9	8.2	2.9	22.2	27	-5.0	2	0	4	-5.0	47	4	-61	3	2		T	T	3.1	1	20.6	33	14	7	10	12	6.2	
SAN DIEGO	4	1017.6	1018.6	18.9	10.0	14.3	0.9	23.9	12+	4.4	3	0	0	6.1	65	3	-52	3	1	0	0	0	1.4	31	8.5	NW	22+	5	11	13	6.3	72
SAN FRANCISCO	2	1020.3	1021.2	15.0	7.2	11.1	0.6	18.9	17	1.7	2	0	0	7.8	82	34	-54	19	8	0	0	0	1.1	25	13.0	28	13	2	10	17	7.5	
SAN FRANCISCO U	16			15.0	9.4	12.2	0.6	19.4	27	5.6	2	0	0			54	-39	31	13		0	0			10.3	SW	21					55
SANTA MARIA	72			18.3	5.0	11.7	0.7	23.9	27+	-1.7	3	0	2			8	-56	5	3		0	0						9	12	8	5.1	
STOCKTON	7	1020.7	1021.5	16.7	5.0	10.7	1.2	22.8	27	-3.9	2	0	3	7.2	82	18	-45	13	6	0	T	0	0.9	29	8.0	27	23+	2	3	24	8.2	
COLORADO																																
ALAMOSA	2297	770.1		7.2	-11.7	-2.3	2.4	15.6	28	-23.3	3	0	29			2	-2	2	2		51	25						11	12	6	4.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers: Speed	Wind: Fastest mile 1.6 kilometers: Direction	Wind: Fastest mile 1.6 kilometers: Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C.	C	C	C		C.				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							%
COLORADO																																
COLORADO SPRINGS	1873	808.7	1016.6	10.0	- 5.6	2.3	2.6	21.7	28	-17.2	3+	0	26	-11.7	40	6	- 2	4	4	0	91	51	1.7	26	13.4	25	14	6	14	9	5.8	
DENVER	1610	833.7	1014.5	11.1	- 6.7	2.3	2.6	23.3	28	-18.9	3	0	26	- 7.8	54	11	- 6	6	5	0	231	127	0.9	22	16.5	NE	9	4	12	13	6.4	68
GRAND JUNCTION	1476	853.4	1019.6	10.6	- 5.6	2.6	2.2	17.8	28+	-13.3	4+	0	28	-10.6	41	T	- 18	T	0	0	T	T	0.6	10	15.6	W	24	9	10	10	5.7	74
PUEBLO	1428	853.7	1015.5	13.9	- 6.7	3.7	2.6	26.1	28	-18.9	3	0	27	-10.0	42	3	- 9	3	3	0	76	51	1.5	32	18.3	N	9	9	9	11	5.8	82
CONNECTICUT																																
BRIDGEPORT	2	1016.3	1016.9	3.3	- 5.6	- 1.1	- 0.3	13.9	29	-13.9	23	0	25	- 7.8	64	169	94	58	12	0	279	127	2.0	32	21.5	32	20	7	9	13	6.5	
HARTFORD	52	1009.1	1015.9	1.7	- 8.3	- 3.3	- 0.6	11.1	15	-18.9	23+	0	29	- 9.4	64	130	55	44	14	0	632	330	1.9	31	18.8	W	4	7	9	13	6.5	56
DELAWARE																																
WILMINGTON	23	1014.2	1017.3	5.0	- 4.4	0.3	- 0.7	18.3	29	-11.7	21+	0	25	- 5.6	66	138	63	41	11	0	178	76	2.0	32	17.9	5	19	9	6	14	6.2	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1005.4	1017.7	6.1	- 5.6	0.3		23.9	29	-13.9	21	0	25	- 5.0	71	138		42	12	0	429	178	1.7	29	16.1	28	4	7	6	16	6.6	
WASHINGTON NATIONAL	3	1015.2	1017.5	7.2	- 2.2	2.5	- 0.7	25.0	29	-10.0	8	0	18	- 5.0	63	134	71	40	13	0	366	76	1.7	31	15.2	NW	20+	7	8	14	6.4	54
FLORIDA																																
APALACHICOLA U	4			16.7	8.3	12.6	- 1.2	22.2	26	0.6	5+	0	0			111	12	33	11	2	0	0			17.0	NW	19	7	6	16	6.7	76
DAYTONA BEACH	9	1017.6	1019.2	20.0	10.0	15.0	- 0.9	28.9	26	0.0	21	0	1	8.9	72	101	31	28	13	5	0	0	1.6	31	11.6	28	19+	7	8	14	6.2	
FORT MYERS	5	1018.6	1018.9	25.0	12.8	18.9	0.4	30.0	28+	3.9	21	0	0	12.8	73	54	- 2	27	8	2	0	0	0.8	35	13.4	30	19	8	12	9	5.6	
JACKSONVILLE	8	1018.6	1019.6	18.3	7.2	12.8	- 1.3	28.3	26	- 2.2	5	0	2	7.2	75	88	14	24	11	4	0	0	1.5	32	17.0	NW	19	6	9	14	6.7	47
KEY WEST	1	1017.6	1018.2	24.4	19.4	22.2	0.8	27.2	3+	13.3	21	0	0	16.7	71	53	3	37	7	2	0	0	2.0	7	13.4	NW	19	13	8	8	4.7	87
LAKELAND U	55			21.1	11.1	16.2	- 1.1	29.3	27	1.7	5	0	0			136	72	47	9		0	0						11	9	9	5.3	56
MIAMI	2	1018.0	1018.2	24.4	16.1	20.2	0.3	28.3	28+	5.6	20	0	0	14.4	71	69	21	26	10	3	0	0	0.4	35	13.4	24	19	10	14	5	5.0	
ORLANDO	33	1014.6	1019.1	22.2	11.1	16.7	0.1	30.6	26	2.8	21+	0	0	10.0	70	126	65	31	10	3	0	0	1.5	31	16.5	22	14	8	5	16	6.2	
PENSACOLA	34	1015.6	1019.9	17.8	7.8	12.8	- 0.6	27.8	26	- 1.1	4	0	2	6.1	70	88	- 20	21	13	2	0	0	0.7	1	11.2	35	19+	7	8	14	6.5	
TALLAHASSEE	17	1017.3	1019.7	18.3	5.6	11.9	- 1.2	27.2	26	- 6.1	5	0	7	6.1	72	179	73	50	11	2	0	0	0.7	26	10.3	32	19	5	7	17	6.9	
TAMPA	6	1019.0	1019.2	21.7	10.0	15.9	- 1.1	28.3	27	1.1	21	0	0	10.0	72	113	41	38	9	4	0	0	1.3	36	15.6	31	19	9	9	11	6.2	60
WEST PALM BEACH	5	1017.3	1018.0	25.0	13.9	19.4	- 0.3	30.0	16+	6.1	20	0	0	13.9	71	65	5	30	12	3	0	0	0.4	30	17.0	28	19	7	10	12	6.1	
GEORGIA																																
ATHENS	244	989.5	1019.2	11.7	0.6	6.3	- 1.6	25.6	29	- 6.1	5	0	13	- 0.6	67	75	- 45	20	11	1	T	T	1.2	31	13.0	31	19	5	8	16	6.9	
ATLANTA	308	981.4	1019.1	11.1	0.6	5.9	- 1.9	23.9	29	- 6.1	5+	0	14	- 1.1	66	80	- 34	20	10	2	T	T	0.8	33	17.4	NW	19	3	9	17	7.4	44
AUGUSTA	41	1013.9	1019.3	13.9	2.8	8.2	- 1.4	26.1	29	- 6.7	5	0	10	1.1	67	78	- 11	21	10	3	0	0	1.3	29	13.0	28	19	4	9	16	7.1	
COLUMBUS	117	1005.4		14.4	4.4	9.3	- 0.5	25.6	25	- 4.4	5	0	7	2.8	70	100	- 18	33	12	2	0	0	1.0	36	13.9	32	19	3	9	17	7.5	
MACON	108	1007.1	1020.4	13.9	3.9	8.9	- 1.8	25.6	25	- 3.9	5	0	6	2.8	70	109	1	32	9	2	0	0	1.4	33	19.7	NW	19	4	6	19	7.6	42
ROME	194			11.7	- 0.6	5.4	- 1.4	23.9	28+	- 9.4	5	0	16			80	- 45	23	14		T	0										
SAVANNAH	14	1017.6	1019.4	16.1	5.0	10.7	- 1.0	27.8	26	- 4.4	5	0	6	3.3	67	117	24	28	11	2	0	0	1.4	32	15.2	NW	19+	4	6	19	7.9	49
HAWAII																																
HILO	8	1014.2	1015.5	26.1	17.2	21.5	0.1	29.4	29	13.9	2+	0	0	17.8	84	257	- 71	81	21	6	0	0	1.1	14	11.6	SE	22+	0	7	22	8.5	21
HONOLULU	2	1014.6	1014.9	25.0	17.8	21.4	- 1.0	26.7	15+	12.2	2	0	0	16.7	75	127	43	78	8	2	0	0	2.9	8	13.1	NE	13+	7	13	9	6.0	56
KAHULUI	15	1012.5	1014.8	26.1	16.7	21.3	- 0.7	28.9	21+	11.7	1	0	0	16.7	77	211	147	126	10	3	0	0	2.2	6	14.3	S	4	10	7	12	6.3	57
LIHUE	31	1010.5	1015.7	24.4	18.9	21.6	0.1	26.7	29+	13.9	26	0	0	17.8	80	197	62	106	15	2	0	0	2.0	8	15.2	SW	4	0	17	12	7.2	42
IDAHO																																
BOISE	865	917.7	1020.4	6.7	- 1.7	2.5	1.1	16.1	19	-15.6	2	0	18	- 3.2	70	23	- 11	10	12	1	89	25	1.4	13	16.5	[illegible]	22	2	6	21	8.2	42
LEWISTON	431			7.2	- 1.1	3.1	0.2	18.3	28	-16.7	2	0	13			37	13	13	18		66	51			28.6Y		16	3	2	24	8.7	
POCATELLO	1358	863.9	1020.9	3.3	- 6.7	- 1.7	1.0	13.3	19	-23.9	2	0	26	- 7.2	67	23	0	10	10	0	175	76	3.4	23	18.3	W	22	5	3	21	7.7	44
ILLINOIS																																
CAIRO U	96			8.9	0.0	4.3	- 0.5	23.9	29	- 9.4	4	0	13			119	26	65	11		T	T			14.8	SW	14	9	11	9	5.4	55
CHICAGO O HARE	201	992.9	1018.2	0.0	- 9.4	- 4.7	- 1.4	16.7	29	-24.4	7	0	28	-10.0	65	19	- 20	5	14	0	196	102	1.9	27	15.6	19	27	6	3	20	7.2	
CHICAGO MIDWAY	185	994.9	1018.6	1.1	- 8.3	- 3.6	- 1.2	18.3	29	-20.6	7	0	27	- 8.9	67	22	- 17	5	13	0	373	127	1.6	26	12.1	S	27	5	1	23	7.5	48
MOLINE	177	997.3	1020.0	- 1.1	-11.7	- 6.3	- 2.8	19.4	29	-28.3	9	0	29	-10.6	70	31	- 3	10	14	0	348	305	1.3	28	16.1	NW	19	7	5	17	7.0	53
PEORIA	199	994.2	1019.3	1.1	- 9.4	- 4.2	- 2.2	21.1	29	-21.7	7+	0	28	- 7.8	77	19	- 25	4	11	0	157	102	0.9	29	14.8	NW	18	6	6	17	7.0	55
ROCKFORD	221	990.5	1018.7	- 1.7	-11.1	- 6.4	- 2.2	11.1	29	-26.7	7	0	28	-10.0	74	15	- 21	6	10	0	201	152	1.2	30	13.0	26	17	6	6	17	7.1	
SPRINGFIELD	179	996.3	1019.3	3.3	- 6.7	- 1.7	- 1.4	23.3	29	-17.8	5	0	25	- 6.1	73	21	- 25	6	12	0	152	102	0.8	28	16.1	NW	18	9	4	16	6.3	52
INDIANA																																
EVANSVILLE	116	1005.1	1019.7	6.7	- 3.9	1.2	- 1.9	25.0	29	-12.2	5	0	25	- 3.9	71	77	- 3	26	12	1	38	25	0.6	29	13.4	NW	19	6	7	16	6.7	53

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation of ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Greatest in 24 hours	No. of days: 2.5 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest in 1.6 kilometers: Speed	Fastest in 1.6 kilometers: Direction	Fastest in 1.6 kilometers: Date	No. of days sunrise to sunset: Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm.	Mps		Mps							%
INDIANA																																
FORT WAYNE	241	988.2	1019.2	1.1	- 8.7	- 3.8	- 1.9	16.7	29	-22.2	8	0	22	- 9.2	71	15	- 42	4	13	0	147	76	1.9	26	16.1	[illegible]	19	3	10	16	7.6	55
INDIANAPOLIS	241	988.9	1019.8	3.3	- 7.2	- 2.0	- 1.5	23.3	29	-18.3	8	0	20	- 6.1	73	29	- 22	7	15	0	160	76	1.3	24	13.4	NW	19	3	6	19	6.9	52
SOUTH BEND	236	989.8	1018.2	1.1	- 7.2	- 3.1	- 0.7	15.6	29	-19.4	8	0	22	- 7.2	74	35	- 12	10	17	0	538	254	1.5	23	11.6	20	4	1	4	24	8.6	
IOWA																																
BURLINGTON	211			1.1	-10.0	- 4.6	- 2.0	22.2	29	-22.2	7	0	28	- 9.4	67	24	- 11	5	13	0	168	203	1.2	32	13.0	32	21+	3	7	15	6.6	
DES MOINES	286	981.7	1022.3	- 1.1	-12.2	- 6.7	- 1.0	22.8	29	-27.8	9	0	28	-10.6	75	16	- 12	5	9	0	222	229	1.1	34	17.9	N	17	6	8	15	6.9	57
DUBUQUE	322	979.3		- 3.3	-13.3	- 8.2	- 2.7	9.2	29	-25.0	7	0	28			25	- 10	6	10		315	152						6	9	14	6.7	
SIOUX CITY	334	978.3	1020.2	- 1.7	-13.3	- 7.6	- 2.2	18.9	28	-26.1	9	0	28	-13.3	61	23	0	10	9	0	231	178	1.4	36	15.7	NW	17	6	11	13	6.4	65
WATERLOO	265	986.5	1022.2	- 5.0	-17.2	-11.2	- 5.3	6.7	22	-32.2	9	0	22	-13.9	75	29	5	8	9	0	491	178	1.5	32	14.3	32	19	7	10	12	6.6	
KANSAS																																
CONCORDIA	449	963.8	1018.5	7.2	- 7.8	- 0.3	- 0.1	30.0	29	-19.4	3	0	26	- 7.2	64	8	- 15	6	3	0	66	51	0.4	25	17.0	NW	21+	8	7	14	6.3	80
DODGE CITY	787	924.1	1017.2	11.1	- 6.1	2.5	1.0	29.4	29	-16.1	3+	0	26	- 8.9	50	2	- 16	1	2	0	18	T	0.4	27	19.2	N	21	7	8	14	6.1	65
GOODLAND	1114	886.6	1016.4	11.1	- 7.2	1.7	2.3	26.7	29	-18.3	3	0	27	- 9.4	52	2	- 11	2	2	0	43	25	2.3	27	15.6	36	21	5	15	9	5.8	
TOPEKA	267	986.8	1019.5	6.7	- 6.7	- 0.1	- 0.7	28.9	29	-20.0	4	0	26	- 6.1	67	14	- 12	6	7	0	170	76	0.6	33	14.8	SW	5	9	6	14	6.2	61
WICHITA	403	969.2	1018.2	8.3	- 5.6	1.6	- 0.8	27.8	29	-17.2	3	0	25	- 5.0	65	7	- 16	3	4	0	11	76	0.3	6	16.5	[illegible]	5	7	7	15	6.1	63
KENTUCKY																																
COVINGTON	265	986.1	1018.7	2.9	- 6.7	- 1.4	- 2.0	22.8	29	-19.4	8	0	27	- 6.7	67	56	- 18	14	15	0	274	127	1.4	26	13.0	22	28+	5	5	19	7.6	
LEXINGTON	294	982.7	1019.4	6.1	- 5.0	0.7	- 1.4	23.9	29	-15.6	5	0	26	- 3.9	76	142	55	64	15	2	160	51	1.1	23	10.7	22	28+	4	9	16	7.3	
LOUISVILLE	145	1001.0	1019.2	6.7	- 3.9	1.6	- 0.5	25.0	29	-12.2	5	0	25	- 4.4	67	130	17	38	16	1	86	25	0.8	20	13.9	W	3	3	7	19	7.2	52
LOUISIANA																																
ALEXANDRIA	28	1015.2	1019.6	18.3	5.0	11.6	0.0	27.2	25	- 5.0	4	0	8			53	- 73	24	7	2	0	0	0.4	19	12.5	21	24	9	9	11	5.7	
BATON ROUGE	20	1016.9	1019.8	18.9	6.7	12.9	- 0.1	26.7	25	- 2.8	4	0	4	6.7	72	87	- 25	26	9	6	0	0	0.4	11	10.3	34	17+	6	9	14	6.4	
LAKE CHARLES	3	1018.6	1019.7	18.9	7.8	13.5	0.0	28.3	26	- 2.2	4	0	4	8.9	80	57	- 58	25	4	3	0	0	0.2	11	10.3	18	23	7	7	15	6.5	
NEW ORLEANS	1	1019.3	1020.0	19.4	7.2	13.4	- 0.6	29.4	26	- 0.6	20	0	3	9.3	73	153	52	28	12	7	0	0	0.4	7	10.3	32	3	6	9	14	6.3	
SHREVEPORT	77	1009.8	1019.2	17.8	4.4	11.1	0.0	26.7	28+	- 7.2	4	0	8	5.0	72	24	- 80	12	5	2	0	0	0.6	17	10.3	18	14+	9	5	15	6.2	51
MAINE																																
CARIBOU	190	989.5		- 7.8	-20.6	-14.2	- 3.6	5.0	15	-31.7	23	0	29			62	9	17	12		638	660						10	4	15	6.1	
PORTLAND	13	1012.9	1015.1	- 0.6	-11.7	- 6.1	- 0.9	8.3	4	-27.8	23	0	29	-11.7	65	131	34	38	10	0	965	635	2.0	31	18.8	SE	4	7	11	11	5.8	65
MARYLAND																																
BALTIMORE	45	1012.2	1018.0	6.1	- 3.3	1.3	- 0.8	23.3	29	-11.7	8	0	21	- 5.6	63	153	79	44	13	0	290	102	2.1	29	17.0	NW	19+	8	8	13	6.2	55
MASSACHUSETTS																																
BLUE HILL OBS'Y	192			1.1	- 8.3	- 3.7	- 1.2	12.2	15	-20.6	23	0	27			167	73	69	13		612	406			30.4	SSE	4					51
BOSTON	5	1014.2	1015.2	2.8	- 5.6	- 1.3	- 0.4	12.8	15	-17.8	23	0	26	- 8.3	60	134	50	62	13	0	419	229	2.5	30	21.0	NW	20+	6	10	13	6.4	49
WORCESTER	301	977.0	1015.4	0.0	- 9.4	- 4.8	- 0.9	11.7	15	-22.8	23	0	27	-11.1	62	125	51	35	12	0	889	660	2.9	30	16.5	4	19	6	9	14	6.7	
MICHIGAN																																
ALPENA	210	990.5	1017.0	- 3.3	-13.9	- 8.7	- 1.7	6.1	12	-23.9	8	0	29	-12.8	71	27	- 13	12	13	0	404	254	1.1	26	12.5	NW	21	6	6	17	7.3	39
DETROIT	189			- 0.6	- 7.2	- 3.7	- 1.0	8.3	12	-15.0	8+	0	27	- 9.4	64	20	- 33	6	11	0	150		1.4	28	15.6	32	19					
DETROIT METRO	193	992.6	1017.4	0.0	- 8.3	- 4.1	- 1.2	7.8	12	-19.4	8+	0	28	- 8.9	68	25	- 24	5	13	0	236	76	1.5	28	18.8	NW	19	5	7	17	7.2	49
FLINT	235	988.2	1017.0	- 1.1	- 9.4	- 5.3	- 1.2	6.7	21+	-22.8	10	0	28	-10.0	68	21	- 24	5	11	0	328	178	1.7	26	14.3	34	19	7	6	16	6.9	
GRAND RAPIDS	239	987.1	1017.5	- 1.1	-10.0	- 5.6	- 1.3	6.7	28	-23.9	10+	0	29	-10.0	69	23	- 22	4	14	0	429	152	1.3	25	17.4	SW	27	4	6	19	7.8	38
HOUGHTON LAKE	350	973.2	1017.1	- 3.3	-13.9	- 8.7	- 1.3	3.9	12	-27.2	8	0	29	-12.2	75	25	- 8	7	14	0	475	279	1.2	27	11.2	34	19	3	13	13	7.1	
LANSING	256	984.8	1017.6	- 1.1	-10.0	- 5.7	- 1.3	7.2	12	-25.6	10+	0	29	- 9.4	73	30	- 19	7	13	0	371	203	1.4	25	14.8	NW	4	5	7	17	7.3	32
MARQUETTE C	206			- 5.6	-13.3	- 9.5	- 2.7	2.8	14	-22.2	5	0	29			36	- 6	6	17		589	711			12.1	NW	18	3	8	18	7.7	48
MUSKEGON	191	993.9	1018.0	- 1.7	- 8.9	- 5.3	- 1.8	6.7	28	-21.7	10	0	29	-10.0	72	26	- 20	4	17	0	493	203	0.8	30	12.5	33	19+	1	7	21	8.6	
SAULT STE MARIE	220	988.8	1016.7	- 7.2	-16.7	-11.8	- 2.8	1.1	14	-27.2	22	0	29	-14.4	79	76	38	15	17	0	1049	1041	0.5	33	13.9	W	4	3	4	22	8.0	43
MINNESOTA																																
DULUTH	435	964.4	1019.1	- 8.9	-19.4	-14.2	- 2.4	0.0	14	-33.9	9	0	29	-18.9	68	37	13	19	12	0	526	711	1.7	31	16.1	NW	18	7	4	18	6.8	43
INTERNATIONAL FALLS	359	973.9	1020.1	-10.6	-23.9	-17.1	- 3.2	1.7	13	-35.0	6	0	29	-22.2	63	18	0	7	8	0	361	737	1.3	30	10.3	33	21+	8	8	13	6.0	
MINNEAPOLIS	254	987.8	1020.2	- 6.7	-17.2	-11.9	- 2.0	2.8	14	-31.1	7	0	29	-16.7	67	12	- 7	8	6	0	193	406	1.3	31	13.0	W	23+	9	6	14	6.2	60
ROCHESTER	395	969.2	1019.5	- 5.6	-16.1	-10.9	- 2.1	3.3	28	-29.4	7	0	29	-13.9	78	7	- 13	3	6	0	89	254	1.9	29	15.6	30	23+	8	9	12	6.2	
ST CLOUD	315	980.4	1021.0	- 7.8	-20.0	-14.0	- 3.7	2.8	14	-32.8	9+	0	29			12	- 8	7	6		170	356						8	7	14	6.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation on ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							
MISSISSIPPI																																
JACKSON	94	1007.8	1020.0	17.2	3.9	10.7	0.4	27.8	25	- 6.1	5	0	9	5.0	73	78	- 47	40	10	2	T	0	0.4	23	14.4	[illegible]	22	7	8	14	6.4	42
MERIDIAN	88	1009.1	1020.3	17.2	3.9	10.6	0.3	27.2	29	- 5.0	5	0	10	3.0	68	32	- 30	32	8	2	0	0	0.3	28	9.4	27	2	7	4	18	6.2	
MISSOURI																																
COLUMBIA REGIONAL	270	986.1	1019.5	6.1	- 4.4	0.9	0.0	27.8	29	-14.4	7+	0	24	- 5.0	60	11	- 35	3	10	0	81	51	0.5	27	15.6	NW	18	7	7	15	6.7	57
KANSAS CITY	226	991.2	1019.0	6.1	- 5.0	0.7	- 1.4	28.3	29	-16.7	3	0	23	- 6.1	64	10	- 21	5	7	0	74	25	0.7	34	14.3	SW	5	8	7	14	6.4	59
ST JOSEPH	247			5.6	- 6.7	- 0.6	- 0.1	26.1	29	-17.8	3	0	28			5	- 23		4		0		0.7	32	13.0	32	17	8	4	17	6.4	
ST LOUIS	163	998.6	1019.6	7.8	- 5.0	1.3	- 0.2	22.4	29	-14.4	7+	0	25	- 2.2	74	18	- 34	7	12	0	48	51	0.8	27	17.9	NW	18	7	7	15	6.5	60
SPRINGFIELD	386	972.2	1018.9	10.0	- 2.8	3.5	0.7	27.2	29	-13.3	4+	0	23	- 3.3	66	31	- 23	13	9	1	79	25	0.9	18	13.9	NW	19	9	6	14	6.3	52
MONTANA																																
BILLINGS	1087	888.6	1016.1	2.2	- 8.9	- 3.3	0.3	16.1	28	-25.0	2	0	27	- 9.4	65	21	5	8	9	0	193	279	2.9	26	22.4	W	16	1	8	20	8.1	38
GLASGOW	696	933.3	1019.5	- 7.2	-16.7	-11.9	- 1.7	9.3	20	-30.6	2	0	29	-16.1	71	15	5	6	12	0	269	203	1.9	8	16.5	32	14	3	10	16	7.6	
GREAT FALLS	1116	884.9	1017.1	1.1	-11.7	- 5.3	- 0.7	16.1	19	-34.4	2+	0	28	-10.6	68	16	- 3	9	8	0	160	127	3.3	[illegible]	21.0	SW	16	0	10	19	8.2	35
HAVRE	788	921.8	1018.3	- 5.6	-16.1	-10.8	- 2.1	11.1	20	-30.4	2+	0	29	-15.0	72	12	2	7	7	0	216	254	1.0	25	23.2	SW	16	1	10	18	8.1	64
HELENA	1167	878.1		2.2	- 8.3	- 2.9	2.0	13.9	28	-28.9	2	0	27	- 8.3	67	14	3	5	6	0	84	178	2.1	27	20.6	W	16	1	8	20	8.3	41
KALISPELL	904	909.6	1017.0	1.1	- 7.8	- 3.2	0.0	8.3	28+	-26.7	2	0	27	- 6.7	77	40	14	11	16	0	239	279	2.1	18	11.2	15	12	1	4	24	8.9	
MILES CITY	801	920.8	1017.9	- 3.3	-12.8	- 8.1	- 1.6	10.0	20	-27.8	2	0	29			19	9		12	0	152		1.3	22								
MISSOULA	972	903.5	1018.7	2.2	- 6.7	- 2.2	1.7	11.7	28	-25.0	2	0	27	- 5.0	82	46	24	14	18	0	386	229	0.7	29	13.0	W	16	2	4	23	8.7	34
NEBRASKA																																
GRAND ISLAND	561	950.2	1019.3	5.0	-10.0	- 2.7	0.6	25.0	28	-22.2	3	0	28	-11.1	56	4	- 14	4	4	0	66	51	0.8	31	15.6	32	17	6	8	15	6.3	
LINCOLN ||	351			4.4	- 8.3	- 1.8	0.0	28.3	29	-19.4	3	0	26			6	- 21	6	4		102	76			17.0	NW	17	7	9	13	6.2	64
NORFOLK	471			1.1	-12.2	- 5.8	- 0.7	21.7	28	-23.9	11	0	28			4	- 16	3	5		64	127						8	8	13	6.7	
NORTH PLATTE	846	917.0	1018.1	7.8	-10.6	- 1.2	1.1	24.4	28	-20.0	3+	0	29	-10.0	59	2	- 11	2	2	0	48	25	1.2	31	16.1	N	21	6	5	18	7.0	62
OMAHA	298	982.7	1019.4	3.3	-10.6	- 3.7	- 0.6	25.6	29	-21.1	9+	0	28	- 9.4	67	9	- 15	7	7	0	127	102	1.2	35	20.6	NW	17	7	11	11	6.1	67
SCOTTSBLUFF	1206	877.4	1016.6	9.4	- 7.8	0.8	2.4	22.8	28	-21.1	11	0	26	- 8.9	57	6	- 4	6	2	0	58	51	3.0	30	17.0	28	21	7	6	16	7.0	
VALENTINE	789			2.8	-11.7	- 4.4	0.6	22.8	28	-23.3	2	0	29			3	- 11	3	3		51	102			20.6	S	22	3	8	18	6.7	61
NEVADA																																
ELKO	1539	846.3	1020.8	7.2	- 6.7	0.2	2.4	16.1	19	-20.6	2	0	28			14	- 8	10	4	0	231	127	1.2	25	13.0	27	23	5	6	18	7.0	
ELY	1906	809.3	1019.8	8.3	- 7.8	0.3	3.3	17.2	27	-23.9	2	0	29	- 8.3	50	T	- 18	T	1	0	T	T	2.1	22	13.1	W	23	7	11	11	6.0	82
LAS VEGAS	659	941.4	1018.8	18.9	3.3	11.1	2.3	27.8	28	- 7.2	3	0	7	- 9.4	25	T	- 11	T	0	0	0	0	1.4	25	14.8	SW	22	14	8	7	4.4	[illegible]
RENO	1342	867.6	1019.7	11.7	- 2.8	4.6	2.6	20.6	27	-15.6	2	0	23	- 5.0	57	4	- 22	2	4	0	18	51	1.0	24	16.5	SW	28	2	6	21	7.0	61
WINNEMUCCA	1311	870.3	1019.8	10.6	- 5.0	2.7	2.6	20.0	19	-18.3	2	0	26	- 3.9	67	15	- 8	12	4	0	157	152	1.4	22	13.0	SW	23	5	6	18	7.6	47
NEW HAMPSHIRE																																
CONCORD	104	1002.0	1015.3	0.0	-11.7	- 6.0	- 0.8	12.2	15+	-23.3	23+	0	28	-11.7	66	66	3	20	11	0	757	483	2.1	31	15.2	NW	20+	7	8	14	6.2	48
MT WASHINGTON OBS	1909			-11.7	-22.2	-17.1	- 2.4	- 2.8	15	-37.9	23+	0	29			340	207	100	21	0	2009	508			74.2Y	E	4	2	6	21	9.1	[illegible]
NEW JERSEY																																
ATLANTIC CITY	20	1013.9	1016.5	5.6	- 5.0	0.3	- 1.2	18.9	29	-13.9	1	0	25	- 5.0	72	109	30	26	12	1	150	51	2.1	30	15.6	30	20+	6	9	14	6.4	47
ATLANTIC CITY ||	3			6.7	- 1.1	2.6	0.5	20.0	29	- 8.3	8	0	15			96	10	25	11						26.4	[illegible]	13					
NEWARK	2	1015.6	1016.6	3.9	- 5.0	- 0.4	- 0.8	17.2	29	-12.8	21+	0	25	- 5.6	70	102	31	32	11	0	312	102	2.1	30	13.9	28	22+	6	10	13	6.3	
TRENTON ||	17			3.9	- 4.4	- 0.2	- 0.9	17.8	29	-11.7	23+	0	24			108	42	28	12		249	76			18.3	E	19	8	9	12	5.9	55
NEW MEXICO																																
ALBUQUERQUE	1619	837.8	1016.8	15.0	- 3.3	5.8	1.4	23.9	29	-11.7	11	0	24	-10.6	36	3	- 7	3	1	0	28	25	0.5	32	19.8	E	22	11	8	10	5.2	85
CLAYTON	1515			13.9	- 5.0	4.4	2.2	25.6	29	-15.0	2	0	25			T	- 9	T	1		8	T						11	13	5	4.6	
ROSWELL	1101			18.3	- 3.3	7.6	2.0	28.9	28	-16.1	3	0	22			0	- 11	0	0		0	0			15.2	NW	1[illegible]					79
NEW YORK																																
ALBANY	84	1006.1	1017.2	0.0	-12.2	- 6.1	- 1.4	11.1	15	-26.7	23	0	29	-11.1	67	77	21	25	11	0	630	305	1.9	30	18.8	NW	20	5	10	14	7.2	56
BINGHAMTON	485	955.3	1016.3	- 2.2	-10.6	- 6.3	- 1.9	7.8	15	-20.6	23	0	29	-10.6	73	95	40	28	17	0	1125	610	1.7	26	15.2	NW	20+	1	7	21	8.5	[illegible]
BUFFALO	215	992.2	1016.8	- 1.1	-10.0	- 5.6	- 1.2	6.7	12	-17.8	23	0	28	- 9.3	80	87	18	31	20	0	798	305	2.8	25	18.3	W	4	1	6	22	9.6	41
NEW YORK ||	40	1012.5	1016.0	3.9	- 4.4	- 0.3	- 1.1	16.7	29	-12.8	23	0	23	- 6.7	67	150	78	42	12	0	452	127	1.7	30	17.9	NE	19					46
NEW YORK KENNEDY	4	1015.9	1016.6	5.0	- 3.3	0.8	1.1	18.3	29	-10.0	23+	0	20	- 5.0	67	124	50	39	11	0	262	76	2.7	31	18.3	26	4	8	8	13	6.4	
NEW YORK LA GUARDIA	3	1015.2	1016.4	2.8	- 4.4	- 0.8	- 1.7	15.6	29	-12.2	23+	0	23	- 8.3	57	122	43	43	12	0	437	127	2.4	33	24.1	W	4	5	10	14	6.7	
ROCHESTER	167	995.9	1016.9	- 0.6	- 9.4	- 4.8	- 0.8	7.2	15	-19.4	22	0	27	- 9.4	71	101	36	34	21	0	907	381	2.4	25	16.5	W	4	2	6	21	9.1	44
SYRACUSE	125	1001.0	1016.4	- 0.6	- 9.4	- 5.1	- 0.8	7.8	15	-21.1	23	0	29	- 9.4	72	73	- 7	26	16	1	1270	508	1.7	26	17.0	W	4	0	6	23	8.9	37

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation of ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, ice pellets: Total	Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover sunrise to sunset	Percent of possible sunshine
NORTH CAROLINA	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							
ASHEVILLE	652	940.7	1018.4	[illegible]	- 2.3	3.1	- 0.7	25.0	22	8.9	5	0	25	- 2.2	74	51	- 51	20	10	0	198	76	1.4	34	26.8	34	[illegible]	[illegible]	7	14	6.2	[illegible]
CAPE HATTERAS R	2	1017.3	1017.7	[illegible]	[illegible]	8.3	0.3	18.9	26	[illegible]	6	0	6	3.0	75	144	44	62	14	[illegible]	T	T	2.5	[illegible]	16.5	14	13	7	6	16	6.2	[illegible]
CHARLOTTE	224	990.6	1018.8	10.0	- 1.1	4.7	- 0.1	24.4	20	[illegible]	5	0	19	- 3.8	[illegible]	82	- 9	23	14	0	12	T	0.7	31	12.1	N	20	7	8	14	6.3	[illegible]
GREENSBORO	273	986.1	1018.6	[illegible]	[illegible]	3.2	- 1.8	25.0	20	-11.7	5	0	22	- 4.4	[illegible]	94	10	[illegible]	11	0	120	51	[illegible]	29	15.2	NW	19	7	9	13	6.4	55
RALEIGH	132	[illegible]	[illegible]	[illegible]	- 1.1	4.4	- 1.7	25.6	[illegible]	- 9.4	5	0	16	- 3.0	60	[illegible]	[illegible]	[illegible]	13	1	36	25	1.3	[illegible]	11.6	[illegible]	20	7	7	15	[illegible]	[illegible]
WILMINGTON	9	1017.3	1018.5	[illegible]	2.8	8.2	- 0.9	26.1	[illegible]	- 4.4	5	0	11	2.2	70	116	29	33	11	1	T	0	1.2	31	16.5	SW	3	6	8	15	[illegible]	[illegible]
NORTH DAKOTA																																
BISMARCK	[illegible]	957.0	1020.3	- 7.2	-18.3	-12.7	- 2.4	7.2	20+	-31.7	8	0	29	-17.2	68	10	- 1	4	9	0	147	[illegible]	0.3	1	26.4	NW	12	5	8	16	7.3	47
FARGO	273	986.5	1021.5	-10.2	-20.6	-15.5	- 2.7	2.2	13	-32.8	7	0	27	-19.4	69	15	3	5	12	0	277	229	0.9	35	22.4	NW	17	6	6	17	7.1	48
WILLISTON	579	947.5	1019.2	- 7.8	-18.[illegible]	-13.2	- 2.3	6.1	20	-28.9	9+	0	29	-15.6	80	35	23	8	13	0	419	305	0.6	36	23.2	NW	17	5	9	15	7.0	60
OHIO																																
AKRON	368	971.2	1017.6	0.0	- 8.9	- 4.4	- 2.6	13.9	29	-21.7	8	0	28	- 7.6	77	60	1	16	14	0	373	178	1.5	25	13.0	30	13	3	7	19	7.8	
CINCINNATI [illegible] R	232			5.0	- 5.0	- 0.1	- 1.8	25.0	29	-16.1	8	0	26			44	- 27	13	13		173	127			13.4	NW	13					40
CLEVELAND	237	987.8	1018.2	1.1	- 7.8	- 3.5	- 1.6	14.4	29	-21.7	10	0	28	- 8.3	69	51	- 8	14	14	0	376	178	1.8	32	14.8	SW	15	4	5	20	7.8	40
COLUMBUS	247	987.5	1018.7	2.2	- 7.2	- 2.4	- 1.0	20.0	29	-21.1	8	0	29	- 8.3	66	44	- 14	15	11	0	168	102	1.5	26	14.3	NW	12+	3	6	20	7.8	35
DAYTON	305	981.4	1018.6	2.8	- 7.2	- 2.1	- 1.5	19.4	29	-19.4	9	0	28	- 7.2	70	22	- 37	6	14	0	244	102	1.6	25	16.1	SW	28	5	8	16	7.2	48
MANSFIELD	395			2.2	- 7.8	- 2.6	- 1.3	18.3	29	-19.4	9	0	28	- 6.7	74	22	- 37	11	12	0	251	127	2.1	24	14.3	33	19	2	10	17	7.8	
TOLEDO	204	991.9	1017.[illegible]	1.1	- 9.4	- 4.2	- 1.6	12.8	28	-22.8	7	0	29	- 8.0	69	20	- 28	6	11	0	193	51	1.6	26	17.9	W	4	3	8	18	7.8	38
YOUNGSTOWN	359	973.2	1017.7	- 0.6	- 8.9	- 4.7	- 2.3	11.1	29	-21.7	10	0	27	- 8.3	78	58	- 6	14	14	0	483	152	1.4	26	13.0	26	4	2	6	21	8.2	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1018.7	12.8	- 1.7	5.6	0.4	27.2	29+	-13.3	2	0	19	- 1.7	66	11	- 24	4	4	0	124	102	0.6	18	15.2	NE	25	11	6	12	5.4	64
TULSA	198	993.9	1018.8	12.2	- 1.1	5.4	0.7	27.8	29+	-13.3	3	0	19	- 1.7	66	12	- 33	10	3	0	124	102	0.6	19	14.8	S	29	9	6	14	5.9	55
OREGON																																
ASTORIA	2	1015.6	1016.4	9.4	2.8	6.2	0.2	13.3	2	- 3.9	3	0	4	3.3	82	218	- 33	29	24	0	T	T	2.8	19	19.7	24	29	2	4	23	8.8	
BURNS	1265	873.7	1020.0	5.0	- 6.7	- 0.7	0.6	13.9	28	-24.4	2	0	25	- 4.4	78	25	- 8	11	10		226	178	1.2	24				3	6	20	7.8	
EUGENE	109	1004.7	1018.6	10.6	2.2	6.4	0.5	16.7	28	- 6.7	2	0	10	3.9	86	156	39	34	22	0	T	T	2.3	18	13.9	21	29	1	3	25	8.8	
MEACHAM	1234	875.4	1018.6	2.8	- 3.9	- 0.4	1.2	11.7	25	-18.9	2	0	23			102	1	26	20		673	1143			13.9	26	20	3	5	21	8.1	
MEDFORD	396	971.2	1019.8	11.1	1.1	6.2	1.7	18.9	19	- 6.7	2	0	8	1.7	77	63	2	17	18	0	23	T	0.7	30	11.2	15	19	2	4	23	8.8	
PENDLETON	452	963.4	1018.4	6.7	- 1.1	3.0	0.0	20.0	28	-17.8	2	0	12	- 2.8	68	27	- 3	9	17	0	157	152	2.1	24	17.4	26	16	0	6	23	8.[illegible]	
PORTLAND	6	1016.3	1017.6	10.6	2.8	6.6	1.0	16.7	28	- 7.8	1	0	6	2.2	76	104	- 4	30	18	1	T	T	2.8	16	17.4	SW	22	2	3	24	8.7	27
SALEM	60	1010.5	1018.0	10.6	1.7	6.2	0.7	16.1	28	- 8.3	3	0	9	2.8	81	119	- 16	26	19	0	T	T	2.6	19	13.0	20	28	2	3	24	8.7	
SEXTON SUMMIT R	1169	884.2	1019.1	5.6	0.0	2.7	0.4	12.8	18	- 8.9	1	0	16			180	75	53	18		833	584			23.7	19	22					
PACIFIC AREA																																
GUAM TAGUAC R	110	997.6	1010.2	28.3	21.1	24.7	- 1.0	30.0	10+	17.8	17	0	0	21.7	82	163	74	59	18	0	0	0	4.3	9	13.0	E	26					76
JOHNSTON	2	1011.9	1012.3	26.1	22.8	24.6	- 0.4	27.8	29+	21.1	11+	0	0	20.0	79	69	[illegible]	33	11	1	0	0	5.0	9	13.0	NE	9	9	15	5	5.0	79
KOROR R	29	1004.4	1008.1	30.6	23.3	26.9	0.1	32.2	15	21.7	19	1	0	23.3	84	275	94	70	[illegible]	1	0	0	2.8	7	17.3	E	18	0	4	25	9.0	55
KWAJALEIN	2	1007.5	1008.3	30.0	25.0	27.4	0.7	30.6	26+	23.3	15+	0	0	23.3	80	157	103	46	21	0	0	0	6.2	6	14.3	E	15	3	8	18	7.7	
MAJURO	3	1008.1	1008.5	29.4	25.0	27.2	0.3	30.0	26+	22.8	5	0	0	23.3	81	181	- 37	36	22	1	0	0	5.1	7	14.8	E	16	0	8	21	8.2	53
PAGO PAGO	4	1009.5	1009.8	30.0	22.8	26.5		31.7	9	21.7	29+	0	0	23.3	83	284		85	22	3	0	0	1.0	8	10.3	E	18	1	11	17	7.4	47
PONAPE R	37	1002.0	1007.3	30.0	23.9	27.1	0.2	31.7	21+	22.2	21+	0	0	23.3	82	299	52	65	22	1	0	0	3.5	6	9.8	NE	25	0	3	26	9.0	44
TRUK MOEN ISLAND	2	1007.8	1008.1	29.4	24.4	26.9	- 0.1	30.6	16	23.3	28+	0	0	23.3	70	271	111	72	19	1	0	0	4.8	6	11.6	NE	3	0	1	28	9.7	63
WAKE	3	1012.9	1013.1	26.7	20.6	23.6	- 1.4	27.2	26+	18.3	4	0	0	18.3	74	19	- 15	6	10	0	0	0	4.4	6	17.4	NE	14	15	10	4	3.9	74
YAP R	13			30.0	23.9	26.8	- 0.1	31.1	29+	21.7	22+	0	0			265	147	88	20	0	0	0			9.8	E	22	0	15	14	7.6	73
PENNSYLVANIA																																
ALLENTOWN	118	1002.4	1017.1	2.2	- 7.8	- 2.9	- 1.3	15.0	29	-16.7	23	0	28	- 7.2	74	103	36	29	11	1	376	229	1.9	31	15.6	32	19+	9	7	13	6.1	
ERIE	223	989.8	1017.8	- 1.1	- 8.9	- 5.1	- 0.8	8.3	29	-18.9	10+	0	28	- 8.3	78	70	11	23	17	0	815	279	2.1	23	23.2	29	4	2	8	19	8.0	
HARRISBURG	103	1004.4	1017.4	3.3	- 5.0	- 1.0	- 1.2	17.8	29	-11.7	8	0	27	- 6.7	67	127	68	44	10	0	549	381	1.2	30	17.4	W	4	9	6	14	6.3	50
PHILADELPHIA	2	1015.9	1017.1	4.4	- 3.9	0.2	- 0.4	20.6	29	-11.7	21+	0	23	- 5.6	67	129	58	40	11	1	208	102	2.1	32	18.8	W	3	9	7	13	6.2	53
PITTSBURGH	347	972.2	1017.7	1.1	- 7.2	- 3.1	- 1.5	16.1	29	-19.4	10	0	26	- 8.9	64	92	37	33	14	0	615	152	2.0	28	17.4	25	15	5	2	22	7.9	38
SCRANTON	283	981.0	1016.5	0.6	- 8.9	- 4.3	- 2.2	12.2	29	-18.3	23	0	29	- 8.3	75	61	11	18	11	0	500	279	0.9	30	13.9	NW	20	5	5	19	7.4	53
WILLIAMSPORT	160	997.6	1017.4	0.6	- 9.4	- 4.3	- 2.8	11.7	29	-21.1	23	0	29	- 8.9	71	123	59	51	13	0	871	559	1.3	30	13.4	26	4	7	6	16	7.0	
RHODE ISLAND																																
BLOCK ISLAND	34			3.3	- 4.4	- 0.6	0.0	11.7	29+	-14.4	23	0	24			149	65	73	10		127	76										
PROVIDENCE	16	1013.5	1015.8	2.8	- 7.2	- 2.2	- 0.9	12.2	29+	-17.8	23	0	27	- 8.9	62	132	53	51	14	0	348	102	2.5	32	20.6	16	4	7	9	13	6.2	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No of days: Max 32.2 °C or above	No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							
SOUTH CAROLINA																																
CHARLESTON	12	1016.9	1019.0	15.0	3.9	9.4	- 1.4	25.6	29+	- 5.6	5	0	6	2.8	70	132	48	48	10	2	0	0	1.7	30	25.0Y	SW	3	4	9	16	7.2	54
CHARLESTON CI	3			13.9	6.1	9.9	- 1.3	23.9	26	- 1.1	5	0	2			91	13	23	11		0	0			16.1	W	3					
COLUMBIA	65	1010.8	1019.2	13.3	1.7	7.6	- 1.5	27.2	29	- 7.8	5	0	11	0.6	67	91	- 4	22	12	1	0	0	1.2	30	13.0	30	12	4	10	15	7.0	54
GRNVLLE-SPRTNBRG	292	983.4	1018.8	11.1	- 1.1	4.9	- 2.3	26.1	29	- 7.8	8	0	18	- 2.2	67	77	- 26	27	12	0	23	25	0.9	33	16.5	NW	20	9	8	12	6.1	53
SOUTH DAKOTA																																
ABERDEEN	395	970.9	1020.7	- 6.7	-18.3	-12.4	- 3.0	5.0	20	-30.6	9	0	29	-16.7	67	1	- 7	3	7	0	178	279	1.4	36	17.0	31	17	7	7	15	6.6	
HURON	390	971.2	1020.2	- 5.0	-16.1	-10.6	- 2.1	3.9	20+	-28.3	10	0	29	-14.4	71	17	1	9	8	0	343	305	0.7	34	22.4	NW	17	6	7	16	6.8	80
RAPID CITY	964	907.5	1017.1	3.2	-11.1	- 4.4	- 0.1	21.1	28	-21.7	2	0	29	-10.0	67	11	- 1	4	7	0	203	76	2.0	35	25.0	NW	16	6	10	13	6.4	56
SIOUX FALLS	432	966.8	1021.1	- 4.4	-18.3	-11.4	- 4.2	7.8	28	-32.8	0	0	29	-13.9	77	10	- 13	3	8	0	269	305	1.0	35	19.7	30	17	9	6	14	6.1	
TENNESSEE																																
BRISTOL	459	963.1	1018.7	7.8	- 3.3	2.1	- 2.4	22.8	23	-12.2	8	0	22	- 3.3	71	122	32	23	16	1	135	76	1.0	29	13.0	24	3	7	6	16	6.9	
CHATTANOOGA	203	994.2	1019.5	10.0	- 1.1	4.4	- 2.4	23.9	29	- 8.9	5	0	19	- 0.6	73	115	- 21	22	13	1	T	T	1.0	31	14.3	NW	19	8	5	16	6.6	47
KNOXVILLE	299	983.7	1019.5	9.4	- 1.1	4.1	- 2.1	23.9	29	- 9.4	5	0	17	- 2.2	66	106	- 16	20	16	0	107	T	1.6	20	17.9	W	3	7	4	18	6.9	40
MEMPHIS	79	1009.5	1019.9	13.3	1.1	7.1	0.3	23.9	25	- 7.2	8+	0	15	- 1.7	57	57	- 62	24	9	0	T	T	0.7	24	12.5	30	3	8	8	13	6.1	64
NASHVILLE	180	997.0	1019.3	11.7	- 1.1	5.4	- 0.1	26.1	29	-10.0	5	0	15	- 1.1	67	88	- 27	23	16	3	13	T	0.9	25	14.8	NW	19	10	4	15	6.3	53
OAK RIDGE R	276			8.3	- 2.2	3.0	- 2.1	24.4	29	-11.7	5	0	20			123	- 25	23	16		127	76			13.4Y		19	9	4	16	6.4	
TEXAS																																
ABILENE	544	954.3	1017.8	17.8	1.7	9.6	0.4	29.4	21	-11.1	3	0	14	- 0.6	57	3	- 25	3	2	0	0	T	1.6	20	14.8		5	14	5	10	4.4	80
AMARILLO	1098	890.3	1015.6	14.4	- 4.4	4.9	- 0.2	27.2	23	-15.0	2	0	24	- 9.4	42	3	- 13	3	1	0	51	51	1.6	24	15.2		7	16	7	6	3.9	77
AUSTIN	182	996.3	1018.5	20.0	6.1	13.2	1.1	29.4	25+	- 4.4	4	0	6	5.6	66	8	- 58	5	4	0	0	0	0.5	17	16.1	NW	7	7	11	11	5.8	67
BROWNSVILLE	6	1017.3	1018.0	23.3	12.8	18.2	0.4	29.4	17	1.1	4	0	0	13.3	77	69	31	46	5	1	0	0	1.4	13	17.0	N	3	7	6	16	6.7	57
CORPUS CHRISTI	12	1016.9	1018.4	21.7	10.6	16.2	0.4	30.0	17	- 2.2	4	0	2	12.2	81	87	43	63	6	3	0	0	2.1	9	17.0	N	2	9	6	14	6.3	61
DALLAS	147	1001.0	1018.6	17.2	3.9	10.7	0.0	27.8	28+	- 7.8	3	0	8	1.7	60	6	- 58	6	2	0	T	T	1.2	17	14.8		14+	11	8	10	5.1	68
DEL RIO	313	981.4	1017.6	22.2	6.7	14.5	1.1	32.8	25	- 4.4	3	2	3	3.9	56	2	- 20	2	2	0	0	0	1.6	11	10.7	14	12+	11	5	13	5.6	
EL PASO	1194	883.2	1015.9	20.6	1.7	11.3	1.8	28.3	21+	- 7.8	3	0	11	- 7.8	29	T	- 10	T	0	0	0	T	1.2	30	15.2	W	2	14	6	9	4.5	82
FORT WORTH	164	998.0	1018.9	18.3	3.3	10.8	1.3	28.9	28	- 6.7	3	0	9	3.3	65	7	- 50	6	3	0	T	T	1.0	21	12.5	1	26+	11	7	11	5.3	
GALVESTON I	2			17.2	11.7	14.5	0.7	25.0	26	- 1.1	3	0	1			47	- 26	34	6		0	0			13.9	NW	3					58
HOUSTON INTERCON	29	1015.9	1019.6	19.4	6.1	12.9	0.8	27.8	25	- 4.4	4	0	5	7.8	75	30	- 62	18	8	1	0	0	0.6	14	11.2	19	21	6	6	17	7.3	60
LUBBOCK	992	903.5	1015.8	17.8	- 2.2	7.7	1.6	28.9	29	-15.6	2	0	18	- 7.8	41	3	- 11	2	1	0	25	25	1.4	25	13.9	28	14	15	6	8	4.1	
MIDLAND	869	916.7	1016.1	19.4	0.0	9.6	0.6	29.4	21	-12.2	3	0	14	- 3.9	49	1	- 14	1	1	0	T	25	1.5	23	13.0	4	26	15	6	8	4.0	
PORT ARTHUR	6	1019.0		18.9	7.2	12.9	- 0.4	27.2	26	- 4.4	4	0	4	8.9	80	46	- 67	25	5	0	0	0	0.8	14	14.3	NW	3	7	6	16	6.6	54
SAN ANGELO	580	950.2	1017.4	20.6	1.7	11.3	1.1	30.6	24	- 7.8	3	0	13	- 0.6	52	2	- 21	2	1	0	0	76	1.6	32	13.4	31	5	15	6	8	4.2	
SAN ANTONIO	240	990.2	1018.5	21.7	5.6	13.7	0.7	28.9	24	- 6.7	4	0	5	5.6	65	10	- 32	8	3	0	0	0	0.4	11	14.8	N	3	7	9	13	6.3	66
VICTORIA	32	1014.9	1018.9	20.6	7.8	14.4	- 0.1	28.3	17	- 3.3	4	0	3	8.9	75	18	- 41	10	5	1	0	0	0.8	11	18.3Y	N	2	7	5	17	6.8	
WACO	153	1000.3	1018.6	18.3	5.0	11.6	0.8	29.4	24	- 5.0	4	0	8	5.6	72	4	- 57	2	3	0	0	0	1.3	13	13.2	33	6	9	10	10	5.1	
WICHITA FALLS	303	980.4	1017.2	15.6	- 0.6	7.3	- 0.9	29.4	28	-10.0	3	0	12	1.7	74	11	- 24	11	3	0	48	T	0.7	10	14.8	30	3	11	6	12	5.1	
UTAH																																
MILFORD	1533	847.6		11.7	- 7.8	2.1	3.3	22.2	28	-20.6	3	0	29			T	- 18	T	1		T	T						7	13	9	5.6	
SALT LAKE CITY	1286	873.7	1020.6	8.9	- 2.8	3.2	2.9	20.6	28	-17.8	2	0	21	- 4.4	63	12	- 18	9	4	0	193	127	0.5	18	14.8	W	29	5	5	19	7.2	71
WENDOVER	1291	873.0	1021.0	7.8	- 4.4	1.6	1.1	16.1	27+	-15.6	3	0	23	- 5.6	62	14	7	13	3		147	152						8	6	15	6.3	
VERMONT																																
BURLINGTON	101	1003.4	1016.5	- 3.3	-13.3	- 8.3	- 0.2	8.3	15	-30.0	23	0	29	-14.4	63	43	- 3	14	11	0	638	406	1.1	26	17.9	SW	22	6	7	16	7.0	54
VIRGINIA																																
LYNCHBURG	279			7.8	- 2.8	2.4	- 1.4	25.0	29	-11.7	8	0	24			145	77	50	12		366	178			11.6	W	15+	8	6	15	6.3	50
NORFOLK	7	1016.6	1017.6	10.6	1.7	6.2	0.9	25.6	29	- 4.4	5	0	13	- 1.1	63	89	7	32	13	0	46	T	2.0	31	21.5	SW	3	7	9	13	6.2	61
RICHMOND	50	1011.5	1018.1	8.3	- 2.2	3.1	- 1.3	26.1	29	-10.6	8	0	18	- 3.3	65	131	57	39	13	0	348	127	1.2	28	13.0	SW	13	8	5	16	6.3	58
ROANOKE	350	974.6	1017.8	7.8	- 3.3	2.2	- 1.8	25.6	29	-12.8	8	0	24	- 6.1	57	122	49	39	12	0	305	76	2.1	30	17.9	31	12	7	7	15	6.4	
WALLOPS ISLAND	3			7.8	- 0.6	3.5		21.7	29	- 8.3	8	0	17			124		31	12		5	T			20.0Y	WNW	20					
WASHINGTON																																
OLYMPIA	59	1008.8	1016.1	9.3	- 1.1	3.8	- 1.2	14.4	27+	-18.3	2	0	15	2.8	93	281	113	60	22	0	61	305	2.0	20	13.9	21	22+	3	1	25	8.7	
QUILLAYUTE	55	1006.8	1014.4	8.1	1.1	4.5	- 0.2	12.2	9	- 9.4	3	0	9	2.2	86	394	82	67	24	0	25	51	1.7	17	15.6	SW	22	2	2	25	8.9	11
SEATTLE-TACOMA	122	998.6	1015.4	8.3	2.2	5.2	0.3	13.9	27+	- 7.2	2+	0	5	1.7	79	236	98	63	20	0	9	102	2.5	18	16.1	SW	29+	3	2	24	8.6	26
SPOKANE	718	932.6	1016.4	3.3	- 4.4	- 0.7	0.4	13.9	27	-24.4	2	0	25			29	- 19	6	15	0	150	229	3.0	22	20.1	W	29+	3	3	23	8.1	31
STAMPEDE PASS R	1206	875.7		- 0.6	- 5.6	- 3.1	- 0.1	5.6	28+	-15.6	3	0	27			491	233	84	22		2847	5330						1	3	25	9.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation of ground	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2°C or above	No. of days: Min 0°C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 0.25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days sunrise to sunset: Clear	Partly cloudy	Cloudy	Average sky cover sunrise to sunset	Percent of possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
WASHINGTON																																
WALLA WALLA	282			6.7	- 0.6	3.1	- 0.4	20.0	27	-17.9	2	0	12			41	2	7	18		152	152			15.2	W	16	0	4	25	9.0	24
YAKIMA	321	978.7	1018.2	6.1	- 6.1	0.1	- 1.0	18.3	28+	-22.3	2	0	26	- 5.0	70	8	- 14	2	8	0	31	127	1.8	26	15.6	31	22	4	9	16	7.2	
WEST INDIES																																
SAN JUAN P.R.	4	1014.9	1017.6	28.8	22.0	25.4	1.9	30.6	27	20.0	15	0	0	19.3	66	51	- 23	13	11	0	0	0	3.8	9	12.1	06	25	8	19	2	4.6	71
WEST VIRGINIA																																
BECKLEY	763	926.2	1018.6	4.4	- 6.1	- 0.7	- 2.0	21.7	29	-18.9	8	0	25	- 5.0	74	152	65	45	17	2	561	178	1.9	33	14.3	29	4+	4	8	17	7.6	
CHARLESTON	290	983.1	1018.3	6.7	- 3.3	1.8	- 1.3	23.9	29	-14.4	8	0	21	- 4.4	67	140	53	35	17	2	249	76	1.4	26	11.2	26	4	3	6	20	7.7	
ELKINS	594	944.9		5.0	- 8.6	- 1.8	- 2.2	21.7	29	-22.9	5	0	25			143	60	35	18		683	229						3	9	17	7.9	
HUNTINGTON	252	987.8	1018.7	6.7	- 3.9	1.4	- 1.7	24.4	29	-14.4	8	0	23	- 4.4	68	124	47	37	16	2	168	25	1.2	25	10.3	25	4+	4	6	19	7.8	
PARKERSBURG	187			5.2	- 4.4	0.4	- 1.6	23.9	29	-16.7	8	0	24			77	5	19	15		198	76			14.0	W	3					34
WISCONSIN																																
GREEN BAY	208	991.9	1018.7	- 4.4	-15.0	- 9.8	- 2.1	4.4	17	-26.7	9+	0	29	-14.4	67	24	- 3	8	11	0	307	203	1.5	28	12.1	NE	10	7	7	15	6.6	47
LA CROSSE	198	994.6	1022.4	- 3.9	-13.7	- 8.8	- 1.8	5.6	28	-29.4	9	0	29	-13.9	69	13	- 14		7	0	203		0.9	32								
MADISON	262	985.4	1019.4	- 3.3	-13.9	- 8.6	- 1.7	6.7	28	-28.3	9	0	29	-11.7	75	11	- 18	4	8	0	160	132	1.4	28	15.2	NW	18	7	6	16	5.8	41
MILWAUKEE	205	992.2	1018.6	- 2.8	-10.6	- 6.8	- 1.4	5.6	28	-22.8	7	0	29	-11.1	69	22	- 14	7	10	0	259	203	2.4	28	13.9	NW	21	7	2	20	7.2	53
WYOMING																																
CASPER	1627	834.4	1016.3	3.9	- 7.8	- 1.9	1.2	16.1	28	-27.2	2	0	25	- 8.3	64	10	- 5	3	7	0	183	51	6.1	22	19.2	27	16	3	11	15	6.9	
CHEYENNE	1867	808.3	1015.4	7.2	- 6.1	0.7	3.3	17.8	28	-22.2	2	0	25	-11.7	42	1	- 14	1	1	0	10	T	6.1	30	22.2	NW	16+	4	7	18	7.1	64
LANDER	1696	826.3	1017.2	4.4	- 9.4	- 2.5	1.9	15.6	28	-26.1	2	0	28	-10.6	57	14	- 4	2	3	0	277	152	1.4	25	17.9	W	27	6	9	14	6.3	64
SHERIDAN	1208	875.7	1016.4	3.9	- 8.9	- 2.6	2.0	16.7	28+	-27.2		0	26			17	- 2	6	13	0	239	279	2.0	30	17.9	SW	27+	1	5	23	8.2	38

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed 'Greatest in 24 hours' are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column 'Fastest Mile' is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which 'Fastest Mile' data can be evaluated.

B Number of days maximum 21.1°C or above for Alaskan stations.
Y Peak Gust
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the 'Elevations - Station Pressure' table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

FEBRUARY 1972

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	526	1859	2086
HUNTSVILLE	590	2149	2497
MOBILE	295	887	1316
MONTGOMERY	443	1437	1898
ALASKA			
ANCHORAGE	1488	8368	7768
ANNETTE	[illegible]	5377	4796
BARROW	2447	13591	13442
BARTER ISLAND	2464	13585	13249
BETHEL	1893	9384	9215
BETTLES	2467	12563	
BIG DELTA	2149	11215	
COLD BAY	1267	[illegible]	6462
FAIRBANKS	2178	10977	10758
GULKANA	2082	11424	
HOMER	1324	7528	
JUNEAU	1315	[illegible]	6247
KING SALMON	[illegible]	8362	7942
KOTZEBUE	2141	10876	10847
MC GRATH	2097	10796	10558
NOME	1759	9694	9643
ST. PAUL ISLAND	1458	7567	7116
SHEMYA	914	6312	6292
SUMMIT	1908	10954	
TALKEETNA	1621	9311	8358
UNALAKLEET	1801	9722	
YAKUTAT	1308	7316	6178
ARIZONA			
FLAGSTAFF	956	5555	5006
PHOENIX	174	1307	1482
TUCSON	259	1620	1487
WINSLOW	711	3714	3817
YUMA	129	1147	1064
ARKANSAS			
FORT SMITH	616	2481	2688
LITTLE ROCK	525	2102	2668
CALIFORNIA			
BAKERSFIELD	286	2108	1742
BISHOP	578	3530	3224
BLUE CANYON	741	4176	3568
EUREKA U	456	3290	3062
FRESNO	357	2437	1979
LONG BEACH	241	1175	1178
LOS ANGELES	229	1214	1192
LOS ANGELES U	132	1036	945
MT SHASTA R	752	4446	3978
OAKLAND	341	2195	2005
RED BLUFF	422	2396	1972
SACRAMENTO	390	2381	2102
SANDBERG R	523	3322	2864
SAN DIEGO	203	1077	1002
SAN FRANCISCO	368	2343	2046
SAN FRANCISCO U	312	2242	1995
SANTA MARIA	340	2376	1936
STOCKTON	394	2395	2120
COLORADO			
ALAMOSA	1071	6340	6242
COLORADO SPRINGS	832	4589	4576
DENVER	832	4461	4515
GRAND JUNCTION	813	4408	4386
PUEBLO	756	4082	4100
CONNECTICUT			
BRIDGEPORT	1009	3629	4052
HARTFORD	1125	4295	4613
DELAWARE			
WILMINGTON	935	3209	3719
DIST.OF COLUMBIA			
WASHINGTON DULLES	935	3343	
WASHINGTON NATIONAL	817	2820	3261
FLORIDA			
APALACHICOLA U	291	738	1103
DAYTONA BEACH	182	357	730
FORT MYERS	60	85	383
JACKSONVILLE	289	690	1051
KEY WEST	8	8	[illegible]
LAKELAND U	139	262	567
MIAMI	39	41	197
ORLANDO	124	[illegible]	660
PENSACOLA	299	847	1251
TALLAHASSEE	337	924	1256
TAMPA	139	255	586
WEST PALM BEACH	48	52	224
GEORGIA			
ATHENS	622	1970	2353
ATLANTA	643	2064	2359
AUGUSTA	523	1603	1972
COLUMBUS	468	1415	1963
MACON	493	1514	1791
ROME	665	2250	2666
SAVANNAH	400	1089	1531
IDAHO			
BOISE	818	[illegible]	[illegible]
LEWISTON	789	4223	4118
POCATELLO	1039	[illegible]	5146
ILLINOIS			
CAIRO U	726	2677	3062
CHICAGO O'HARE	1197	4471	4834
CHICAGO MIDWAY	1139	4213	[illegible]
MOLINE	1280	4789	4847
PEORIA	1167	[illegible]	4568
ROCKFORD	1287	[illegible]	[illegible]
SPRINGFIELD	[illegible]	[illegible]	[illegible]
INDIANA			
EVANSVILLE	887	3267	3534
FORT WAYNE	1152	4317	4651
INDIANAPOLIS	[illegible]	[illegible]	4273
SOUTH BEND	[illegible]	4273	4718
IOWA			
BURLINGTON	1187	4588	4652
DES MOINES	1303	4978	5139
DUBUQUE	[illegible]	[illegible]	[illegible]
SIOUX CITY	1350	5361	5265
WATERLOO	1536	[illegible]	[illegible]
KANSAS			
CONCORDIA	965	4174	4188
DODGE CITY	812	3841	3807
GOODLAND	862	4346	4504
TOPEKA	958	3897	[illegible]
WICHITA	871	3813	[illegible]
KENTUCKY			
COVINGTON	1024	3636	[illegible]
LEXINGTON	917	[illegible]	[illegible]
LOUISVILLE	866	[illegible]	3576
LOUISIANA			
ALEXANDRIA	[illegible]	1357	1603
BATON ROUGE	288	967	1328
LAKE CHARLES	267	917	1234
NEW ORLEANS	[illegible]	878	[illegible]
SHREVEPORT	382	1478	1812
MAINE			
CARIBOU	1698	7254	6999
PORTLAND	1265	5180	[illegible]
MARYLAND			
BALTIMORE	884	3068	[illegible]
MASSACHUSETTS			
BLUE HILL OBS R	1141	[illegible]	[illegible]
BOSTON	[illegible]	3747	[illegible]
WORCESTER	[illegible]	4691	5014
MICHIGAN			
ALPENA	1403	5622	5954
DETROIT	1141	4162	[illegible]
DETROIT METRO	1165	4506	[illegible]
FLINT	1226	4754	[illegible]
GRAND RAPIDS	[illegible]	4787	[illegible]
HOUGHTON LAKE	1401	5687	5927
LANSING	1246	4839	[illegible]
MARQUETTE U	1447	5893	5833
MUSKEGON	1231	4815	4756
SAULT STE MARIE	1566	[illegible]	6330
MINNESOTA			
DULUTH	1698	7410	7167
INTERNATIONAL FALLS	1848	[illegible]	7800
MINNEAPOLIS	1576	[illegible]	6271
ROCHESTER	1521	6226	6165
ST CLOUD	1690	6921	[illegible]
MISSISSIPPI			
JACKSON	410	1423	1830
MERIDIAN	[illegible]	1442	[illegible]
MISSOURI			
COLUMBIA REGIONAL	901	3577	3901
KANSAS CITY	920	3632	3652
ST JOSEPH	976	4194	4249
ST LOUIS	884	[illegible]	[illegible]
SPRINGFIELD	767	[illegible]	3524
MONTANA			
BILLINGS	1118	5981	[illegible]
GLASGOW	1579	7040	6721
GREAT FALLS	1226	6144	5513
HAVRE	1520	[illegible]	6360
HELENA	1102	6464	[illegible]
KALISPELL	1118	[illegible]	5956
MILES CITY	1376	6526	5752
MISSOULA	1062	5892	5960
NEBRASKA			
GRAND ISLAND	[illegible]	4671	[illegible]
LINCOLN U	1046	[illegible]	[illegible]
NORFOLK	[illegible]	[illegible]	5254
NORTH PLATTE	1013	5061	4964
OMAHA	1143	[illegible]	[illegible]
SCOTTSBLUFF	[illegible]	[illegible]	[illegible]
VALENTINE	1180	[illegible]	5467
NEVADA			
[illegible]	[illegible]	[illegible]	[illegible]
ELY	936	[illegible]	5438
LAS VEGAS	373	2422	2271
RENO	[illegible]	[illegible]	[illegible]
WINNEMUCCA	[illegible]	[illegible]	[illegible]
NEW HAMPSHIRE			
CONCORD	1267	5385	5381
MT WASHINGTON OBS	1846	[illegible]	[illegible]
NEW JERSEY			
ATLANTIC CITY	[illegible]	[illegible]	3531
ATLANTIC CITY U	818	2992	3359
NEWARK	[illegible]	3279	[illegible]
TRENTON U	958	[illegible]	3724
NEW MEXICO			
ALBUQUERQUE	648	3588	3406
CLAYTON	719	[illegible]	[illegible]
ROSWELL	551	2804	[illegible]
NEW YORK			
ALBANY	[illegible]	[illegible]	5070
BINGHAMTON	1280	5015	5223
BUFFALO	1237	4526	[illegible]
NEW YORK U	[illegible]	[illegible]	3606
NEW YORK KENNEDY	[illegible]	[illegible]	3776
NEW YORK LA GUARDIA	987	3438	3546
ROCHESTER	[illegible]	[illegible]	4848
SYRACUSE	[illegible]	4641	4927
NORTH CAROLINA			
ASHEVILLE	[illegible]	[illegible]	3424
CAPE HATTERAS	[illegible]	1469	[illegible]
CHARLOTTE	710	2345	2552
GREENSBORO	783	2613	2994
RALEIGH	718	2357	2712
WILMINGTON	516	1525	1909
NORTH DAKOTA			
BISMARCK	1618	[illegible]	6603
FARGO	1763	[illegible]	6892
WILLISTON	1644	7337	6851
OHIO			
AKRON	1182	4369	4470
CINCINNATI ABBE OBS	954	[illegible]	3669
CLEVELAND	1133	[illegible]	4453
COLUMBUS	1077	3999	[illegible]
DAYTON	[illegible]	3827	4219
MANSFIELD	1085	4029	[illegible]
TOLEDO	[illegible]	4536	[illegible]
YOUNGSTOWN	[illegible]	4409	4683
OKLAHOMA			
OKLAHOMA CITY	660	2907	2995
TULSA	670	2814	[illegible]
OREGON			
ASTORIA	623	[illegible]	[illegible]
BURNS U	989	5570	5019
EUGENE	617	3626	[illegible]
MEACHAM	975	5807	5233
MEDFORD	624	3662	3636
PENDLETON	793	[illegible]	3869
PORTLAND	607	3283	3324
SALEM	625	[illegible]	[illegible]
SEXTON SUMMIT	[illegible]	4686	[illegible]
PENNSYLVANIA			
ALLENTOWN	1102	4013	4333
ERIE	1217	4473	4900
HARRISBURG	1001	3532	3992
PHILADELPHIA	941	3252	3870
PITTSBURGH	1112	[illegible]	4433
SCRANTON	1175	4441	4669
WILLIAMSPORT	[illegible]	4242	4442
RHODE ISLAND			
BLOCK ISLAND	982	[illegible]	[illegible]
PROVIDENCE	[illegible]	[illegible]	4298
SOUTH CAROLINA			
CHARLESTON	463	1274	1701
CHARLESTON U	[illegible]	1146	1491
COLUMBIA	[illegible]	1643	[illegible]
GREENVILLE-SPARTANBURG	[illegible]	[illegible]	2452
SOUTH DAKOTA			
ABERDEEN	[illegible]	6793	6385
HURON	1510	6385	6166
RAPID CITY	1182	5738	5265
SIOUX FALLS	[illegible]	[illegible]	[illegible]
TENNESSEE			
BRISTOL	844	2771	[illegible]
CHATTANOOGA	[illegible]	2401	[illegible]
KNOXVILLE	[illegible]	2426	[illegible]
MEMPHIS	[illegible]	2169	2626
NASHVILLE	667	2364	[illegible]
OAK RIDGE	792	[illegible]	[illegible]
TEXAS			
ABILENE	464	[illegible]	2647
AMARILLO	692	[illegible]	[illegible]
AUSTIN	298	1190	1446
BROWNSVILLE	[illegible]	[illegible]	[illegible]
CORPUS CHRISTI	166	[illegible]	810
DALLAS	412	[illegible]	[illegible]
DEL RIO	[illegible]	[illegible]	1398
EL PASO	[illegible]	[illegible]	[illegible]
FORT WORTH	398	1691	2000
GALVESTON U	211	643	1024
HOUSTON INTERCON	295	[illegible]	1418
LUBBOCK	549	[illegible]	[illegible]
MIDLAND	446	[illegible]	2193
PORT ARTHUR	291	1021	1224
SAN ANGELO	392	1716	1914
SAN ANTONIO	263	1041	[illegible]
VICTORIA	229	[illegible]	1007
WACO	368	1512	[illegible]
WICHITA FALLS	574	2365	[illegible]
UTAH			
MILFORD	847	[illegible]	[illegible]
SALT LAKE CITY	783	[illegible]	4541
WENDOVER	[illegible]	4729	[illegible]
VERMONT			
BURLINGTON	1387	5471	[illegible]
VIRGINIA			
LYNCHBURG	826	2904	3240
NORFOLK	628	2011	2657
RICHMOND	788	2654	3070
ROANOKE	837	[illegible]	3234
WALLOPS ISLAND	767	[illegible]	
WASHINGTON			
OLYMPIA	[illegible]	4184	[illegible]
QUILLAYUTE	716	4237	[illegible]
SEATTLE-TACOMA	678	3696	3582
SPOKANE	991	5408	[illegible]
STAMPEDE PASS	1111	6421	6242
WALLA WALLA U	786	[illegible]	3674
YAKIMA	941	4877	[illegible]
WEST VIRGINIA			
BECKLEY	[illegible]	[illegible]	[illegible]
CHARLESTON	856	2878	3448
ELKINS	1047	[illegible]	4224
HUNTINGTON	877	[illegible]	3430
PARKERSBURG U	[illegible]	3268	[illegible]
WISCONSIN			
GREEN BAY	1463	[illegible]	5844
LA CROSSE	1414	5654	[illegible]
MADISON	1401	5554	5762
MILWAUKEE	1305	5228	[illegible]
WYOMING			
CASPER	1052	5876	5259
CHEYENNE	916	[illegible]	5147
LANDER	1083	6079	[illegible]
SHERIDAN	1082	[illegible]	6663

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals January through this month
	This month	Period January through this month	
[illegible]			
[illegible]	[illegible]	10	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	62	
MONTGOMERY	[illegible]	15	
[illegible]			
[illegible]		0	
[illegible]		0	
[illegible]	[illegible]	0	
BARTER ISLAND		0	
BETHEL			
BETTLES	0		
BIG DELTA		0	
COLD BAY			
[illegible]	0		
[illegible]		0	
HOMER			
[illegible]	0	[illegible]	
KING SALMON	0		
[illegible]		0	
MC GRATH	0	0	
NOME			
ST. PAUL ISLAND	0		
SHEMYA		0	
[illegible]			
TALKEETNA	0	0	
[illegible]	0		
YAKUTAT			
ARIZONA			
[illegible]	0		
[illegible]	11	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]			
[illegible]	[illegible]	[illegible]	
ARKANSAS			
[illegible]		0	
LITTLE ROCK		2	
CALIFORNIA			
[illegible]	[illegible]	0	
BISHOP		0	
[illegible]			
[illegible]		0	
FRESNO			
LONG BEACH		0	
LOS ANGELES			
LOS ANGELES U	[illegible]	[illegible]	
[illegible]			
[illegible]		[illegible]	
RED BLUFF		[illegible]	
[illegible]			
SANDBERG R		0	
SAN DIEGO			
SAN FRANCISCO	[illegible]	[illegible]	
SAN FRANCISCO U		0	
SANTA MARIA			
STOCKTON			
COLORADO			
ALAMOSA			
COLORADO SPRINGS			
DENVER	0	[illegible]	
GRAND JUNCTION		0	
[illegible]		0	
CONNECTICUT			
BRIDGEPORT			
HARTFORD			
DELAWARE			
WILMINGTON		0	
DIST.OF COLUMBIA			
WASHINGTON DULLES			
WASHINGTON NATIONAL		0	
[illegible]			
APALACHICOLA U	[illegible]	[illegible]	
DAYTONA BEACH	16	[illegible]	
FORT MYERS	[illegible]	307	
[illegible]	[illegible]	62	
KEY WEST	[illegible]	530	
[illegible]	[illegible]	186	
[illegible]	144	[illegible]	
ORLANDO	[illegible]	[illegible]	
PENSACOLA	[illegible]	[illegible]	
TALLAHASSEE	[illegible]	46	
TAMPA	[illegible]	151	
[illegible]	[illegible]	335	
[illegible]			
ATHENS			
ATLANTA			
AUGUSTA	[illegible]	[illegible]	
COLUMBUS	[illegible]	10	
[illegible]	[illegible]	[illegible]	
ROME	0		
SAVANNAH	[illegible]	36	
[illegible]			
[illegible]	171	334	
HONOLULU	170	[illegible]	
[illegible]	162	[illegible]	
[illegible]	178	[illegible]	
IDAHO			
BOISE		0	
LEWISTON		[illegible]	
POCATELLO		0	
ILLINOIS			
CAIRO U			
[illegible]	0	0	
CHICAGO MIDWAY		0	
[illegible]	0	0	
PEORIA	0	0	
[illegible]	0	0	
SPRINGFIELD	0	[illegible]	
INDIANA			
EVANSVILLE	0	0	
[illegible]	0	[illegible]	
[illegible]	0	0	
SOUTH BEND		0	
[illegible]			
[illegible]	0	[illegible]	
DES MOINES	0		
DUBUQUE	0	0	
SIOUX CITY	0	0	
WATERLOO		0	
KANSAS			
[illegible]		0	
[illegible]	[illegible]	0	
GOODLAND	0	0	
[illegible]	0	0	
WICHITA	[illegible]	0	
KENTUCKY			
[illegible]	0	0	
LEXINGTON	[illegible]	0	
LOUISVILLE	0	[illegible]	
LOUISIANA			
ALEXANDRIA	14	35	
BATON ROUGE	15	46	
LAKE CHARLES	22	42	
NEW ORLEANS	26	76	
SHREVEPORT	10	32	
MAINE			
CARIBOU			
PORTLAND	[illegible]		
MARYLAND			
BALTIMORE	[illegible]	0	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	[illegible]	
WORCESTER		0	
MICHIGAN			
ALPENA	0		
DETROIT	0	0	
DETROIT METRO	[illegible]	0	
FLINT	0	0	
GRAND RAPIDS		0	
[illegible]	0	0	
LANSING	0	0	
MARQUETTE J	0	0	
MUSKEGON	0	[illegible]	
SAULT STE MARIE	0	[illegible]	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	[illegible]	
MINNEAPOLIS		0	
POCHESTER		0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	17	[illegible]	
MERIDIAN	6	14	
MISSOURI			
COLUMBIA REGIONAL	0	0	
KANSAS CITY	3	[illegible]	
ST JOSEPH			
ST LOUIS		0	
SPRINGFIELD		0	
MONTANA			
BILLINGS		[illegible]	
GLASGOW			
GREAT FALLS	0	[illegible]	
HAVRE			
HELENA	0		
KALISPELL			
MILES CITY		0	
MISSOULA	0		
NEBRASKA			
GRAND ISLAND		[illegible]	
LINCOLN U	[illegible]	0	
NORFOLK	[illegible]	0	
NORTH PLATTE	0		
OMAHA	0	[illegible]	
SCOTTSBLUFF	[illegible]	0	
VALENTINE	0	0	
NEVADA			
[illegible]	[illegible]	0	
[illegible]	[illegible]		
LAS VEGAS	2	2	
RENO	[illegible]	0	
WINNEMUCCA		0	
NEW HAMPSHIRE			
CONCORD	0	[illegible]	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	0	0	
NEWARK	[illegible]	0	
TRENTON U	0	0	
NEW MEXICO			
ALBUQUERQUE	0	0	
CLAYTON	0	0	
ROSWELL	0	0	
NEW YORK			
ALBANY	[illegible]	0	
BINGHAMTON	0	0	
BUFFALO	[illegible]	0	
NEW YORK U	0	0	
NEW YORK KENNEDY	0	[illegible]	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	0	0	
SYRACUSE	[illegible]	0	
NORTH CAROLINA			
ASHEVILLE	0	0	
CAPE HATTERAS R	0	7	
CHARLOTTE	0	0	
GREENSBORO	0	0	
RALEIGH	0	0	
WILMINGTON	0	5	
NORTH DAKOTA			
BISMARCK		0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI ABBE OB	[illegible]	0	
CLEVELAND	0	0	
COLUMBUS	0	0	
DAYTON	0	0	
MANSFIELD	0	0	
TOLEDO	[illegible]	0	
YOUNGSTOWN	[illegible]	0	
OKLAHOMA			
OKLAHOMA CITY	2	2	
TULSA	6	6	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	0	0	
PENDLETON	[illegible]		
PORTLAND	0	[illegible]	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	343	713	
JOHNSTON	334	700	
KOROR R	456	955	
KWAJALEIN	477	974	
MAJURO	466	946	
PAGO PAGO	433	879	
PONAPE R	465	957	
TRUK MOEN ISLAND	[illegible]	956	
[illegible]	[illegible]	[illegible]	
YAP R	[illegible]	927	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	0	
PITTSBURGH	0	0	
SCRANTON	[illegible]	0	
WILLIAMSPORT	[illegible]		
RHODE ISLAND			
BLOCK ISLAND	[illegible]		
PROVIDENCE	[illegible]		
SOUTH CAROLINA			
CHARLESTON	3	10	
CHARLESTON U	1	7	
COLUMBIA	0	1	
GRNVLLE-SPRTNBRG	0	0	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	0	0	
KNOXVILLE	0	[illegible]	
MEMPHIS	0	0	
NASHVILLE	0	0	
OAK RIDGE R	0	0	
TEXAS			
ABILENE	12	12	
AMARILLO	0	0	
AUSTIN	34	40	
BROWNSVILLE	91	239	
CORPUS CHRISTI	61	154	
DALLAS	15	21	
DEL RIO	37	40	
EL PASO	4	4	
FORT WORTH	14	16	
GALVESTON U	20	50	
HOUSTON INTERCON	[illegible]	78	
LUBBOCK	0	0	
MIDLAND	0	0	
PORT ARTHUR	18	39	
SAN ANGELO	20	20	
SAN ANTONIO	31	42	
VICTORIA	28	86	
WACO	24	27	
WICHITA FALLS	4	4	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	[illegible]	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	0	0	
RICHMOND	0	0	
ROANOKE	0	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE-TACOMA	0	0	
SPOKANE	0	0	
STAMPEDE PASS R	0	0	
WALLA WALLA U	0	0	
YAKIMA	0	0	
WEST INDIES			
SAN JUAN P.R.	376	776	
WEST VIRGINIA			
BECKLEY	0	0	
CHARLESTON	0	0	
ELKINS	0	0	
HUNTINGTON	0	0	
PARKERSBURG U	0	0	
WISCONSIN			
GREEN BAY	0	[illegible]	
LA CROSSE	0	0	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
[illegible]

STORM SUMMARY

FEBRUARY 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE PROP-ERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROP-ERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROP-ERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROP-ERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROP-ERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROP-ERTY	† DAMAGE CROPS
Alabama*																													
Alaska												5								6									
Arizona*																													
Arkansas								1																					
California*																													
Colorado*																													
Connecticut												5						2		5								5	
Delaware												4						1											
Florida	6	3		3	5							4																	
Georgia	1	1			4							4																	
Hawaii												3	4															5	4
Idaho												4				3			2	3									
Illinois*																													
Indiana*																													
Iowa												5								5									
Kansas*																													
Kentucky												4				4							[illegible]	[illegible]				2	[illegible]
Louisiana	1	1		3	5							5				4											2	4	
Maine										1		6						1		5								4	
Maryland												5						3		5									
Massachusetts											17	7								6								5	
Michigan*																													
Minnesota																				5									
Mississippi*																													
Missouri*																													
Montana											2	5																4	
Nebraska*																													
Nevada*																													
New Hampshire										1	1	6								5								4	
New Jersey*																													
New Mexico*																													
New York											1	4						3	4	4								1	
North Carolina												5								5									
North Dakota																				3									
Ohio																			2	2									
Oklahoma																				2				[illegible]					
Oregon												5											150	2	2			[illegible]	
Pacific Area*																													
Pennsylvania																			2	5									
Puerto Rico*																													
Rhode Island												5								5								6	
South Carolina											5	3																	
South Dakota*																													
Tennessee										1		4																	
Texas*																													
Utah*																													
Vermont												5								5									
U.S. Virgin Is.*																													
Virginia																				5									
Washington										5	13	6	5			3												6	5
West Virginia																												5	
Wisconsin*																													
Wyoming*																													

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
= Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

FEBRUARY 1972

Elmer R. Nelson, Office of Hydrology

The most disastrous flooding during February occurred in the Guyandot Basin in West Virginia in the Buffalo Creek Hollow. Some 16 mining towns in the hollow were completely or partially destroyed. At least 118 people lost their lives. All of Logan County was declared a national disaster area by the President. Flood damages were estimated to be in excess of $10 million.

HUDSON BAY DRAINAGE

Red River of the North Basin--Precipitation amounts during February averaged near or slightly below normal along the tributaries of the Red River of the North in North Dakota, except 0.25 inch above normal over portions of the Park and Pembina Rivers in the lower basin. In Minnesota, the precipitation averaged near or below normal along the upper tributaries and 0.25 to 0.50 inch above normal along the lower tributaries. The heaviest amounts occurred along the Roseau River and portions of the Clearwater, Red Lake, and Thief Rivers. Snow depths at the end of the month ranged from 5 to 10 inches along the main stem and tributaries in Minnesota, with a water content of 1 inch.

In the Souris Basin, precipitation totals during February averaged near 0.50 inch above normal along the Des Lacs River; 0.15 to 0.25 inch above normal along the lower Souris; and 0.50 to 1.25 inch above normal along the right tributaries of the lower Souris. Most snow depths at the close of the month ranged from 5 to 10 inches with water content of 1 inch or less. The exceptions were, the Des Lacs Basin with 8 to 13 inches snow cover and 1 to 3 inches water content, and the Turtle Mountain area with 14 to 22 inches snow cover and 2 to 3.5 inches water content.

The main stem of the rivers continue to flow near or a little above normal as water storage in the reservoirs was being lowered to accomodate the expected spring runoff.

ATLANTIC SLOPE DRAINAGE

Precipitation was much above normal during February over the Delaware River Valley and New Jersey. In the Delaware River Basin above Trenton, N. J., the precipitation for February averaged 3.97 inches or 137 percent of normal. Below Trenton, the precipitation averaged 4.9 inches or 168 percent of normal. In New Jersey, except for the coastal strip, the precipitation averaged 4.3 inches in the north portion or 147 percent of normal, and 4.9 inches in the central and southern sections or 162 percent of normal. Milder temperatures at the end of February reduced the snow on the ground to an average of 6 to 14 inches in New York State and in the Poconos of northeastern Pennsylvania, except 22 inches at Claryville, N. Y. In east-central and southeastern Pennsylvania, the snow on the ground at the end of February ranged from 1 to 5 inches. In the northern third of New Jersey snow on the ground at the end of the month averaged 4 to 10 inches, while the rest of the State ranged from none to 3 inches.

Water-supply storage in New Jersey's 13 principal reservoirs increased by 1.5 billion gallons during the month to an average of 98 percent of capacity. All reservoirs were spilling at the end of the month except Wanaque and Spruce Run. New York City's three reservoirs increased storage by 2.2 billion gallons during February to about 78 percent of capacity at the end of the month.

Slight flooding occurred on the Rivanna River at Palmyra, Va., and along the lower James River on the 13th-15th. The duration of the overflow was rather brief, lasting only about 12 hours at Palmyra to around 32 hours at the Westham gage in Richmond. The rainfall over the basin on the 12th and 13th ranged from 3.25 inches to 1.25 inches. A second major rise over the James Basin on the 26th-29th caused minor flooding at several points. The duration of the overflow lasted from about 14 hours at Buchanan, Va., to around 40 hours at the Westham gage in Richmond. The rainfall averaged generally around 1 inch and was supplemented by snowmelt in the upper basin. Maximum runoff occurred as the soil was saturated from the previous rains earlier in the month.

The flooding on the Neuse and Cape Fear Rivers in eastern North Carolina in the beginning of the month was due to heavy precipitation (2 to 4 inches) on the 2d-4th. Snow depths of 1 inch to 8 inches occurred in south-central Virginia. Additional heavy rainfall on the 12th-13th prolonged the flooding on the Neuse River and caused some flooding on the Roanoke and Cape Fear Rivers. A mixture of rain and snow over eastern North Carolina on the 18th prolonged the high stages on streams in eastern North Carolina. A minor overflow occurred on the lower Roanoke River at Williamston through the end of the month.

Heavy rain during the first 4 days of February caused flooding in the Pee Dee and Santee River Basins in South Carolina. The rainfall averaged 1-1/2 to 3 inches over most of South Carolina and adjacent North Carolina during this period. Moderate flooding occurred along the Pee Dee and Lumber Rivers. Flooding along the other streams was mostly minor. Losses were mainly along the Pee Dee River from the disruption of logging and flooding of the Lumber River in Lumberton, N. C.

Additional rains in early February contributed to high stages on the lower Savannah and Ogeechee Rivers in Georgia. The Savannah River at Clyo, Ga., continued above flood stage from Jan. 15 through March 6. The Ogeechee River at Eden, Ga., continued above flood stage from Jan. 17 to March 3. Damages on both streams were estimated to be light.

Minor flooding occurred on the Altamaha River at Charlotte, Ga., on the 5th-23d and on the Satilla River at Waycross, Ga., on the 8th-13th. The crests on the 10th ranged up to 2.4 feet above flood stage at Charlotte. No damages were reported from the minor overflows.

EAST GULF OF MEXICO DRAINAGE

There were two rises on the Apalachicola River to above flood stage at Blountstown, Fla., during February. The first rise occurred on the 2d-20th and the second on the 24th-26th. The higher crest (18.9 feet) occurred on the 11th and was nearly 4 feet above flood stage.

The lower Pearl River at Bogalusa, La., continued above flood stage from Jan. 5 through Feb. 28 and at Pearl River, La., from Dec. 10 to Feb. 26. Heavy rains during the last few days of January caused the Pearl River at Jackson and Monticello, Miss., to rise above flood stage early in February. Inundated areas were confined to low-lying farm and timber lands adjacent to the river.

Soil preparation and timber cutting operations were hampered in the area of overflow most of the month. Some construction projects along the river at Bogalusa, La., were delayed as floodwaters invaded the sites.

MISSISSIPPI SYSTEM

Upper Mississippi Basin--Precipitation in the Upper Mississippi Basin above Guttenberg, Iowa, during February was below to much below normal, except near normal over western and northern Minnesota and northern Wisconsin.

The water equivalent of the snow on the ground at the end of the month was the greatest over east-central Minnesota and west-central Wisconsin and the northern portions of Minnesota and Wisconsin. The Upper Mississippi, the St. Croix, the Black, the Chippewa, and the upper Wisconsin Basin had amounts ranging from 3 to a little over 5 inches of water content in the snow cover. Elsewhere, amounts were mostly 1 to 2 inches.

The snow cover in the Upper Mississippi Basin at the end of February compared with that of other years is shown in the following table:

COMPARATIVE SNOW DEPTHS (INCHES)

STATION	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956
Minnesota)																	
Bemidji	21	12	7	29	8	23	18	10	9	4	24	5	5	4	T	14	22
Duluth	26	25	18	30	7	24	12	21	12	10	23	8	17	9	3	22	--
Alexandria	23	26	7	29	4	18	1	4	T	2	17	0	4	1	0	4	12
New Ulm	8	12	8	19	T	10	T	3	T	2	17	0	T	T	0	0	6
Minneapolis	14	6	9	17	1	23	T	4	0	3	24	0	2	0	0	T	7
Rochester	7	11	9	12	T	6	0	1	0	3	13	2	3	13	0	T	6
Wisconsin)																	
Park Falls	19	29	15	18	4	23	3	20	7	16	33	6	17	10	3	16	20
Wausau	23	17	9	13	2	16	0	5	11	7	30	1	5	9	0	1	7
Portage	3	8	2	8	T	5	T	T	0	6	24	0	4	10	T	0	T

Extensive snowmelt and ice action during the last 2 days of February caused the Plum and Edwards Rivers n Illinois and the Wapsipinicon at DeWitt, Iowa, to rise bove flood stage on the 29th. The streams continued above flood stage until March 1.

Missouri Basin--The Madison River near Three Forks, Mont., overflowed about 5 acres of land on the 6th due o a buildup of float ice which jammed at the Intertate 90 bridge. Several hundred acres of bottomland, north and east of Three Forks, Mont., were flooded on he 7th. Seven families in Old Town, Mont., were vacuated as basements of several homes were flooded. The flooding continued through the end of the month.

Ice-jam flooding occurred on Bazile and Bow Creeks n northern Nebraska during the last 10 days of the month. There were two crests on Bazile Creek at Niobrara, Nebr. The higher crest occurred on the 22d nd was 2.4 feet above bankfull stage. About 500 acres were inundated. The highway was closed due to water ver the road. However, no damage was reported. An ce jam, near the mouth of Bow Creek, caused flooding orth of Wynot in Cedar County, Nebraska. Dynamite ad to be used to break the ice at the bridge. About 00 acres were inundated. Damage to roads, a bridge, nd equipment at a gravel pit company was estimated t $36,000.

Minor flooding occurred on the North Loup River in he vicinity of St. Paul, Nebr., on the 27th-28th due to ce action. The Platte River overflowed a low section f Highway 64, west of Valley, Nebr., on the 29th due o ice action. No damage was reported on either stream.

Ohio Basin--Rapid melting of the heavy snow cover lus heavy rains produced flooding in the Tygart Valley n West Virginia towards the end of the month. No ignificant damage resulted from this overflow.

Heavy rainfall beginning on the 24th and continuing nto the 26th, plus snowmelt, caused considerable floodng on streams in West Virginia and Kentucky. Total ainfall during the 3 days averaged over 3 inches and ell on a snow cover ranging up to 20 inches in depth n West Virginia. The flooding began on the Guyandot t Logan, W. Va., and on the Tug Fork at Williamson, W. Va., on the 24th. There were two crests on the Guyandot at Logan, W. Va. The higher crest (27.2 feet) on the 26th was 4.2 feet above flood stage and 8 feet lower than the record crest of 34.98 feet in 1963. Downstream at Branchland, W. Va., the crest on the 27th was 12.6 feet above flood stage. The crests on the Tug Fork ranged up to nearly 7 feet above flood stage at Williamson, W. Va. Both streams receded within their banks on the 27th-28th. Damages in the Guyandot Basin, below Man, W. Va., to the backwater point at Salt Rock, W. Va., were estimated at $1.4 million by the Corps of Engineers. Damages in the Tug Fork Basin were placed at $250,000. Minor flooding occurred on the Greenbrier, Elk, and Coal Rivers in West Virginia on the 26th-27th. Damages along the Levisa Fork and the Big Sandy in Kentucky were estimated at $217,000.

A major disaster occurred in Logan County, West Virginia, on the morning of Feb. 26 when a coal waste bank on the Middle Fork of Buffalo Creek collapsed. It has been estimated that the level of the lake, dammed up behind the huge coal-slag heap, had been filled by 3 days of rain totalling as much as 5.6 inches. The rains had fallen on a snow cover estimated to be 6 inches to 1 foot deep in the higher elevations. Buffalo Creek, a small tributary of the Guyandot River at Man, W. Va., is one of the most densely settled areas of Logan County. Twelve coal mines and 16 mining towns were located in the hollow, many of which bordered right near the creek. Millions of gallons of water were released onto these communities in the narrow 17-mile hollow when the coal waste bank collapsed. A wall of water, estimated 30 to 35 feet high near its source moved down the valley at an average rate of 15 feet to 20 feet per second, demolishing everything in its path. In the area closest to the coal waste bank, the soil was stripped down to the bedrock. The enormous force of the water lifted buildings, cars, and trees, and floated them downstream. The Logan County Coal camp of Lorado, about 4 miles downstream from the coal waste bank, was completely destroyed. Some 16 mining towns in the hollow were completely or partially destroyed including all existing roads and bridges. Scores of people were trapped in their homes or injured. At least 400 buildings were destroyed completely, 400 badly damaged, and about 2,200 partially damaged. About 4,000 people were left homeless. The Red Cross reported that 118 people lost their lives and that 20 persons are still listed as missing. Rescue attempts were started almost immediately as the Governor sent in the National Guard and signed a bill providing $1 million in emergency relief. All of Logan County was declared a national disaster area by the President. Preliminary estimates indicate that flood loss, including cleanup, was in excess of $10 million. Flash flood warnings for natural flooding were issued by the National Weather Service several hours before the disaster on Buffalo Creek.

Heavy rain on the 24th and 26th caused minor flooding in the Kentucky River Basin from Hazard to Frankfort, Ky. The heaviest precipitation occurred over the middle reaches of the Kentucky River in the area from Heidelberg, Ky., Lock 14 to Lock 5. The damage was relatively light.

Heavy rain on the 23d-25th caused flooding on the Rough and Green Rivers in Kentucky. Storm totals for the 3 days amounted to over 4 inches at several points in the Green River Basin and over 3 inches along the Ohio River. The lower Green River continued in flood until March 13.

Minor flooding occurred along the upper Cumberland River in southeastern Kentucky on the 26th-27th. This overflow was due to heavy rain that averaged 1.75 to 2.00 inches in 24 to 36 hours on the 23d-24th. No major damage resulted from the minor overflow.

The main stem of the Ohio River rose above flood stage in the reach from Tell City, Ind., to Fords Ferry, Ky., between the 27th and 29th. The crests on Mar. 3-8 ranged from 5 feet to 10.5 feet above flood stage. The flooding continued until the middle of March.

White Basin--Minor flooding occurred on the Cache River at Patterson, Ark., on the 15th-17th. The minor overflow was due to rainfall averaging 0.75 to 1.00 inch on the 6th-7th. No damage was reported.

Lower Mississippi Basin--Minor overflow occurred on the Big Black River at West, Miss., on the 1st-3d. Adjacent farmlands were flooded briefly.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the Calcasieu River at Hineston, La., during the first week of February. No damages were reported.

The lower Trinity at Moss Bluff, Tex., continued in flood from Nov. 25 to Feb. 12. The crest on Feb. 3 was 2.7 feet above flood stage compared to 4.1 feet above flood stage on Dec. 29 to Jan. 1.

Minor flooding occurred on the Navidad River at Ganado, Tex., on Feb. 1-2 and on the Lavaca River at Edna, Tex., on Jan. 31 to Feb. 1. Flooding was restricted to lowlands along these rivers with no reportable damage.

Heavy thundershowers on the morning of the 29th caused flash flooding of fields and farm roads in the area south of Alice, Tex., and Robstown to Kingsville, Tex. Creeks in the area ran bankfull through the night of the 29th.

PACIFIC SLOPE DRAINAGE

Columbia Basin--Streamflow was above average throughout Idaho during February. The warm rain and temperatures on the 12th to the 29th on the intermediate level snowpack caused considerable melt. The flow of the Weiser River increased rapidly during the night of the 28th and the morning of the 29th following the heavy rain (over 1 inch) on the 28th-29th. One foot to 1.5 feet overflow occurred on the Weiser River near Cambridge and Weiser, Idaho, on the 28th-29th.

The Owyhee River in northern Nevada and southeast Oregon rose rapidly during this same period. The outflow from the Owyhee Reservoir increased the volume in the Snake River between Nyssa and Ontario, Oreg. This increase in flow threatened farms along the flood plain and the river islands from the confluence of the Owyhee with the Snake to just north of Ontario, Oreg.

In the upper Snake River Valley, feeder streams near Idaho Falls, Idaho, caused some concern when channel ice began piling up at bridge crossings. The lodged ice was freed resulting in little or no damage.

Minor damage occurred to homes along Canyon Creek at Glensferry, Idaho, when basements were flooded.

Heavy precipitation during the last 4 days of February, which varied from 8 inches along coastal northwest Oregon to 5 inches at Cascade locations and 2 inches in the Willamette Valley, caused moderate to heavy rises in streams. The Coastal Wilson River crested 2 feet above flood stage on the 27th and remained above flood stage until the afternoon of the 29th.

The Nehalem River near Foss, Oreg., crested near bankfull on the 27th and reached flood stage about midnight of the 28th. Other Oregon coastal streams crested below bankfull. In the Willamette Basin, the Luckiamute, South Yamhill, upper Tualatin, Santiam, and Clackamas Rivers crested at or near bankfull, while the Pudding River at Aurora, Oreg., exceeded flood stage on the 29th and crested about 4 feet above flood stage on Mar. 3. Moderate rises were observed at reservoir-controlled Willamette locations but bankfull stage was not reached at any forecast point.

This storm at the end of the month, with warmer temperatures, produced considerable rainfall and snowmelt runoff from basins east of the Cascades in both Washington and Oregon. Substantial rises occurred in tributaries in eastern Oregon and eastern and southeastern Washington. The lower Snake River, responding to sharp rises on the Clearwater River and lesser rises on the Salmon River increased its flow from 66,000 c.f.s. on the 27th to a peak flow near 106,000 c.f.s. on the 29th.

The combination of Snake River flow, plus the high tributary flow, caused the lower Columbia River at Bonneville, Oreg., to increase its flow from 175,000 c.f.s. on the 28th to slightly over 300,000 c.f.s. on the 29th. The stages in the Vancouver-Portland harbor rose from near 10 feet on the 28th to 15 feet on the 29th. The lower Columbia at Vancouver, Wash., crested 1 foot above flood stage on Mar. 3. The lower Willamette at Portland, Oreg., crested 0.6 foot below flood stage on Mar. 3. These were the highest stages reached in the Vancouver-Portland harbor for early March since 1910.

North Coastal Basins--Moderate flooding occurred on the Cedar, Snoqualmie, and Snohomish Rivers, and minor flooding on the Chehalis River in Washington during the last few days of February. The high water was due to a combination of snowmelt and heavy rains. Storm rainfall totals ranged from 3 to 8 inches. Temperatures in the lowlands ranged up to 60°. In the Cascades at Stampede Pass, the temperature at 4,000 feet was 42°. Damage estimates may total several hundred thousand dollars. Considerable damage resulted to river banks, roads, farmland, and residential real estate due to erosion. Many homes and roads were damaged by numerous landslides.

FLOOD STAGE DATA

All dates in February unless otherwise specified

FEBRUARY 1972

River and station		Flood stage	Above flood stages -dates		Crest *	
			From–	To–	Stage	Date
		Ft			Ft	
ATLANTIC SLOPE DRAINAGE						
Rivanna:	Palmyra, Va.	17	11	14	18.8	11
James:	Buchanan, Va.	17	27	27	18.5	27
	Bremo Bluff, Va.	19	27	28	21.4	28
	Columbia, Va.	18	13 27	14 29	E 21.2 E 21.5	14 28
	State Farm, Va.	12	14 28	15 29	E 14.0 E 14.0	14 28
	Richmond (Westham, Va.)	12	14 27	15 29	13.9 13.9	14 29
Roanoke:	Randolph, Va.	21	14	14	21.85	14
	Williamston, N. C.	10	19	Mar 7	10.9	25
Neuse:	Neuse, N. C.	14	4	7	15.75	5
	Smithfield, N. C.	15	5 14	9 17	17.05 15.0	6 17
	Goldsboro, N. C.	14	6	26	16.5	11
	Kinston, N. C.	14	11	27	15.4	15
Cape Fear:	Fayetteville, N. C.	35	5	5	36.2	5
	Wm. O. Huske, L&D (nr. Tarheel), N. C.	42	4 15	8 15	51.6 43.9	5 15
	Elizabethtown, N. C.	20	5 15	9 16	28.3 22.2	6 15
Rocky:	Norwood, N. C.	15	2	2	#17.0	2
Lumber:	Lumberton, N. C.	9	Jan 13	Mar 6	12.3 12.0 10.5	Jan 18-19 9 20-22
Little Pee Dee:						
	Galivants Ferry, S. C.	9	4	24	#10.1	10
Waccamaw:	Conway, S. C.	7	18	21	# 7.1	19-20
Black:	Kingstree, S. C.	12	5	9	#12.5	7
Pee Dee:	Cheraw, S. C.	30	4	5	34.0	4
	Peedee, S. C.	19	4 22	18 22	#22.3 #19.0	9 22
Broad:	Blair, S. C.	14	4	4	14.9	4
North Fork Edisto:						
	Orangeburg, S. C.	8	1	6	# 8.9	4
Edisto:	Givhans Ferry State Park, S. C.	10	Jan 17	26	#13.2	7
Savannah:	Millhaven-Wade 2 SE, Ga.	15	Jan 16	23	#17.8 #16.7	Jan 23-24 4
	Clyo, Ga.	11	Jan 15	Mar 6	#16.3 #15.6	Jan 26-27 7-8
Ogeechee:	Scarboro, Ga.	8	2	26	# 9.2	6-7
	Eden, Ga.	9	Jan 17	Mar 3	#12.1 #11.1	Jan 23 9-10
Altamaha:	Charlotte, Ga.	15	5	23	17.35	10
Satilla:	Waycross, Ga.	16	8	13	16.75	10
EAST GULF OF MEXICO DRAINAGE						
Apalachicola:						
	Blountstown, Fla.	15	2 24	20 26	18.9 15.5	11 25
Pearl:	Jackson, Miss.	18	2	20	25.4	13
	Monticello, Miss.	19	1	3	20.25	1
	Bogalusa, La.	15	Jan 5	28	19.8	26
	Pearl River, La.	12	Dec 10	26	15.75 14.4	Dec 16 [illegible]
MISSISSIPPI SYSTEM						
Upper Mississippi Basin						
Plum:	Savanna, Ill	22	29	Mar 1	23.0	Mar 1
Wapsipinicon:						
	DeWitt, Iowa	10	29	Mar 1	E11.6	29
Edwards:	New Boston, Ill.	17	29	Mar 1	19.9	Mar 1

River and station		Flood stage	Above flood stages -dates		Crest *	
			From–	To–	Stage	Date
		Ft.			Ft	
MISSISSIPPI SYSTEM-Cont.						
Missouri Basin						
Bazile Creek:	Niobrara, Nebr.	B 15	21 27	26 Mar 1	17.4 15.9	22 29
North Loup:	St. Paul, Nebr.	5.5	27	28	5.8	28
Ohio Basin						
Tygart:	Belington, W. Va.	14	25 26	25 27	14.2 15.7	25 27
	Philippi, W. Va.	17	24 26	25 27	17.8 19.2	25 26
Greenbrier:	Alderson, W. Va.	14	26	27	17.9	26
Elk:	Queen Shoals, W.Va.	19	26	26	19.7	26
Coal:	Tornado, W. Va.	25	26	27	25.5	26
Guyandot:	Logan, W. Va.	23	24	27	26.3 27.2	25 26
	Branchland, W. Va.	30	25	28	42.65	27
Tug Fork:	Williamson, W. Va.	27	24	27	33.8 30.0	25 26
	Kermit, W. Va.	38	25	27	43.05	26
Levisa Fork:	Paintsville, Ky.	35	26	27	37.3	26
Big Sandy:	Louisa, Ky.	45	26	28	46.5	26
North Fork Kentucky:						
	Hazard, Ky.	20	25	25	21.6	25
	Jackson, Ky.	29	25	27	31.6	26
Kentucky:	Lock 10, Ford, Ky.	25	26	28	27.2	27
	Lock 4, Frankfort, Ky.	31	26	29	34.4	27
Rough:	Dundee, Ky.	25	25	27	27.4	26
Green:	Munfordville, Ky.	28	25	27	32.0	26
	Lock 6, Brownsville, Ky.	18	26	28	21.7	27
	Lock 4, Woodbury,Ky.	33	25	29	38.0	27
	Lock 2, Calhoun,Ky.	23	26	Mar 13	27.6	Mar 3
Cumberland:	Barbourville, Ky.	27	25	27	29.3	25
	Williamsburg, Ky.	21	26	27	21.3	27
Ohio:	Tell City, Ind.	38	28	Mar 10	43.0	Mar [illegible]
	Dam 47, Newburgh, Ind.	38	27	Mar 13	44.1	Mar 4
	Dam 48, Cypress, Ind.	38	28	Mar 13	43.7	Mar 4
	Mt. Vernon, Ind.	35	29	Mar 14	41.0	Mar 5
	Shawneetown, Ill.	33	29	Mar 16	41.9	Mar 7
	Dam 50, Fords Ferry, Ky.	34	29	Mar 17	44.5	Mar 8
White Basin						
Cache:	Patterson, Ark.	7	15	17	7.1	15
Lower Mississippi Basin						
Big Black:	West, Miss.	12	1	5	12.7	1
WEST GULF OF MEXICO DRAINAGE						
Calcasieu:	Hineston, La.	12	1	7	14.1	4
Trinity:	Moss Bluff, Tex.	4	Nov 25	12	6.7	3
Navidad:	Ganado, Tex.	21	1	2	26.5	1
Lavaca:	Edna, Tex.	21	Jan 31	1	22.1	1
PACIFIC SLOPE DRAINAGE						
Columbia Basin						
Weiser:	Cambridge (nr.), Idaho	9	28	29	9.8	29
	Weiser (nr.), Idaho	8	28	29	9.5	29
Pudding:	Aurora, Oreg.	20	29	Mar 9	24.1	Mar 3
North Coastal Basins						
Chehalis:	Centralia, Wash.	63	29	Mar 1	#64.2	29
Cedar:	Renton, Wash.	8	27	29	# 9.4	28
Snoqualmie:	Carnation, Wash.	54	28	29	#57.2	28
Snohomish:	Snohomish, Wash.	25	28	Mar 1	#29.8	28

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* Provisional
# Highest

B Bankfull
E Estimated

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	[illegible] No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	ALBUQUERQUE, N. MEX. 838 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	AMARILLO, TEXAS [illegible] MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	* ANCHORAGE, ALASKA [illegible] MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	* ANNETTE, ALASKA [illegible] MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	86	-8.2	[illegible]	29	1.8	29	1,619	-.1	-11.1	05	1.2	29	1,095	-.7	-9.6	[illegible]	2.1	[illegible]	45	-10.5	-15.3	03	[illegible]	28	37	-1.8	-5.5	11	2.3
950	[illegible]	555	-8.3	-11.7	28	[illegible]													29	476	-6.3	-18.5	02	7.2	28	[illegible]	-3.8	-7.9	14	5.0
900	[illegible]	[illegible]	-9.8	-13.0	28	6.9													29	896	-7.8	-18.7	[illegible]	6.9	28	897	-6.3	-9.7	17	6.6
850	[illegible]	[illegible]	-10.6	-15.5	28	9.1							[illegible]	1,473	5.5	-9.8	[illegible]	4.7	29	1,339	-9.3	-19.7	04	5.6	28	1,343	-8.3	-12.2	19	7.3
800	29	[illegible]	-11.3	[illegible]	28	11.8	29	1,999	3.5	-14.4	31	3.9	29	1,968	[illegible]	-12.5	29	6.0	29	1,806	-11.7	-21.3	06	5.4	28	1,812	-10.2	-14.7	[illegible]	7.3
750	[illegible]	2,355	-12.6	[illegible]	28	13.1	29	2,519	[illegible]	-16.7	30	7.5	29	2,491	1.8	-15.3	29	8.2	29	2,298	-14.6	-22.9	06	4.9	28	2,307	-12.5	-17.2	[illegible]	7.3
700	29	2,880	-14.6	-23.1	28	14.7	29	3,069	-3.1	-19.5	30	9.3	29	3,043	-1.6	-18.5	29	9.6	29	2,818	-17.6	-26.0	05	4.9	[illegible]	2,831	-15.5	-20.0	23	8.3
650	29	3,439	-17.1	-25.7	28	17.1	[illegible]	3,652	-6.4	-22.7	30	11.1	29	3,629	-5.6	-21.0	28	10.4	29	3,369	-21.0	-29.5	05	5.5	28	3,387	-19.2	-23.7	23	10.1
600	29	4,035	-20.4	-29.8	27	19.2	29	4,273	-10.0	-25.8	29	13.5	[illegible]	4,252	-10.0	-24.7	28	12.0	29	3,956	-24.9	-33.6	04	5.1	28	3,978	-23.1	-28.5	23	11.0
550	29	4,675	-24.3	-33.7	27	21.1	29	4,938	-14.4	-29.7	29	14.4	29	[illegible]	-14.4	-29.2	28	13.5	29	4,583	-29.1	-37.9	03	4.9	[illegible]	4,610	-27.4	-33.3	24	12.9
500	[illegible]	[illegible]	-28.6	-37.7	27	24.5	29	5,654	-19.4	-33.5	29	15.6	29	5,632	-19.6	-32.9	29	15.3	[illegible]	5,252	-33.9	-41.9	02	4.0	[illegible]	5,289	-32.1	-37.3	24	13.9
450	[illegible]	6,110	-33.6	-42.9	27	[illegible]	29	[illegible]	-24.9	-38.2	28	16.7	29	6,405	-25.5	-38.5	29	17.8	[illegible]	5,983	-39.1	-43.2	01	3.7	[illegible]	6,025	-37.3	-39.8	24	15.5
400	[illegible]	6,927	-39.1	-45.6	27	30.7	29	7,274	-31.2	-44.8	29	19.1	29	7,248	-32.0	-44.4	29	19.7	[illegible]	6,782	-44.3	-46.6	36	3.7	28	6,830	-42.4	-44.2	24	16.8
350	[illegible]	7,834	-44.6		26	35.3	[illegible]	[illegible]	-38.4	[illegible]	[illegible]	20.3	29	8,180	-39.2	-46.4	28	22.4	28	7,670	-48.8		34	4.6	28	7,726	-47.4		25	17.6
300	29	8,851	-49.9		[illegible]	36.0	28	9,243	-46.2		29	22.2	29	[illegible]	-47.3		28	25.9	28	8,675	-51.4		32	6.6	27	8,719	-51.7		26	18.0
250	29	10,030	-54.9		26	37.0	28	10,433	-54.5		29	26.7	[illegible]	10,405	-55.1		28	28.3	27	9,841	-51.7		30	7.4	27	9,898	-52.5		27	17.3
200	29	11,453	-55.1		[illegible]	37.2	[illegible]	11,841	-59.3		28	29.3	[illegible]	11,815	-59.1		28	31.1	[illegible]	11,296	-48.7		31	10.3	27	11,344	-51.0		28	15.2
175	29	12,308	-54.0		26	36.0	27	12,677	-57.9		28	28.7	28	12,653	-58.9		28	33.6	27	12,176	-47.7		30	10.3	[illegible]	12,216	-49.9		28	15.6
150	29	13,299	-53.7		26	33.1	26	13,647	-58.8		28	26.7	28	13,620	-59.3		27	28.8	[illegible]	13,193	-47.9		30	11.1	[illegible]	13,227	-49.9		29	14.3
125	29	14,466	-55.4		26	30.2	[illegible]	14,785	-61.8		28	25.2	28	14,756	-61.6		28	27.8	[illegible]	14,395	-48.3		29	12.7	[illegible]	14,418	-50.5		[illegible]	14.5
100	29	[illegible]	-56.9		26	29.6	25	16,149	-64.2		28	22.7	[illegible]	16,130	-64.3		28	24.5	27	15,862	-48.9		29	13.6	[illegible]	15,874	-51.3		30	14.3
80	29	17,291	-58.6		27	27.3	25	17,514	-64.4		28	16.3	27	17,487	-64.6		28	17.2	27	17,327	-49.2		29	14.0	24	17,328	-51.7		30	14.5
70	29	18,131	-58.3		27	22.8	24	18,329	[illegible]		29	11.5	27	18,305	-63.8		28	13.0	25	18,194	-49.4		29	15.5	24	18,193	-52.2		31	13.7
60	29	19,101	-58.4		27	[illegible]	[illegible]	19,286	[illegible]		30	8.3	27	19,252	-62.6		28	9.8	25	19,205	-49.3		29	16.3	23	19,187	-51.9		32	13.6
50	29	20,250	-57.9		27	17.9	22	20,414	-60.7		31	6.0	27	20,383	-60.7		29	6.4	22	20,397	-48.9		29	15.2	23	20,369	-51.9		33	13.1
40	29	21,661	-56.9		27	15.8	22	21,808	-59.3		33	4.0	27	21,774	-59.6		30	4.9	22	21,862	-49.1		30	16.9	23	21,816	-51.4		33	14.7
30	29	23,484	-56.3		27	15.9	[illegible]	23,616	-58.0		34	5.4	[illegible]	23,583	-57.7		34	3.9	22	23,753	-48.7		30	17.2	19	23,676	-52.4		34	17.0
25	[illegible]	24,658	-55.1		29	9.6	22	24,769	-56.6		35	6.0	27	24,737	-56.2		34	3.8	21	24,940	-49.2		30	18.2	17	24,865	-51.7		35	[illegible]
20	27	26,107	[illegible]		31	[illegible]	[illegible]	26,187	-54.8		36	5.6	[illegible]	26,147	-55.1		35	4.1	[illegible]	26,417	-48.9		30	19.3	17	26,314	-51.3		35	16.4
15	25	27,945	-53.4		30	[illegible]	19	28,054	-52.9		01	4.3	21	28,027	-53.2		03	5.5	17	28,325	-47.9		31	19.2	12	28,171	-50.2			
10	[illegible]	30,537	-50.6		28	13.7	10	30,674	-49.8				12	30,654	-51.1				10	31,017	-46.9				9	30,874	-48.3			
7	[illegible]	32,805	-46.2																						5	33,206	-43.6			

Standard pressure surface (mb)	ATHENS, GEORGIA [illegible] MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	* BARROW, ALASKA 1030 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	BARTER IS., ALASKA 1028 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	BETHEL, ALASKA [illegible] MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	* BISMARCK, N. DAK. 957 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	[illegible]	[illegible]	-3.5	32	1.1	26	8	-28.8	-34.3	27	.4	29	15	-28.9	-30.7	27	4.8	28	39	-18.1	-21.7	02	6.8	29	503	-13.9	-18.1	36	1.0
1000							26	[illegible]	-22.7	-24.5	36	1.1	29	213	-25.7	-29.8	28	6.5	20	198	-10.6	-19.8	03	9.5						
950	29	578	3.8	-3.5	29	2.9	26	602	-20.4	-24.0	36	2.2	[illegible]	588	-22.4	-25.5	28	6.2	[illegible]	528	-10.1	-19.3	04	12.5	21	588	-16.4	-21.6	06	.8
900	29	1,018	3.5	-4.5	28	6.2	26	1,003	-19.7	-24.6	[illegible]	2.7	29	986	-21.4	-25.8	29	5.6	28	946	-9.5	-18.7	04	11.3	29	965	-12.1	-15.7	29	4.1
850	29	1,481	2.8	-7.2	28	9.5	[illegible]	1,428	-19.5	-25.4	36	3.6	29	[illegible]	-22.1	-26.5	31	4.2	[illegible]	1,387	-10.7	-21.1	[illegible]	10.5	29	1,404	-10.5	-14.8	30	7.3
800	29	1,971	1.2	-9.9	28	11.3	26	1,877	-21.0	-27.4	[illegible]	4.4	28	1,857	-22.8	-27.7	33	4.6	28	1,851	-12.7	-22.8	[illegible]	11.1	29	1,872	-9.6	-14.1	30	10.8
750	29	[illegible]	-1.4	-13.4	28	12.7	26	2,352	-22.7	-28.8	34	5.4	28	2,329	-24.0	-29.4	34	5.8	[illegible]	2,342	-14.9	-24.6	02	11.3	[illegible]	2,370	-10.9	-16.4	30	15.3
700	29	3,035	-4.0	-17.6	27	14.6	26	2,856	-24.7	-31.2	34	6.8	28	[illegible]	-25.9	-32.0	34	7.3	[illegible]	2,861	-17.7	-27.5	02	10.9	29	2,898	-13.7	-19.9	30	17.5
650	29	3,617	-6.8	-22.2	27	16.6	26	3,393	-27.1	-34.0	34	8.2	28	3,364	-28.5	-34.2	34	7.8	28	3,412	-21.0	-30.6	02	12.1	29	3,458	-17.0	-22.9	30	18.0
600	[illegible]	4,237	-10.8	-24.7	27	19.5	26	3,967	-30.8	-37.6	34	9.8	28	3,935	-31.3	-37.5	34	8.7	28	3,999	-24.5	-35.3	[illegible]	12.1	29	4,054	-20.5	-27.0	30	19.3
550	29	4,900	-15.3	-28.2	27	21.5	[illegible]	4,582	-33.8	-40.2	34	11.5	28	4,547	-34.8	-40.6	34	10.2	28	4,628	-28.1	-38.4	02	12.2	29	4,693	-24.4	-32.1	30	21.4
500	29	5,614	-19.9	-33.0	27	25.2	26	5,245	-37.7	-41.0	33	13.1	28	5,206	-39.0	-42.8	34	11.2	28	5,306	-32.6	-41.9	02	11.1	29	5,381	-29.1	-36.6	30	22.7
450	29	6,387	-25.0	-37.0	27	28.2	26	5,965	-42.3	-42.8	[illegible]	14.3	28	[illegible]	-43.7		34	11.3	26	[illegible]	-37.1	[illegible]	01	11.0	29	6,126	-34.4	-41.0	30	24.8
400	29	[illegible]	-30.8	-41.7	26	34.9	[illegible]	6,753	-47.3		33	16.3	[illegible]	6,705	-48.3		34	13.1	28	6,848	-41.8	-46.7	36	10.1	29	6,939	-40.6	-44.6	30	27.6
350	29	8,172	-37.4	-46.1	26	40.6	26	7,629	-52.4		33	17.9	[illegible]	7,578	-52.7		34	14.8	[illegible]	7,746	-46.6		36	10.4	29	7,840	-46.6		30	29.5
300	29	9,216	-45.1		26	43.6	26	8,610	-57.6		33	[illegible]	[illegible]	8,561	-56.7		34	15.8	[illegible]	8,757	-50.6		35	7.4	29	8,845	-53.0		30	32.2
250	29	10,412	-53.5		26	49.9	26	9,753	-59.9		32	19.3	[illegible]	9,716	-56.5		33	13.9	28	9,938	-53.4		34	7.8	29	10,010	-56.9		30	33.7
200	29	11,827	-59.1		27	51.2	[illegible]	11,150	-56.8		31	16.9	[illegible]	11,137	-54.9		32	15.6	28	11,379	-50.7		32	8.4	29	11,420	-56.5		29	31.8
175	27	12,665	-59.7		27	46.2	[illegible]	11,993	-55.7		30	17.1	[illegible]	11,992	-54.5		31	18.0	28	12,253	-49.0		31	8.4	29	12,271	-55.3		29	29.5
150	27	13,630	-59.8		27	[illegible]	23	12,976	-55.2		29	19.9	[illegible]	12,981	-53.8		31	20.7	28	13,267	-48.3		31	8.8	29	13,256	-54.4		29	28.0
125	27	14,763	-62.3		27	36.6	[illegible]	14,142	-54.6		29	21.8	[illegible]	14,154	-53.4		31	22.4	28	14,466	-48.8		29	8.5	28	14,424	-55.8		29	28.0
100	[illegible]	16,131	-64.9		27	29.7	[illegible]	15,571	-54.4		29	26.2	28	15,591	-52.7		30	25.6	28	15,931	-49.1		29	10.3	27	15,851	-55.7		30	25.0
80	27	17,487	-65.8		27	21.6	22	16,996	-53.9		29	28.5	28	17,033	-52.4		30	27.3	27	17,395	-49.0		28	9.6	25	17,280	-56.5		29	23.9
70	27	18,300	-64.8		27	15.0	[illegible]	17,855	-53.4		28	30.1	[illegible]	17,896	-52.5		30	28.5	27	18,272	-49.1		28	9.6	25	18,128	-56.1		30	20.9
60	27	19,243	-63.7		27	10.7	20	18,864	-52.7		28	31.1	28	18,893	-52.4		30	30.5	26	19,285	-48.5		28	10.2	21	19,113	-56.2		30	19.0
50	[illegible]	20,363	-61.7		29	6.8	[illegible]	[illegible]	-52.0		29	32.9	27	20,098	-51.0		30	33.2	26	20,486	-48.4		28	11.1	21	20,272	-56.1		30	19.7
40	[illegible]	21,749	-60.3		28	4.9	[illegible]	21,532	[illegible]		29	[illegible]	[illegible]	21,554	-50.2		30	35.6	[illegible]	21,958	-48.2		28	10.8	17	21,671	-56.1		31	20.4
30	[illegible]	23,555	-57.8		28	2.5	11	23,501	-49.8		30	34.0	25	23,447	-49.4		30	32.8	24	23,856	-47.7		27	10.7	14	23,545	-54.0		32	14.5
25	25	24,708	-56.5		27	2.5	[illegible]	24,703	-49.5				21	24,659	-48.9		30	33.4	21	25,063	-47.3		28	10.3	13	24,757	-52.4		32	13.1
20	23	[illegible]	-55.2		27	5.2	[illegible]	26,458	-44.2				19	26,134	-48.2		30	37.6	[illegible]	26,539	-47.4		28	9.6	11	26,236	-52.0		35	11.8
15	23	27,974	-51.8		26	10.6							14	28,108	-46.0				19	28,460	-46.6		28	8.4	11	28,103	-51.1		01	11.4
10	16	30,637	-48.4										9	30,952	-43.8				[illegible]	31,157	-46.8				8	30,690	-50.7			
7																														

Standard pressure surface (mb)	BOISE, IDAHO [illegible] MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	BOOTHVILLE, LA. 1019 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	* BROWNSVILLE, TEXAS 1016 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	BUFFALO, N. Y. 990 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.	CAPE HATTERAS, N. C. 1017 MB No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	871	-.1	-3.8	13	1.7	29	1	11.5	9.1	01	2.9	22	7	16.4	14.3	14	1.2	29	218	-7.2	-9.3	25	3.0	29	4	6.9	2.8	33	3.3
1000							29	161	13.3	9.3	02	2.0	[illegible]	140	17.3	14.6	15	3.4							26	159	6.4	-.1	32	4.6
950							29	[illegible]	10.8	6.2	35	1.4	[illegible]	578	16.2	10.9	16	7.1	29	542	-7.3	-10.0	26	5.8	29	562	5.5	-2.2	29	6.8
900	29	1,027	.7	-4.3	[illegible]	1.3	[illegible]	1,042	9.8	-.2	29	2.7	[illegible]	1,037	14.3	4.8	[illegible]	6.8	29	962	-9.5	-12.6	27	8.5	[illegible]	1,003	4.1	-5.5	[illegible]	8.1
850	29	1,486	.1	-6.8	[illegible]	3.1	[illegible]	1,516	8.0	-3.5	28	5.4	[illegible]	1,518	12.6	.8	20	5.9	29	1,403	-10.5	-15.0	28	9.6	29	1,467	2.8	-9.3	27	9.9
800	29	1,970	-2.3	-9.2	[illegible]	6.3	29	2,014	5.8	-7.4	28	7.5	[illegible]	2,026	10.8	-5.0	22	5.0	[illegible]	1,869	-11.9	-17.4	28	11.0	29	1,957	1.3	-11.5	27	12.2
750	29	2,480	-5.1	-12.1	[illegible]	8.0	29	2,540	3.4	-13.0	[illegible]	9.7	[illegible]	2,561	7.9	-8.7	24	4.0	29	2,362	-13.3	-19.9	28	13.3	29	2,474	-1.1	-14.5	27	14.7
700	29	3,019	-8.3	-17.0	[illegible]	10.2	[illegible]	3,097	.6	-16.3	[illegible]	11.1	[illegible]	3,127	4.5	-13.1	26	6.2	29	2,885	-15.3	-23.1	28	15.3	29	3,022	-4.1	-18.4	26	17.4
650	29	3,592	-11.4	-19.4	28	12.7	29	3,688	-2.6	-19.2	27	12.7	[illegible]	3,727	1.0	-15.6	[illegible]	9.5	29	3,442	-18.5	-26.4	28	17.4	29	3,602	-7.4	-22.4	26	19.6
600	29	4,202	-14.9	-23.1	[illegible]	14.9	[illegible]	4,318	-6.6	-21.6	27	15.9	[illegible]	4,365	-3.4	-18.4	26	11.6	[illegible]	4,035	-21.9	-29.3	28	20.7	[illegible]	4,222	-10.9	-25.4	26	21.6
550	29	4,855	-19.1	[illegible]	[illegible]	17.1	[illegible]	4,995	-10.6	-24.6	27	18.3	[illegible]	5,047	-8.2	-21.2	26	14.7	[illegible]	4,672	-24.9	-33.4	[illegible]	23.0	29	4,885	-15.2	-28.9	26	24.5
500	29	5,557	-24.1	-32.1	[illegible]	18.0	[illegible]	5,721	-15.4	-27.4	26	21.0	[illegible]	5,776	-13.4	-24.8	26	17.2	[illegible]	5,359	-29.1	-38.1	28	25.7	29	5,598	-19.9	-32.5	26	26.9
450	29	6,317	-29.7	-37.5	[illegible]	19.9	[illegible]	6,509	-20.5	-31.7	26	24.6	[illegible]	6,570	-19.0	-29.1	26	19.1	29	6,104	-34.1	-42.4	27	27.6	29	6,372	-25.1	-37.0	26	29.3
400	29	7,147	-35.6	-44.3	[illegible]	23.2	[illegible]	7,370	-26.9	-37.4	26	27.3	[illegible]	7,436	-24.9	-35.6	26	22.3	29	6,919	-40.0	-46.7	27	31.1	29	7,218	-31.0	-41.7	26	31.9
350	29	8,066	-42.1	-44.4	[illegible]	25.2	28	8,322	-33.9	-45.0	26	29.4	[illegible]	8,396	-32.2	-42.8	[illegible]	23.8	29	7,821	-46.3		27	31.8	29	8,155	-37.8	-44.9	26	36.4
300	29	9,090	-49.4		[illegible]	[illegible]	[illegible]	9,381	-42.0		26	32.0	[illegible]	9,462	-40.8	-50.1	27	27.5	29	8,829	-51.9		26	33.8	29	9,200	-45.5		26	39.8
250	29	10,266	-56.6		[illegible]	31.4	28	10,591	-51.5		26	[illegible]	[illegible]	10,678	-50.1		26	31.5	29	10,000	-55.4		26	37.3	28	10,402	-53.7		26	43.8
200	29	11,666	-60.1		[illegible]	28.6	[illegible]	12,017	-57.9		[illegible]	39.5	[illegible]	12,112	-55.9		26	32.3	29	11,425	-54.7		26	29.8	28	11,816	-58.9		27	45.8
175	29	12,504	-58.1		[illegible]	[illegible]	24	12,854	-59.6		27	39.1	[illegible]	12,958	-58.0		[illegible]	31.4	[illegible]	12,279	-54.6		26	29.9	25	12,648	-59.3		27	45.7
150	29	13,479	-56.6		[illegible]	23.1	[illegible]	13,814	-61.9		27	38.0	[illegible]	13,921	-62.1		26	32.4	[illegible]	13,266	-54.5		26	27.5	24	13,611	-59.2		26	40.2
125	29	14,633	-57.8		[illegible]	19.8	[illegible]	14,937	-66.3		27	33.8	[illegible]	15,033	-67.6		[illegible]	26.9	[illegible]	14,439	-55.7		26	26.6	22	14,743	-61.5		27	36.2
100	28	16,031	-59.0		[illegible]	16.7	[illegible]	16,283	-70.6		27	27.7	[illegible]	16,354	-72.7		27	20.0	27	15,867	-56.0		26	23.6	19	16,110	-63.4		27	30.4
80	28	17,433	-58.4		[illegible]	12.7	[illegible]	17,605	-71.2		27	19.9	[illegible]	17,660	-74.3		[illegible]	15.8	[illegible]	17,294	-57.6		26	18.6	19	17,478	-64.0		27	24.6
70	26	18,276	-58.7		[illegible]	10.2	[illegible]	18,397	-70.3		27	15.0	[illegible]	18,441	-72.7		27	11.1	25	18,150	-58.0		26	17.0	18	18,303	-62.9		27	20.2
60	24	19,250	-58.0		[illegible]	8.6	[illegible]	19,328	-66.8		27	9.7	[illegible]	19,352	-69.7		28	7.8	23	19,129	-57.3		27	16.8	18	19,253	-62.3		27	15.8
50	[illegible]	20,403	-57.0		[illegible]	7.8	[illegible]	20,461	-62.5				[illegible]	20,455	-64.7		29	2.2	23	20,284	-56.6		28	14.2	17	20,381	-61.2		27	7.8
40	22	21,808	-56.7		[illegible]	8.8	[illegible]	21,872	-59.9				[illegible]	21,830	-61.2		07	1.6	23	[illegible]	-56.2		28	11.3	16	21,763	-60.0		28	7.6
30	[illegible]	23,648	-55.3		36	8.6	[illegible]	[illegible]	-57.0				16	23,630	-58.0		[illegible]	2.8	21	23,527	-55.5		29	10.0	14	23,578	-57.9		31	3.2
25	[illegible]	24,824	-54.6		01	10.3	[illegible]	24,840	-56.0				16	24,783	-56.6		05	3.5	21	24,690	-55.2		29	7.9	11	24,752	-56.2			
20	[illegible]	26,255	-53.6		02	12.1	[illegible]	26,266	-54.1				[illegible]	26,205	-54.5		[illegible]	2.2	21	26,115	-54.9		31	7.4	[illegible]	26,174	-55.1			
15	16	[illegible]	-51.7		[illegible]	11.5	[illegible]	28,128	-50.6				[illegible]	28,059	-51.3		29	3.3	20	27,993	-53.2		33	6.5	[illegible]	28,074	-52.1			
10	5	30,866	-48.0										[illegible]	30,722	-48.5				13	30,601	-52.1									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

*** CARIBOU, MAINE**
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4
1000						
950	[illegible]	497	[illegible]	[illegible]	[illegible]	3.5
900	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.2
850	[illegible]	1,339	[illegible]	[illegible]	27	7.5
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.7
750	[illegible]	2,283	[illegible]	[illegible]	[illegible]	[illegible]
700	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
650	[illegible]	[illegible]	-20.7	[illegible]	[illegible]	[illegible]
600	[illegible]	[illegible]	-23.6	[illegible]	26	[illegible]
550	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	5,251	-31.7	[illegible]	[illegible]	[illegible]
450	[illegible]	5,988	-37.0	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
350	[illegible]	7,688	[illegible]		[illegible]	[illegible]
300	[illegible]	[illegible]	-53.3		[illegible]	33.3
250	[illegible]	[illegible]	[illegible]		26	[illegible]
200	[illegible]	11,270	[illegible]		26	33.1
175	[illegible]	12,131	[illegible]		[illegible]	31.7
150	[illegible]	13,123	-53.3		[illegible]	30.9
125	[illegible]	14,294	[illegible]		[illegible]	32.2
100	[illegible]	15,719	-55.7		26	31.6
80	[illegible]	17,138	[illegible]		[illegible]	[illegible]
70	[illegible]	17,988	-55.7		[illegible]	25.7
60	[illegible]	18,964	-56.6		[illegible]	26.5
50	[illegible]	20,116	-56.5		[illegible]	25.2
40	[illegible]	21,518	-56.5		26	[illegible]
30	[illegible]	23,374	[illegible]		25	24.8
25	[illegible]	24,542	[illegible]		24	25.2
20	[illegible]	[illegible]	[illegible]		25	21.1
15	[illegible]	[illegible]	-50.9		25	24.4
10	[illegible]	[illegible]	-45.9			
7	[illegible]	[illegible]	-41.5			

CHARLESTON, S. C.
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	13	5.8	[illegible]	[illegible]	1.7
1000	[illegible]	154	6.6	[illegible]	[illegible]	[illegible]
950	[illegible]	576	6.9	[illegible]	[illegible]	[illegible]
900	[illegible]	[illegible]	6.1	-4.1	[illegible]	[illegible]
850	[illegible]	1,438	4.9	-6.8	[illegible]	8.1
800	[illegible]	[illegible]	2.5	-9.8	[illegible]	10.1
750	[illegible]	2,500	.3	[illegible]	27	12.7
700	[illegible]	3,050	-2.2	[illegible]	[illegible]	15.0
650	[illegible]	3,636	-5.5	[illegible]	27	17.0
600	[illegible]	4,259	-9.3	[illegible]	27	19.6
550	[illegible]	4,926	-13.3	[illegible]	[illegible]	22.4
500	[illegible]	[illegible]	-18.0	[illegible]	[illegible]	25.7
450	[illegible]	6,425	[illegible]	-35.4	[illegible]	29.6
400	[illegible]	7,278	-28.9	-39.9	27	33.3
350	[illegible]	[illegible]	-35.3	[illegible]	26	38.0
300	[illegible]	9,277	-43.4		26	41.3
250	[illegible]	10,480	-52.4		26	[illegible]
200	[illegible]	11,901	-58.7		26	47.4
175	[illegible]	[illegible]	-59.9		[illegible]	[illegible]
150	[illegible]	[illegible]	-60.4		[illegible]	[illegible]
125	[illegible]	14,828	-63.5		[illegible]	39.8
100	[illegible]	16,188	-66.3		26	[illegible]
80	[illegible]	17,534	-66.7		[illegible]	[illegible]
70	[illegible]	18,342	-66.2		[illegible]	[illegible]
60	[illegible]	19,282	-64.1		[illegible]	15.0
50	[illegible]	20,405	-61.6		27	10.6
40	[illegible]	21,793	-59.7		27	8.1
30	[illegible]	23,603	-57.0		[illegible]	6.7
25	[illegible]	24,761	-55.7		27	6.5
20	[illegible]	26,190	[illegible]		[illegible]	6.4
15	[illegible]	28,050	-51.0		[illegible]	7.5
10	[illegible]	30,700	-46.7		[illegible]	13.8

CHATHAM, MASS.
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	16	-2.0	[illegible]	[illegible]	1.6
1000	[illegible]	142	-3.1	[illegible]	[illegible]	2.3
950	[illegible]	524	-4.3	[illegible]	27	5.3
900	[illegible]	949	-5.9	[illegible]	[illegible]	6.7
850	[illegible]	1,396	-7.3	[illegible]	[illegible]	8.7
800	[illegible]	1,867	-9.1	[illegible]	[illegible]	11.1
750	[illegible]	2,366	-10.7	[illegible]	[illegible]	14.2
700	[illegible]	2,895	-13.1	[illegible]	[illegible]	16.9
650	[illegible]	[illegible]	-15.5	[illegible]	[illegible]	19.9
600	[illegible]	4,058	-18.4	-28.1	[illegible]	23.4
550	[illegible]	4,703	[illegible]	-31.9	27	[illegible]
500	[illegible]	5,398	[illegible]	-36.8	[illegible]	27.4
450	[illegible]	6,152	[illegible]	[illegible]	[illegible]	30.7
400	[illegible]	6,976	-37.5	-45.5	[illegible]	35.2
350	[illegible]	7,888	-43.3		[illegible]	40.3
300	[illegible]	8,909	-49.5		[illegible]	43.8
250	[illegible]	[illegible]	-54.6		26	46.6
200	[illegible]	11,509	[illegible]		26	42.4
175	[illegible]	12,360	[illegible]		[illegible]	40.7
150	[illegible]	13,348	[illegible]		26	34.6
125	[illegible]	14,500	-56.0		26	31.9
100	[illegible]	[illegible]	-57.4		26	29.6
80	[illegible]	17,322	-58.0		26	24.9
70	[illegible]	18,167	-58.2		26	[illegible]
60	[illegible]	19,137	-58.3		26	20.5
50	[illegible]	20,286	-57.8		[illegible]	18.8
40	[illegible]	21,699	-56.5		26	15.7
30	[illegible]	23,523	-56.0		[illegible]	15.7
25	[illegible]	24,673	-56.0		[illegible]	15.7
20	[illegible]	26,094	-55.4		[illegible]	14.0
15	[illegible]	27,917	-53.6		25	16.0
10	[illegible]	30,585	-49.4		24	[illegible]
7	9	32,913	-46.1			

CHIHUAHUA, MEXICO
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.9
850	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.0
800	[illegible]	2,004	9.5	[illegible]	27	2.2
750	[illegible]	2,536	[illegible]	[illegible]	[illegible]	2.9
700	[illegible]	3,098	[illegible]	-12.5	[illegible]	3.9
650	[illegible]	3,694	-.8	[illegible]	[illegible]	5.7
600	[illegible]	4,328	[illegible]	[illegible]	[illegible]	6.9
550	[illegible]	[illegible]	-9.8	[illegible]	[illegible]	8.6
500	[illegible]	[illegible]	[illegible]	-28.9	[illegible]	[illegible]
450	29	[illegible]	[illegible]	[illegible]	27	[illegible]
400	[illegible]	7,386	[illegible]	[illegible]	[illegible]	[illegible]
350	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
300	[illegible]	[illegible]	[illegible]	-46.4	[illegible]	[illegible]
250	[illegible]	[illegible]	-51.1		27	[illegible]
200	[illegible]	[illegible]	-57.9		27	[illegible]
175	[illegible]	[illegible]	[illegible]		27	[illegible]
150	[illegible]	[illegible]	[illegible]		27	[illegible]
125	29	14,958	[illegible]		27	21.7
100	29	[illegible]	-69.3		27	18.0
80	[illegible]	[illegible]	[illegible]		28	14.6
70	[illegible]	[illegible]	[illegible]		[illegible]	11.1
60	[illegible]	19,346	[illegible]		[illegible]	6.7
50	[illegible]	[illegible]	[illegible]		29	3.3
40	[illegible]	[illegible]	[illegible]		33	1.5
30	27	[illegible]	-58.0		01	1.8
25	27	24,794	-56.3		01	2.5
20	25	26,217	-54.0		36	2.2
15	[illegible]	[illegible]	-51.4		32	2.2
10	7	[illegible]	-47.7			

*** COLD BAY, ALASKA**
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	[illegible]	[illegible]	-8.8	34	[illegible]
950	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
900	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
850	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
750	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
700	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.2
650	[illegible]	3,393	[illegible]	[illegible]	[illegible]	[illegible]
600	28	[illegible]	[illegible]	[illegible]	[illegible]	6.9
550	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	-39.6	[illegible]	[illegible]
450	[illegible]	[illegible]	-34.9	-43.4	[illegible]	[illegible]
400	28	6,855	[illegible]	-47.6	34	9.4
350	[illegible]	[illegible]	[illegible]		33	7.2
300	28	[illegible]	[illegible]		33	[illegible]
250	28	[illegible]	[illegible]		33	8.0
200	28	[illegible]	[illegible]		32	[illegible]
175	[illegible]	[illegible]	[illegible]		31	[illegible]
150	[illegible]	[illegible]	-48.0		31	[illegible]
125	28	14,506	-48.8		30	4.5
100	27	[illegible]	[illegible]		[illegible]	3.6
80	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
70	[illegible]	[illegible]	[illegible]		[illegible]	2.2
60	27	[illegible]	-46.9		[illegible]	1.5
50	[illegible]	[illegible]	[illegible]		31	.6
40	[illegible]	[illegible]	-48.6		33	.4
30	[illegible]	23,870	[illegible]		[illegible]	[illegible]
25	25	[illegible]	-48.1		04	3.1
20	24	[illegible]	[illegible]		[illegible]	2.5
15	24	[illegible]	[illegible]		[illegible]	[illegible]
10	18	31,167	-45.3			
7	8	33,559	-44.7			

DAYTON, OHIO
983 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	299	-4.6	-9.0	28	1.2
1000						
950	29	561	-4.5	-9.1	[illegible]	3.4
900	29	987	-4.8	-11.3	28	6.9
850	29	1,436	-5.2	[illegible]	28	9.2
800	29	1,912	-6.3	-16.3	28	11.1
750	29	2,415	-8.1	[illegible]	28	13.0
700	29	2,948	-10.5	[illegible]	28	16.0
650	29	3,516	-13.2	-21.2	28	18.5
600	29	4,122	-16.6	-25.0	28	20.3
550	29	4,771	-20.9	-28.8	28	22.0
500	29	5,468	-25.7	-33.6	27	24.1
450	29	6,224	-31.0	-38.2	27	27.6
400	29	7,049	-36.9	-44.8	27	30.5
350	29	7,963	-43.4		27	32.9
300	29	8,982	-50.2		27	37.5
250	29	10,158	-55.5		27	40.7
200	29	11,573	-57.0		27	36.9
175	29	12,421	-55.8		27	36.0
150	29	13,403	-55.8		27	32.5
125	29	14,560	-57.1		27	30.3
100	29	15,967	-58.7		27	26.8
80	28	17,364	-59.7		27	22.7
70	28	18,199	-59.8		27	20.1
60	[illegible]	19,168	-60.0		27	18.1
50	[illegible]	20,306	-60.0		28	16.5
40	25	21,711	-57.6		28	14.5
30	24	23,543	-57.0		29	9.6
25	21	24,715	-55.8		29	8.6
20	21	26,142	-54.2		29	7.1
15	[illegible]	27,989	-52.4		32	4.4
10	[illegible]	30,677	-50.1		05	3.5
7	[illegible]	[illegible]	-47.2			

DEL RIO, TEXAS
981 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	314	8.9	4.6	08	1.7
950	29	580	10.6	4.3	15	3.5
900	29	1,031	10.7	.8	19	4.3
850	29	1,507	10.9	-5.9	24	3.5
800	29	2,011	8.7	-9.9	27	4.5
750	29	2,542	5.6	-12.1	29	6.1
700	29	3,101	1.5	-15.3	29	7.5
650	29	3,694	-2.5	-17.8	28	9.0
600	29	4,323	-6.8	-21.6	28	11.3
550	29	4,997	-11.3	-26.5	27	13.8
500	29	5,721	-16.5	-29.9	27	16.9
450	29	6,505	-21.7	-33.6	27	20.4
400	29	7,362	-28.0	[illegible]	27	22.6
350	29	8,311	-34.7	-44.6	27	26.8
300	29	9,366	-43.0		27	29.7
250	26	10,570	-51.7		27	34.6
200	27	11,996	-58.6		27	36.8
175	26	12,834	-59.9		27	35.2
150	26	13,795	-61.3		27	33.3
125	26	14,916	-65.4		27	28.0
100	26	16,259	-69.5		27	22.4
80	23	17,581	-70.6		27	16.7
70	21	18,371	-69.4		27	12.4
60	21	19,296	-66.9		27	8.5
50	21	20,408	-63.4		28	5.2
40	[illegible]	21,787	-61.2		29	3.4
30	[illegible]	23,584	[illegible]		31	3.1
25	21	24,735	-56.8		32	1.9
20	19	26,158	-54.4		30	2.1
15	16	27,996	-51.9		27	8.7
10	9	30,662	-48.2			

DENVER, COLO.
835 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	[illegible]	-2.5	-8.7	20	1.2
800	29	1,952	1.4	-13.6	29	4.3
750	29	2,470	-1.2	-17.0	30	7.6
700	29	3,016	-5.0	-19.1	30	9.3
650	29	3,594	-8.7	-21.4	30	10.9
600	29	4,210	-12.8	-25.1	30	12.8
550	29	4,867	-17.5	-29.6	30	14.9
500	29	5,574	-22.5	-35.2	30	16.4
450	29	6,339	-28.4	-39.9	30	19.0
400	29	7,172	-35.0	-45.3	30	21.3
350	29	8,092	-42.1	-48.7	29	23.4
300	29	9,115	-49.6		29	26.7
250	29	10,290	-56.5		29	30.2
200	29	11,692	-59.4		29	30.0
175	29	12,531	-57.9		28	27.3
150	29	13,504	-57.6		28	26.8
125	29	14,650	-59.1		29	24.3
100	29	16,044	-60.4		29	18.5
80	28	17,430	-61.3		29	13.8
70	28	18,260	-60.9		29	13.0
60	27	19,215	-60.5		30	10.9
50	27	20,352	-59.5		31	8.9
40	26	21,768	-57.6		32	7.3
30	26	23,589	-56.9		34	6.5
25	[illegible]	24,739	-56.4		34	8.5
20	23	26,186	-54.8		02	8.8
15	20	[illegible]	-53.5		36	10.7
10	[illegible]	30,699	-49.5			

DODGE CITY, KANS.
924 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	791	-3.5	-10.8	28	1.7
900	29	1,001	1.3	-9.2	29	2.9
850	29	1,464	3.6	-10.6	30	4.4
800	29	1,956	2.3	-12.7	30	5.8
750	29	2,475	-.5	-15.0	29	7.8
700	29	3,022	-4.4	-17.5	29	9.7
650	29	3,602	-8.0	-20.6	29	11.2
600	29	4,219	-12.3	-24.7	29	12.6
550	29	4,878	-16.7	-28.4	29	14.1
500	29	5,587	-21.9	-33.2	29	16.2
450	29	6,354	-27.3	-38.6	29	18.2
400	29	7,191	-33.9	-44.3	29	21.2
350	29	8,115	-41.4	-47.0	29	22.4
300	29	9,141	-49.2		29	24.4
250	29	10,316	-56.1		29	28.6
200	28	11,726	-58.8		28	30.4
175	27	12,568	-57.8		28	30.4
150	27	13,541	-57.9		28	28.9
125	27	14,685	-60.1		28	25.7
100	27	16,072	-61.9		28	21.5
80	27	17,452	-61.9		28	17.0
70	26	18,275	-61.7		28	13.7
60	26	19,232	-61.0		29	11.2
50	25	20,367	-60.2		29	8.9
40	26	21,761	-59.4		30	7.0
30	23	23,570	-57.6		31	6.8
25	23	24,724	-56.5		32	5.4
20	22	26,144	-55.4		33	4.1
15	21	27,978	-53.5		31	5.5
10	10	30,584	-51.5			

EL PASO, TEXAS
883 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,193	4.2	-9.4	32	.7
850	28	1,505	9.5	-7.7	[illegible]	2.5
800	28	2,006	7.0	-10.2	29	5.8
750	28	2,533	3.7	-12.9	28	7.9
700	28	3,089	-.2	-16.0	28	9.1
650	28	3,678	-4.1	-18.8	28	9.9
600	28	4,305	-8.2	-23.3	28	11.2
550	28	4,974	-12.7	-27.3	28	13.2
500	28	5,695	-17.5	-31.6	28	16.1
450	28	6,476	-23.1	-35.6	28	18.5
400	28	7,327	-29.7	-40.7	28	20.9
350	28	8,269	-36.5	-45.4	28	25.5
300	28	9,317	-44.6		28	27.7
250	28	10,514	-53.3		28	32.3
200	28	11,925	-59.7		27	33.0
175	27	12,762	-59.7		27	32.1
150	[illegible]	13,717	-60.6		27	32.9
125	21	14,830	-62.9		27	28.8
100	18	16,190	-66.2		27	21.6
80	[illegible]	17,538	-67.9		28	16.4
70	14	18,359	-67.6		28	10.6
60	14	19,291	-65.5		28	8.3
50	13	20,391	-62.8		29	4.3
40	13	21,773	-61.0		30	3.5
30	13	23,571	-58.3			
25	8	24,783	-56.3			
20	8	26,205	-55.2			
15	5	28,056	-53.1			

ELY, NEV.
809 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,908	-5.1	-9.3	21	2.9
1000						
950						
900						
850						
800	28	2,003	-.6	-8.2	21	2.4
750	29	2,515	-1.4	[illegible]	25	3.0
700	29	3,061	-4.9	-15.3	28	5.7
650	29	3,640	[illegible]	[illegible]	29	8.1
600	29	4,258	[illegible]	[illegible]	29	10.9
550	29	4,919	-15.8	[illegible]	29	13.2
500	29	5,631	-20.8	-32.4	29	15.4
450	29	6,401	-26.3	-37.1	29	17.4
400	29	7,242	-32.6	[illegible]	29	19.7
350	29	8,172	-39.5	-46.6	29	21.6
300	29	9,207	-47.3		29	24.9
250	28	10,390	-55.9		29	28.4
200	28	11,789	-61.3		28	27.6
175	28	12,620	-60.0		28	24.7
150	28	13,585	-58.8		28	23.5
125	28	14.729	-59.7		28	20.7
100	28	16,119	-61.3		29	15.2
80	28	17,502	-61.5		30	15.6
70	27	18,326	[illegible]		30	9.1
60	[illegible]	19,286	-60.0		31	7.3
50	[illegible]	[illegible]	-58.8		33	6.7
40	[illegible]	[illegible]	[illegible]		[illegible]	5.7
30	[illegible]	23,666	-55.8		02	[illegible]
25	[illegible]	24,830	-54.7		03	8.5
20	[illegible]	26,277	-53.4		04	10.1
15	[illegible]	[illegible]	-51.0		04	12.5
10	[illegible]	[illegible]	[illegible]			

EMPALME, MEXICO
1014 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	12	11.7	3.5	34	2.2
1000	28	125	17.4	1.6	34	2.2
950	28	565	19.0	-3.2	34	3.0
900	28	1,027	16.7	-6.3	33	[illegible]
850	28	1,510	13.3	-8.3	27	1.0
800	[illegible]	2,016	10.2	-11.8	23	[illegible]
750	[illegible]	2,550	7.2	-15.3	24	3.1
700	28	3,114	4.1	-17.0	25	3.6
650	[illegible]	3,712	.4	-21.0	27	4.5
600	28	4,348	-3.9	-24.3	28	5.5
550	[illegible]	5,029	-8.6	-26.7	27	8.0
500	28	5,760	-13.8	-30.5	28	10.9
450	28	6,551	-19.6	-34.5	28	12.6
400	[illegible]	7,414	-26.2	-38.8	27	14.7
350	[illegible]	8,369	-33.5	-44.0	27	19.1
300	[illegible]	9,429	-41.9	-48.5	27	20.9
250	28	10,639	-51.3		27	27.0
200	28	12,060	-58.9		27	29.2
175	[illegible]	12,894	-60.0		27	[illegible]
150	[illegible]	13,852	-61.9		27	28.2
125	[illegible]	14,961	-65.7		27	23.9
100	[illegible]	16,292	-70.0		27	20.9
80	[illegible]	17,613	-71.1		27	15.1
70	17	18,404	-69.4		28	12.7
60	17	19,326	-68.0		28	8.0
50	16	20,425	-64.9		30	5.3
40	14	21,807	[illegible]		33	2.7
30	14	23,606	-58.4		02	3.3
25	[illegible]	24,759	-56.4		35	3.0
20	[illegible]	26,170	-54.8		33	2.7
15	[illegible]	28,012	-51.3		32	3.2

*** FAIRBANKS, ALASKA**
1005 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	135	-24.6	-30.2	01	1.8
950	[illegible]	548	-18.9	-24.6	[illegible]	4.0
900	[illegible]	952	-17.4	-23.6	08	4.7
850	29	1,381	-17.1	-23.7	07	4.8
800	[illegible]	1,835	-17.6	-24.7	[illegible]	4.9
750	[illegible]	2,317	-19.3	[illegible]	05	4.9
700	29	2,827	-21.7	-29.4	04	4.8
650	29	3,370	-24.8	[illegible]	[illegible]	5.5
600	29	3,948	-28.1	-35.3	01	6.5
550	29	4,568	-32.1	-38.8	36	7.5
500	29	5,234	-36.5	[illegible]	36	[illegible]
450	29	5,957	-41.2	-43.2	35	[illegible]
400	29	6,749	-46.3		34	10.5
350	29	7,629	-51.2		34	11.4
300	29	8,620	-54.4		34	13.4
250	29	9,789	-54.4		33	12.9
200	29	11,228	-51.8		32	12.8
175	29	12,096	-51.0		31	14.5
150	29	13,101	-50.3		31	16.2
125	29	14,292	-50.0		30	17.6
100	29	15,749	-50.4		30	19.6
80	29	17,204	-50.8		30	21.8
70	27	18,068	-50.4		29	23.0
60	[illegible]	19,079	-49.8		29	23.1
50	[illegible]	20,274	-49.5		30	23.6
40	[illegible]	21,739	-49.6		30	25.4
30	[illegible]	23,657	-49.5		30	26.6
25	[illegible]	24,826	-48.9		30	27.3
20	[illegible]	26,266	-48.8		30	26.7
15	[illegible]	28,164	-47.5			

FLINT, MICH.
988 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	236	-7.3	-11.7	28	1.3
950	29	543	-8.4	-11.2	28	4.1
900	29	962	-9.6	-13.9	29	6.3
850	29	1,403	-9.7	-16.4	29	8.1
800	29	1,871	-11.0	-18.7	29	9.7
750	29	2,365	-12.8	-21.7	29	11.6
700	29	2,889	-14.9	-23.8	28	13.5
650	29	3,447	-17.7	-25.9	28	16.6
600	29	4,043	-20.7	-29.0	28	18.8
550	29	4,682	-24.3	-33.2	28	21.4
500	29	5,370	-28.9	-36.7	28	23.4
450	29	6,116	-34.3	-42.4	29	24.8
400	29	6,930	-40.2	-46.7	27	27.5
350	29	7,832	-46.3		27	31.2
300	29	8,838	-52.6		27	34.6
250	29	10,007	-55.7		27	35.1
200	29	11,426	-55.5		27	34.4
175	29	12,281	-54.4		28	33.7
150	29	13,268	-54.7		28	30.7
125	27	14,429	-55.5		27	29.6
100	25	15,858	-56.5		27	26.8
80	24	17,281	-57.2		27	23.3
70	24	18,125	-57.4		28	21.4
60	22	19,124	-56.5		28	20.4
50	22	[illegible]	-56.8		28	17.3
40	21	21,698	-55.7		[illegible]	13.7
30	20	23,521	-55.0		31	6.0
25	17	24,793	[illegible]		33	4.5
20	14	[illegible]	[illegible]		[illegible]	4.5
15	13	28,159	-51.2		03	5.3
10	8	30,816	-49.4			

FORT WORTH, TEXAS
997 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	180	5.6	.0	21	.9
950	29	576	7.5	-1.2	22	5.3
900	29	1,022	7.6	-2.6	25	5.4
850	29	1,493	7.5	-8.6	27	6.9
800	29	1,990	5.2	-11.1	27	8.0
750	29	2,514	2.3	-13.5	28	9.5
700	29	3,067	-1.6	-16.9	28	11.0
650	29	3,653	-5.1	-20.9	28	12.0
600	29	4,277	-9.3	-24.7	28	13.5
550	29	4,944	-13.7	-28.6	28	15.7
500	29	5,661	-18.9	-34.0	28	17.6
450	29	6,438	-24.3	-38.5	28	19.6
400	29	7,286	-30.3	[illegible]	28	23.7
350	29	8,226	-37.0	-48.9	28	28.7
300	29	9,272	-44.7		28	33.6
250	29	10,471	-52.1		27	36.0
200	29	11,894	-58.2		27	37.5
175	29	12,735	-58.1		27	36.0
150	29	13,705	-58.8		27	34.8
125	27	14,841	-61.9		27	31.7
100	27	16,207	-66.2		27	[illegible]
80	27	17,557	-66.3		27	17.6
70	27	18,369	-65.0		28	13.0
60	26	19,315	-63.8		28	9.4
50	25	20,443	-61.2		29	5.5
40	[illegible]	21,833	[illegible]		30	3.7
30	[illegible]	23,631	-57.3		31	4.5
25	[illegible]	24,776	-56.8		32	[illegible]
20	[illegible]	26,208	-54.8		35	4.5
15	[illegible]	28,030	-51.8		28	8.4

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* See reference note at end of table.

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT.
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000						
950						
900	[illegible]	979	[illegible]	[illegible]	31	[illegible]
850	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	1,891	-7.9	[illegible]	[illegible]	11.8
750	[illegible]	2,341	-9.7	[illegible]	[illegible]	14.3
700	[illegible]	2,911	-12.8	[illegible]	[illegible]	[illegible]
650	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
600	[illegible]	4,080	[illegible]	[illegible]	[illegible]	[illegible]
550	[illegible]	4,720	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	5,408	[illegible]	[illegible]	[illegible]	[illegible]
450	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26.5
400	[illegible]	6,967	[illegible]	[illegible]	[illegible]	28.7
350	[illegible]	7,867	[illegible]		[illegible]	[illegible]
300	[illegible]	8,869	[illegible]		[illegible]	[illegible]
250	[illegible]	10,027	[illegible]		[illegible]	[illegible]
200	[illegible]	11,433	[illegible]		[illegible]	28.7
175	[illegible]	12,284	[illegible]		[illegible]	26.5
150	[illegible]	13,270	[illegible]		[illegible]	25.8
125	[illegible]	14,436	[illegible]		[illegible]	25.6
100	[illegible]	15,858	[illegible]		[illegible]	23.3
80	[illegible]	17,274	[illegible]		[illegible]	21.4
70	[illegible]	18,114	[illegible]		[illegible]	20.8
60	[illegible]	19,091	[illegible]		[illegible]	[illegible]
50	[illegible]	20,288	[illegible]		31	17.9
40	[illegible]	[illegible]	[illegible]		31	15.9
30	[illegible]	23,547	[illegible]		[illegible]	14.3
25	[illegible]	24,727	[illegible]		[illegible]	14.9
20	[illegible]	26,146	[illegible]		[illegible]	14.4
15	[illegible]	28,014	[illegible]		34	14.1
10	[illegible]	30,763	[illegible]			

GRAND JUNCTION, COLO.
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000						
950						
900						
850						
800	[illegible]	1,990	[illegible]	[illegible]	[illegible]	2.2
750	[illegible]	2,506	[illegible]	[illegible]	[illegible]	4.5
700	[illegible]	3,050	[illegible]	[illegible]	[illegible]	7.3
650	[illegible]	3,628	[illegible]	[illegible]	[illegible]	9.0
600	[illegible]	4,242	[illegible]	[illegible]	[illegible]	11.1
550	[illegible]	4,899	[illegible]	[illegible]	29	14.0
500	[illegible]	5,607	-22.1	[illegible]	[illegible]	17.1
450	[illegible]	6,374	-27.3	[illegible]	[illegible]	19.1
400	[illegible]	7,211	-33.7	[illegible]	[illegible]	21.5
350	[illegible]	8,137	[illegible]	[illegible]	[illegible]	24.3
300	[illegible]	9,168	[illegible]		[illegible]	27.2
250	[illegible]	10,348	[illegible]		[illegible]	30.3
200	[illegible]	11,753	[illegible]		[illegible]	30.3
175	[illegible]	[illegible]	[illegible]		[illegible]	28.5
150	[illegible]	13,564	-57.7		29	26.0
125	[illegible]	14,712	-59.1		28	22.4
100	[illegible]	16,108	[illegible]		[illegible]	18.3
80	[illegible]	17,489	[illegible]		[illegible]	15.3
70	[illegible]	18,317	[illegible]		29	11.8
60	[illegible]	19,277	[illegible]		[illegible]	9.2
50	[illegible]	20,417	-58.9		31	7.5
40	[illegible]	21,828	-57.5		33	6.1
30	[illegible]	23,662	[illegible]		[illegible]	5.7
25	[illegible]	24,824	[illegible]		[illegible]	6.6
20	[illegible]	26,276	[illegible]		[illegible]	8.6
15	[illegible]	28,129	[illegible]		[illegible]	12.9

* GREAT FALLS, MONT.
885 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	[illegible]	-6.4	-11.2	[illegible]	[illegible]
1000						
950						
900						
850	[illegible]	1,434	[illegible]	[illegible]	[illegible]	8.9
800	[illegible]	1,912	[illegible]	[illegible]	[illegible]	[illegible]
750	[illegible]	2,419	[illegible]	[illegible]	[illegible]	[illegible]
700	[illegible]	2,954	[illegible]	[illegible]	[illegible]	[illegible]
650	[illegible]	3,522	[illegible]	[illegible]	[illegible]	[illegible]
600	[illegible]	4,125	-17.8	[illegible]	[illegible]	[illegible]
550	[illegible]	4,771	-22.0	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	-27.2	[illegible]	[illegible]	[illegible]
450	[illegible]	6,215	[illegible]	[illegible]	29	[illegible]
400	[illegible]	7,034	-39.1	-43.3	[illegible]	25.9
350	[illegible]	7,939	-45.7		[illegible]	28.1
300	[illegible]	8,949	-52.1		[illegible]	[illegible]
250	[illegible]	10,113	-58.1		29	[illegible]
200	[illegible]	11,515	-57.6		[illegible]	[illegible]
175	[illegible]	12,365	-55.5		29	[illegible]
150	[illegible]	13,352	[illegible]		29	[illegible]
125	[illegible]	14,519	[illegible]		29	[illegible]
100	[illegible]	15,942	[illegible]		[illegible]	[illegible]
80	[illegible]	17,363	[illegible]		[illegible]	17.8
70	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
60	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
50	[illegible]	20,361	-54.9		31	[illegible]
40	[illegible]	21,791	-54.5		32	[illegible]
30	[illegible]	23,631	[illegible]		34	13.7
25	[illegible]	[illegible]	[illegible]		[illegible]	12.7
20	[illegible]	26,186	[illegible]		[illegible]	[illegible]
15	[illegible]	27,964	[illegible]			
10	[illegible]	30,492	[illegible]			

GREEN BAY, WIS.
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	[illegible]	[illegible]	-15.7	[illegible]	1.7
1000						
950	[illegible]	541	[illegible]	[illegible]	31	3.0
900	[illegible]	956	-11.5	[illegible]	29	4.6
850	[illegible]	1,395	[illegible]	[illegible]	29	7.2
800	[illegible]	1,860	[illegible]	[illegible]	29	9.3
750	[illegible]	2,353	[illegible]	[illegible]	29	[illegible]
700	[illegible]	[illegible]	[illegible]	-23.6	29	13.0
650	[illegible]	3,431	-18.8	[illegible]	29	15.7
600	[illegible]	4,023	[illegible]	[illegible]	29	17.3
550	[illegible]	4,658	[illegible]	-35.6	29	[illegible]
500	[illegible]	[illegible]	[illegible]	-40.3	29	20.8
450	[illegible]	6,084	[illegible]	[illegible]	29	22.9
400	[illegible]	[illegible]	[illegible]	[illegible]	28	25.3
350	[illegible]	7,792	[illegible]		28	28.8
300	[illegible]	8,795	-53.3		28	30.1
250	[illegible]	[illegible]	[illegible]		28	30.4
200	[illegible]	11,374	-55.9		28	30.7
175	[illegible]	12,227	-54.5		29	28.5
150	[illegible]	13,214	[illegible]		28	27.9
125	[illegible]	14,377	-55.9		28	27.4
100	[illegible]	15,794	-56.5		28	27.2
80	[illegible]	17,206	[illegible]		28	25.3
70	[illegible]	[illegible]	[illegible]		28	[illegible]
60	[illegible]	19,023	[illegible]		28	22.0
50	[illegible]	[illegible]	[illegible]		28	20.5
40	[illegible]	21,598	[illegible]		29	16.8
30	[illegible]	23,455	[illegible]		29	16.2
25	[illegible]	[illegible]	-55.3		30	13.7
20	[illegible]	26,068	[illegible]		31	[illegible]
15	[illegible]	27,907	[illegible]		32	14.3
10	[illegible]	30,669	[illegible]		33	[illegible]

GREENSBORO, N. C.
986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	275	[illegible]	[illegible]	[illegible]	1.3
1000						
950	[illegible]	569	[illegible]	[illegible]	[illegible]	[illegible]
900	[illegible]	[illegible]	.9	-8.6	29	7.0
850	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.9
800	[illegible]	[illegible]	-1.1	-13.3	[illegible]	[illegible]
750	[illegible]	[illegible]	-2.9	[illegible]	[illegible]	13.3
700	[illegible]	[illegible]	-5.8	[illegible]	[illegible]	14.8
650	[illegible]	[illegible]	-9.0	[illegible]	[illegible]	16.4
600	[illegible]	[illegible]	-12.9	[illegible]	[illegible]	19.0
550	[illegible]	[illegible]	-17.2	[illegible]	[illegible]	22.3
500	[illegible]	[illegible]	-21.9	-34.5	[illegible]	25.2
450	[illegible]	6,331	-26.9	[illegible]	[illegible]	27.8
400	[illegible]	[illegible]	-32.7	[illegible]	27	31.2
350	[illegible]	[illegible]	-39.0	[illegible]	[illegible]	35.1
300	[illegible]	[illegible]	-46.0		[illegible]	40.4
250	[illegible]	[illegible]	-54.0		27	43.5
200	[illegible]	[illegible]	-57.9		[illegible]	40.0
175	[illegible]	12,589	[illegible]		[illegible]	37.8
150	[illegible]	13,563	-58.1		[illegible]	36.6
125	[illegible]	[illegible]	-60.3		[illegible]	32.6
100	[illegible]	16,090	-62.5		27	26.3
80	[illegible]	17,467	[illegible]		27	18.7
70	[illegible]	18,291	-62.5		[illegible]	17.9
60	[illegible]	19,244	-61.6		[illegible]	15.5
50	[illegible]	[illegible]	-60.2		[illegible]	9.9
40	[illegible]	21,765	-59.2		[illegible]	6.6
30	[illegible]	23,577	-57.5		[illegible]	8.1
25	[illegible]	[illegible]	[illegible]		[illegible]	6.9
20	[illegible]	26,161	[illegible]		[illegible]	3.9
15	[illegible]	28,013	[illegible]		[illegible]	3.8
10	[illegible]	30,648	[illegible]			

GUADALUPE IS., MEXICO
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	26	[illegible]	[illegible]	[illegible]	[illegible]	4.3
1000	26	157	[illegible]	[illegible]	34	4.4
950	26	589	[illegible]	[illegible]	[illegible]	[illegible]
900	26	1,045	[illegible]	[illegible]	[illegible]	2.5
850	26	1,524	[illegible]	-9.8	[illegible]	[illegible]
800	26	2,028	[illegible]	[illegible]	[illegible]	3.3
750	26	2,559	[illegible]	[illegible]	[illegible]	[illegible]
700	26	3,121	[illegible]	[illegible]	[illegible]	[illegible]
650	26	3,718	-.5	-16.3	[illegible]	[illegible]
600	26	4,353	[illegible]	[illegible]	[illegible]	[illegible]
550	26	5,031	[illegible]	[illegible]	[illegible]	[illegible]
500	26	5,761	[illegible]	[illegible]	[illegible]	10.2
450	26	6,553	-19.9	[illegible]	[illegible]	10.5
400	[illegible]	7,415	-26.6	[illegible]	[illegible]	10.8
350	26	8,367	-34.1	[illegible]	[illegible]	[illegible]
300	25	9,425	-42.4	[illegible]	26	[illegible]
250	26	10,634	-51.0			
200	25	12,066	-57.7			
175	[illegible]	12,906	-58.6			
150	25	13,873	[illegible]			
125	23	14,998	[illegible]			
100	23	16,353	[illegible]			
80	22	17,689	[illegible]			
70	21	18,491	-66.9			
60	20	19,429	-65.3			
50	20	20,547	[illegible]			
40	20	21,934	-59.5			
30	19	23,753	-56.3			
25	18	24,913	[illegible]			
20	13	26,319	[illegible]			
15	5	28,213	[illegible]			
10						
7						
5						

GUAM, MARIANA IS.
999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	111	23.8	21.0	08	[illegible]
1000						
950	[illegible]	546	21.5	18.4	08	9.9
900	[illegible]	1,015	19.0	14.1	[illegible]	8.3
850	[illegible]	1,504	16.6	9.5	09	6.3
800	[illegible]	2,019	14.2	4.6	09	[illegible]
750	[illegible]	2,562	11.9	.0	10	[illegible]
700	[illegible]	3,137	9.4	-7.8	09	[illegible]
650	[illegible]	3,749	6.6	-10.7	[illegible]	2.9
600	[illegible]	4,402	3.3	-14.7	06	3.1
550	[illegible]	5,102	-1.1	-18.8	03	[illegible]
500	[illegible]	5,855	-5.7	[illegible]	01	1.7
450	[illegible]	6,673	-10.6	-29.0	34	2.4
400	[illegible]	7,570	-16.2	-33.9	[illegible]	2.6
350	[illegible]	8,564	[illegible]	-40.4	[illegible]	3.7
300	[illegible]	9,672	-31.2	-47.5	26	4.1
250	[illegible]	10,936	[illegible]		24	5.7
200	[illegible]	12,409	-53.8		24	[illegible]
175	[illegible]	13,255	-60.3		22	6.4
150	[illegible]	14,199	-67.9		20	5.2
125	[illegible]	15,276	-74.7		15	[illegible]
100	[illegible]	16,547	-82.4		10	[illegible]
80	[illegible]	17,790	-81.4		[illegible]	3.6
70	[illegible]	18,550	-77.0		36	1.2
60	[illegible]	19,449	-71.9		29	2.7
50	[illegible]	20,538	-67.1		25	[illegible]
40	[illegible]	21,898	-63.3		25	[illegible]
30	[illegible]	23,695	-56.7		[illegible]	[illegible]
25	[illegible]	24,860	-54.0		08	2.6
20	[illegible]	26,299	-51.9		08	[illegible]
15	[illegible]	28,189	-48.3		[illegible]	[illegible]
10	[illegible]	30,899	-43.8		[illegible]	[illegible]
7	[illegible]	33,312	-40.2		[illegible]	[illegible]
5	[illegible]	35,638	-36.0			

HILO, HAWAII
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	10	[illegible]	[illegible]	[illegible]	1.6
1000	29	135	[illegible]	15.8	[illegible]	1.1
950	[illegible]	576	[illegible]	[illegible]	[illegible]	2.2
900	[illegible]	1,035	[illegible]	[illegible]	[illegible]	2.8
850	[illegible]	1,515	[illegible]	7.6	[illegible]	2.9
800	[illegible]	2,018	[illegible]	3.7	[illegible]	2.9
750	[illegible]	2,551	[illegible]	-9.6	[illegible]	3.5
700	[illegible]	3,117	[illegible]	[illegible]	22	[illegible]
650	[illegible]	3,718	[illegible]	-19.9	24	[illegible]
600	[illegible]	[illegible]	[illegible]	[illegible]	25	5.5
550	[illegible]	5,041	[illegible]	[illegible]	[illegible]	7.8
500	[illegible]	5,777	[illegible]	-33.4	27	[illegible]
450	[illegible]	6,575	[illegible]	[illegible]	27	13.7
400	29	7,448	[illegible]	[illegible]	27	15.5
350	[illegible]	8,414	-30.2	[illegible]	27	21.3
300	[illegible]	9,492	[illegible]	[illegible]	27	[illegible]
250	[illegible]	10,725	-46.6		[illegible]	[illegible]
200	[illegible]	12,180	-54.8		28	[illegible]
175	[illegible]	13,021	-59.6		28	[illegible]
150	[illegible]	13,973	-65.1		28	34.6
125	[illegible]	15,068	-70.9		28	28.8
100	[illegible]	16,375	[illegible]		[illegible]	[illegible]
80	[illegible]	17,665	[illegible]		27	[illegible]
70	[illegible]	18,446	[illegible]		[illegible]	8.8
60	[illegible]	19,359	-69.6		25	[illegible]
50	[illegible]	20,459	[illegible]		15	1.8
40	[illegible]	21,834	[illegible]		09	[illegible]
30	[illegible]	23,639	[illegible]		07	3.5
25	[illegible]	24,796	-56.1		07	4.6
20	[illegible]	26,221	[illegible]		[illegible]	3.6
15	[illegible]	28,091	[illegible]		[illegible]	1.6
10	[illegible]	30,767	[illegible]		[illegible]	3.9
7	[illegible]	33,149	-41.4			

HUNTINGTON W. VA.
990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	246	-1.6	-6.9	[illegible]	.5
1000						
950	[illegible]	569	-1.2	-6.8	[illegible]	4.9
900	[illegible]	[illegible]	-2.7	-8.8	[illegible]	7.7
850	[illegible]	1,452	-3.8	[illegible]	27	10.2
800	[illegible]	1,930	-4.7	[illegible]	[illegible]	12.2
750	[illegible]	2,436	-6.4	-15.4	[illegible]	14.3
700	[illegible]	[illegible]	-8.4	[illegible]	28	16.4
650	[illegible]	3,545	-11.9	[illegible]	[illegible]	[illegible]
600	[illegible]	4,154	[illegible]	[illegible]	[illegible]	21.0
550	[illegible]	4,806	-19.4	[illegible]	27	22.6
500	[illegible]	5,508	-23.8	[illegible]	27	[illegible]
450	[illegible]	6,270	-28.9	[illegible]	27	27.1
400	29	7,102	-35.1	-43.2	27	30.8
350	[illegible]	8,023	-41.7	-47.7	27	34.5
300	[illegible]	9,050	-48.5		27	37.5
250	[illegible]	10,234	-54.4		27	41.6
200	[illegible]	11,651	-56.7		27	41.2
175	[illegible]	12,497	-56.2		27	39.8
150	[illegible]	13,483	-56.3		[illegible]	37.5
125	[illegible]	14,637	-57.9		27	33.6
100	[illegible]	16,038	-59.7		27	26.0
80	[illegible]	17,437	-60.5		27	22.3
70	[illegible]	18,270	[illegible]		27	19.4
60	[illegible]	19,235	-59.1		28	16.4
50	[illegible]	20,374	-58.7		28	12.8
40	[illegible]	21,779	-57.8		27	9.6
30	[illegible]	23,603	-55.3		28	7.8
25	[illegible]	24,777	-54.7		30	5.0
20	[illegible]	26,196	-53.5		29	5.1
15	[illegible]	28,047	-51.4		[illegible]	4.5
10	[illegible]	30,670	-48.4			

* INTERNATIONAL FALLS, MINN.
974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	359	-19.9	-24.0	29	.9
1000						
950	[illegible]	545	-17.6	[illegible]	30	2.5
900	[illegible]	950	-17.2	-19.6	29	4.1
850	[illegible]	1,380	-16.4	-20.4	30	5.9
800	[illegible]	1,836	-16.6	[illegible]	[illegible]	7.5
750	[illegible]	2,321	-17.2	-23.6	29	10.4
700	[illegible]	2,836	-18.9	[illegible]	29	12.8
650	[illegible]	3,386	-21.5	-28.1	29	15.2
600	29	3,973	-24.3	-30.2	29	17.1
550	29	4,602	-28.1	-33.6	29	19.4
500	[illegible]	5,280	-32.7	[illegible]	29	20.8
450	29	6,014	-37.8	[illegible]	29	22.5
400	[illegible]	6,816	-43.4	-43.8	29	24.9
350	[illegible]	7,705	-49.6		29	26.7
300	[illegible]	8,699	-55.4		29	28.7
250	[illegible]	9,852	-58.2		29	28.7
200	[illegible]	11,264	-55.9		29	[illegible]
175	[illegible]	12,115	-55.1		29	28.0
150	[illegible]	13,100	-55.2		29	27.5
125	[illegible]	14,275	-55.1		29	28.1
100	[illegible]	15,709	-55.4		29	26.8
80	[illegible]	17,131	-55.7		29	26.0
70	[illegible]	17,986	-55.7		29	24.0
60	[illegible]	18,988	-55.3		29	23.4
50	[illegible]	20,164	-54.5		29	18.9
40	[illegible]	21,710	-51.5		29	15.4
30	[illegible]	23,667	-50.2		31	7.4
25	[illegible]	24,857	-50.4			
20	[illegible]	26,322	-49.1			
15	[illegible]	[illegible]	-48.0			

JACKSON, MISS.
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	100	[illegible]	[illegible]	[illegible]	.8
1000	[illegible]	171	[illegible]	[illegible]	[illegible]	[illegible]
950	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
900	[illegible]	1,036	6.4	-2.3	[illegible]	[illegible]
850	[illegible]	1,504	[illegible]	-6.1	[illegible]	[illegible]
800	[illegible]	1,996	2.7	[illegible]	[illegible]	[illegible]
750	[illegible]	2,516	.4	[illegible]	[illegible]	[illegible]
700	[illegible]	3,067	[illegible]	[illegible]	[illegible]	[illegible]
650	[illegible]	3,652	[illegible]	[illegible]	[illegible]	[illegible]
600	[illegible]	4,275	[illegible]	[illegible]	[illegible]	[illegible]
550	[illegible]	4,943	[illegible]	[illegible]	[illegible]	18.3
500	[illegible]	5,661	[illegible]	[illegible]	[illegible]	20.7
450	[illegible]	6,439	[illegible]	[illegible]	[illegible]	23.0
400	[illegible]	7,288	[illegible]	-43.1	[illegible]	[illegible]
350	[illegible]	8,229	-36.6	-47.6	[illegible]	[illegible]
300	[illegible]	9,277	[illegible]		[illegible]	[illegible]
250	[illegible]	10,477	-52.3		[illegible]	[illegible]
200	[illegible]	11,896	[illegible]		[illegible]	[illegible]
175	[illegible]	12,734	-58.8		[illegible]	[illegible]
150	[illegible]	13,700	-59.8		[illegible]	[illegible]
125	[illegible]	14,833	-62.9		[illegible]	[illegible]
100	[illegible]	16,194	-66.6		[illegible]	[illegible]
80	[illegible]	17,547	-67.3		[illegible]	[illegible]
70	[illegible]	18,356	-65.8		[illegible]	[illegible]
60	[illegible]	19,295	-64.6		[illegible]	[illegible]
50	[illegible]	20,417	-61.9		[illegible]	[illegible]
40	[illegible]	21,806	[illegible]		[illegible]	[illegible]
30	[illegible]	23,614	-57.8		[illegible]	[illegible]
25	[illegible]	24,768	-56.7		[illegible]	[illegible]
20	[illegible]	26,190	-54.3		[illegible]	[illegible]
15	[illegible]	28,044	-52.1		[illegible]	[illegible]
10	[illegible]	30,686	-48.4		[illegible]	[illegible]
7	[illegible]	33,011	[illegible]			
5						

JOHN F. KENNEDY INT. AP NY
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	5	[illegible]	[illegible]	[illegible]	2.6
1000						
950	[illegible]	537	-4.3	[illegible]	[illegible]	4.8
900	[illegible]	963	[illegible]	[illegible]	[illegible]	6.4
850	[illegible]	1,410	[illegible]	[illegible]	29	9.6
800	[illegible]	1,882	[illegible]	[illegible]	[illegible]	12.6
750	[illegible]	2,382	-9.6	[illegible]	[illegible]	14.1
700	[illegible]	2,914	[illegible]	[illegible]	[illegible]	16.9
650	[illegible]	3,479	-14.4	[illegible]	[illegible]	19.3
600	[illegible]	4,082	[illegible]	[illegible]	[illegible]	22.7
550	[illegible]	4,728	[illegible]	[illegible]	[illegible]	26.6
500	[illegible]	5,424	[illegible]	-36.5	[illegible]	30.1
450	[illegible]	6,179	[illegible]	-41.1	[illegible]	35.0
400	[illegible]	7,004	[illegible]	-45.1	[illegible]	38.4
350	[illegible]	7,920	[illegible]		[illegible]	42.1
300	[illegible]	8,942	[illegible]		[illegible]	44.7
250	[illegible]	10,123	[illegible]		[illegible]	48.7
200	[illegible]	11,544	[illegible]		[illegible]	43.9
175	[illegible]	12,397	[illegible]		[illegible]	[illegible]
150	[illegible]	13,381	[illegible]		[illegible]	37.8
125	[illegible]	14,541	-57.0		[illegible]	30.0
100	[illegible]	15,948	-58.4		27	29.4
80	[illegible]	17,349	-59.3		[illegible]	23.1
70	[illegible]	18,180	[illegible]		[illegible]	21.9
60	[illegible]	19,144	[illegible]		[illegible]	19.5
50	[illegible]	20,287	[illegible]		[illegible]	16.1
40	[illegible]	21,692	[illegible]		[illegible]	11.6
30	[illegible]	23,502	[illegible]		[illegible]	9.5
25	[illegible]	24,660	[illegible]		[illegible]	9.9
20	[illegible]	26,069	[illegible]		[illegible]	8.4
15	[illegible]	27,903	[illegible]		[illegible]	11.3
10	[illegible]	30,521	[illegible]			

JOHNSTON IS., PACIFIC AREA
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	29	3	24.0	20.1	09	5.6
1000	29	110	22.9	18.8	09	5.7
950	[illegible]	556	19.2	16.8	09	6.1
900	[illegible]	1,020	16.4	12.4	10	5.1
850	[illegible]	1,504	13.3	8.4	11	3.1
800	[illegible]	2,013	11.3	1.3	13	1.4
750	[illegible]	2,551	[illegible]	-7.6	24	.6
700	[illegible]	3,122	7.8	-13.1	28	1.9
650	[illegible]	3,729	4.4	-17.2	28	3.7
600	[illegible]	4,375	[illegible]	-20.5	28	5.9
550	[illegible]	5,066	[illegible]	-24.6	28	7.4
500	[illegible]	5,808	[illegible]	[illegible]	28	9.4
450	[illegible]	6,612	-15.4	[illegible]	28	[illegible]
400	[illegible]	7,491	[illegible]	[illegible]	28	[illegible]
350	[illegible]	8,469	[illegible]	[illegible]	28	[illegible]
300	[illegible]	9,563	[illegible]	-50.4	28	[illegible]
250	[illegible]	10,817	[illegible]		28	28.4
200	[illegible]	12,288	[illegible]		28	[illegible]
175	[illegible]	13,136	-59.4		[illegible]	[illegible]
150	[illegible]	14,086	[illegible]		28	[illegible]
125	[illegible]	15,175	[illegible]		29	[illegible]
100	[illegible]	16,460	[illegible]		29	13.8
80	[illegible]	17,735	-78.3		[illegible]	6.1
70	[illegible]	[illegible]	[illegible]		[illegible]	3.8
60	[illegible]	19,406	[illegible]		29	2.6
50	[illegible]	20,495	[illegible]		[illegible]	2.1
40	[illegible]	21,863	[illegible]		[illegible]	[illegible]
30	[illegible]	23,674	[illegible]		[illegible]	1.2
25	[illegible]	24,839	[illegible]		[illegible]	[illegible]
20	[illegible]	26,276	[illegible]		[illegible]	1.9
15	[illegible]	28,151	-48.9		[illegible]	2.4
10	[illegible]	30,840	[illegible]		[illegible]	4.5
7	[illegible]	33,238	[illegible]			
5	[illegible]	35,553	[illegible]			

KEY WEST, FLA.
1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	[illegible]	3	20.5	[illegible]	06	2.3
1000	[illegible]	152	20.2	[illegible]	[illegible]	3.2
950	[illegible]	594	17.4	[illegible]	05	2.2
900	[illegible]	1,054	14.5	8.6	12	.7
850	[illegible]	1,536	11.9	[illegible]	[illegible]	1.4
800	[illegible]	2,042	9.5	.7	[illegible]	3.4
750	[illegible]	2,575	[illegible]	-6.9	27	4.4
700	[illegible]	3,140	[illegible]	-11.6	27	8.4
650	[illegible]	3,742	[illegible]	-14.0	28	9.2
600	[illegible]	4,384	[illegible]	-18.8	[illegible]	10.0
550	[illegible]	5,071	[illegible]	-22.3	27	11.3
500	[illegible]	[illegible]	-11.3	-26.8	26	13.6
450	[illegible]	6,609	-16.9	-32.2	26	17.3
400	[illegible]	7,483	[illegible]	-37.8	26	19.5
350	[illegible]	8,448	-30.8	-43.5	26	23.2
300	[illegible]	9,520	-39.3	-49.4	27	28.9
250	[illegible]	10,743	-48.8		[illegible]	34.8
200	[illegible]	12,185	-56.1		26	41.7
175	[illegible]	13,031	-59.3		[illegible]	39.4
150	[illegible]	13,986	-64.2			
125	[illegible]	15,085	-70.1			
100	[illegible]	16,396	[illegible]			
80	[illegible]	17,688	[illegible]			
70	[illegible]	18,464	[illegible]			
60	[illegible]	19,377	[illegible]			
50	[illegible]	[illegible]	[illegible]			
40	[illegible]	21,865	[illegible]			
30	[illegible]	23,676	[illegible]			
25	[illegible]	[illegible]	[illegible]			
20	[illegible]	26,276	[illegible]			
15	[illegible]	28,157	[illegible]			
10	[illegible]	30,878	[illegible]			
7	[illegible]	33,266	[illegible]			

+ KOROR, CAROLINE IS.
1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	29	30	26.6	23.9	08	3.0
1000	29	80	26.2	22.4	08	3.4
950	29	532	[illegible]	19.6	[illegible]	6.6
900	29	[illegible]	[illegible]	15.9	[illegible]	6.9
850	29	1,495	[illegible]	[illegible]	[illegible]	5.9
800	29	2,012	15.0	8.0	09	5.2
750	29	2,556	12.3	3.5	09	5.4
700	29	[illegible]	9.6	-2.1	[illegible]	5.3
650	29	3,745	6.5	-5.7	08	6.1
600	29	[illegible]	2.8	-10.3	08	6.6
550	29	5,097	-1.0	-15.7	[illegible]	7.6
500	29	5,852	-5.5	-20.0	09	6.9
450	29	[illegible]	[illegible]	-26.1	[illegible]	6.8
400	29	7,570	[illegible]	-31.6	[illegible]	6.7
350	29	[illegible]	[illegible]	-38.3	[illegible]	6.6
300	29	9,679	-30.8	[illegible]	[illegible]	6.5
250	29	[illegible]	-41.1	-53.8	[illegible]	7.0
200	[illegible]	[illegible]	[illegible]		[illegible]	8.3
175	[illegible]	13,268	[illegible]		[illegible]	8.8
150	[illegible]	14,211	[illegible]		11	10.1
125	[illegible]	[illegible]	[illegible]		11	12.8
100	[illegible]	16,547	-82.5		10	13.7
80	[illegible]	[illegible]	-78.2		08	4.1
70	[illegible]	[illegible]	-73.4		29	2.7
60	26	[illegible]	-69.0		28	8.0
50	26	[illegible]	-65.5		27	10.4
40	[illegible]	[illegible]	[illegible]		27	10.9
30	[illegible]	[illegible]	[illegible]		26	7.7
25	[illegible]	[illegible]	-55.8		25	2.5
20	[illegible]	[illegible]	-52.6		[illegible]	7.3
15	[illegible]	[illegible]	[illegible]		[illegible]	17.3
10	[illegible]	[illegible]	[illegible]		[illegible]	23.7
7	7	[illegible]	-39.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS.
1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	4	26.6	23.4	07	5.9
1000	29	82	26.0	22.9	07	7.2
950	29	533	22.4	20.5	07	10.0
900	29	1,003	19.4	17.1	08	9.5
850	29	1,495	17.1	[illegible]	09	8.6
800	[illegible]	2,011	14.9	9.4	09	7.2
750	29	2,556	12.5	4.8	09	6.0
700	29	3,133	9.4	-1.1	09	5.4
650	29	3,744	6.0	-4.8	09	3.8
600	29	4,396	2.4	-9.8	09	2.9
550	29	5,095	-1.2	-16.5	09	2.2
500	29	5,849	-5.6	-22.3	08	2.4
450	29	6,667	-10.8	-26.5	05	1.4
400	29	7,563	-16.5	-32.4	35	2.9
350	29	8,554	-23.1	-39.3	33	5.3
300	29	9,664	-31.6	-46.3	31	6.3
250	29	10,926	-42.1	-54.6	29	8.2
200	29	12,396	-54.4	-65.0	27	5.4
175	29	13,238	-61.3		26	5.5
150	29	14,178	-68.5		28	3.3
125	28	15,250	-76.3		33	4.2
100	[illegible]	16,513	-83.2		03	5.4
80	[illegible]	[illegible]	-81.3		05	2.9
70	18	18,522	-75.8		28	4.9
60	16	19,424	-71.4		27	9.6
50	15	20,512	-67.0		27	11.9
40	14	21,875	-63.2		28	13.3
30	14	23,663	-58.5		27	7.0
25	14	24,817	-55.8		07	1.8
20	[illegible]	26,249	-53.5		09	9.8
15	10	28,124	-49.4		10	18.0
10	9	30,798	-45.7			
7	7	33,170	-41.9			
5						

LAKE CHARLES, LA.
1019 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	5	9.4	7.6	[illegible]	1.2
1000	29	159	11.0	4.5	11	1.2
950	29	587	10.5	1.3	20	1.9
900	29	1,037	9.1	-1.2	25	3.7
850	29	1,519	7.4	-7.7	26	5.7
800	29	2,006	5.5	-14.0	28	7.4
750	[illegible]	[illegible]	3.2	-17.7	29	8.9
700	29	3,087	-.1	-20.4	28	10.5
650	29	3,676	-3.7	-22.7	28	12.1
600	29	4,303	-7.7	-26.0	29	15.2
550	29	4,975	-11.8	-29.2	27	17.5
500	29	5,698	[illegible]	-33.8	27	20.5
450	29	6,480	-22.4	-35.4	27	23.2
400	29	7,336	-28.2	-40.7	26	27.1
350	29	8,285	-34.6	-46.3	27	32.2
300	29	9,341	-42.7		27	35.0
250	29	10,546	-51.9		27	38.4
200	29	11,968	-58.0		27	38.7
175	[illegible]	12,807	-59.0		26	39.9
150	[illegible]	13,771	[illegible]		26	36.1
125	29	14,894	-65.0		27	34.7
100	[illegible]	16,245	[illegible]		27	26.4
80	[illegible]	17,575	-70.1		27	19.5
70	27	18,372	[illegible]		27	15.0
60	27	19,300	-66.2		27	9.5
50	[illegible]	20,412	-63.8		27	5.7
40	27	21,790	-61.1		28	5.3
30	[illegible]	23,585	-58.8		29	3.3
25	24	24,741	-57.0		30	2.2
20	24	26,159	-55.4		29	2.2
15	24	28,007	-52.4		27	6.9
10	20	30,654	-47.5		26	11.7
7	9	32,972	-43.5			
5						

LANDER, WYO.
[illegible]

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	[illegible]	1,697	-5.9	-12.5	21	1.8
1000						
950						
900						
850						
800	29	1,950	-2.0	-13.2	24	.9
750	29	2,462	-3.7	-16.7	29	4.0
700	29	3,004	-7.1	-19.1	29	8.5
650	[illegible]	3,578	-10.9	-21.7	29	12.0
600	29	4,188	-14.8	-25.8	29	15.2
550	29	4,841	-19.3	-30.4	29	17.0
500	29	5,542	-24.5	-34.4	29	18.2
450	29	6,300	-30.4	-38.6	29	19.7
400	29	7,127	-36.7	-43.1	29	21.0
350	29	8,042	-43.2	-48.3	29	23.3
300	29	9,061	-50.4		29	26.9
250	29	10,232	-56.9		29	27.7
200	[illegible]	11,633	-59.7		29	28.0
175	29	12,472	-58.0		29	26.6
150	28	13,453	-57.2		29	25.3
125	28	14,606	-57.7		29	22.0
100	28	16,008	-59.3		29	19.2
80	28	17,406	-59.2		29	14.9
70	[illegible]	18,241	-59.9		30	12.3
60	26	19,212	-58.1		30	11.4
50	26	20,362	-57.8		31	10.1
40	26	21,773	-57.0		32	8.8
30	26	23,598	-56.4		34	9.0
25	25	24,774	-55.4		35	9.6
20	25	26,203	-53.9		01	10.3
15	19	28,049	-52.8		01	10.6
10	9	30,732	-49.1			
7						
5						

LIHUE KAUAI, HAWAII
1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	[illegible]	36	20.1	17.2	09	1.5
1000	29	138	20.4	16.0	[illegible]	2.6
950	[illegible]	579	16.9	14.2	10	3.3
900	29	1,039	13.6	11.5	11	2.5
850	29	1,519	10.4	7.7	15	1.6
800	29	2,022	8.2	.8	19	1.9
750	29	2,554	7.2	-11.5	20	2.9
700	29	3,119	4.8	-18.2	21	3.1
650	29	3,719	1.4	-22.4	24	4.0
600	[illegible]	4,358	-2.6	-25.6	25	4.9
550	29	[illegible]	-7.2	-28.7	26	6.9
500	[illegible]	5,777	-12.5	-32.2	27	9.0
450	29	6,573	-18.0	-36.3	27	11.6
400	29	7,442	-24.3	-42.4	27	14.1
350	29	8,404	-31.7	-46.7	27	18.3
300	[illegible]	9,473	-39.8	-52.7	27	25.0
250	[illegible]	10,701	-45.6		28	32.1
200	29	12,157	-54.4		28	36.6
175	[illegible]	12,999	-59.1		28	35.5
150	28	13,954	-64.4		28	32.7
125	[illegible]	15,054	-69.7		28	26.8
100	28	16,370	-73.5		28	17.9
80	20	17,673	-74.0		28	10.3
70	20	18,457	-71.8		26	5.0
60	[illegible]	19,376	-68.2		24	1.8
50	17	20,482	-64.3		[illegible]	1.9
40	17	21,860	-60.3		10	2.8
30	17	23,672	-56.2		08	6.0
25	17	24,835	-54.7		07	6.8
20	17	26,269	-53.0		08	5.2
15	14	28,142	-48.8		09	1.6
10	13	30,837	-44.3		20	2.3
7	11	33,214	-39.8			
5	[illegible]	35,514	-36.3			

LITTLE ROCK, ARK.
1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	79	3.5	-1.0	30	1.3
1000	[illegible]	163	4.1	-2.6	28	1.4
950	29	577	4.7	-3.8	26	3.9
900	29	1,017	3.6	-5.9	26	5.0
850	29	1,481	2.9	-8.6	27	7.6
800	29	1,971	1.0	-10.9	28	9.2
750	29	2,487	-1.6	-15.4	28	11.3
700	29	3,034	-4.4	-17.9	28	13.3
650	29	3,614	-7.5	-21.4	28	15.6
600	29	4,233	-11.4	-25.5	28	17.4
550	29	4,894	-15.9	-30.1	27	18.5
500	29	5,606	-20.8	-34.6	[illegible]	20.1
450	29	6,377	-26.1	-39.8	27	22.6
400	29	7,218	-32.3	-45.3	27	24.5
350	29	8,150	-39.0	-49.3	[illegible]	27.5
300	29	9,188	-46.1		26	32.0
250	29	10,381	-53.3		27	35.1
200	26	11,793	-57.1		27	38.4
175	25	12,642	-57.5		27	37.2
150	[illegible]	13,617	-57.6		27	36.6
125	25	14,760	-60.6		27	33.8
100	[illegible]	16,140	-63.0		27	26.5
80	[illegible]	17,511	-63.5		27	19.2
70	[illegible]	18,332	-62.9		27	14.8
60	[illegible]	19,282	-62.0		27	10.5
50	22	20,416	-60.0		28	7.6
40	22	21,814	-58.5		30	5.0
30	22	23,630	-57.0		34	2.5
25	[illegible]	24,785	-55.6		35	2.6
20	20	26,212	-54.0		02	2.0
15	[illegible]	28,075	-51.4		04	3.9
10	7	30,709	-48.5			
7						
5						

MCGRATH, ALASKA
1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	[illegible]	103	-25.0	-26.0	35	1.5
1000						
950	22	550	-16.4	-23.5	04	7.3
900	22	957	-15.0	-22.8	05	10.1
850	22	1,391	-14.0	-23.3	05	11.6
800	22	[illegible]	-14.5	-23.8	04	10.9
750	22	2,339	-16.2	-26.1	03	10.3
700	22	2,855	-18.8	-28.6	03	9.3
650	22	3,404	-21.8	-32.2	02	9.5
600	22	3,989	-25.4	-35.8	01	9.5
550	[illegible]	4,616	-29.4	-39.2	01	8.8
500	22	5,290	-33.9	-41.4	01	8.6
450	22	6,021	-38.9	-43.0	36	9.1
400	22	6,820	-43.6	-46.5	35	10.0
350	22	7,712	-48.4		35	11.5
300	[illegible]	8,714	-52.2		34	12.0
250	22	9,886	-54.7		33	13.6
200	[illegible]	11,321	-51.1		31	13.0
175	22	12,193	-49.8		30	12.5
150	21	13,196	-49.0		30	12.8
125	21	14,395	-48.6		30	14.7
100	[illegible]	15,860	-49.3		29	16.4
80	21	17,323	-49.7		29	16.8
70	21	18,198	-49.4		29	17.9
60	21	19,208	-49.5		28	17.8
50	21	20,404	-48.7		28	18.6
40	20	21,857	-49.0		29	19.3
30	18	23,753	-48.1		29	21.3
25	17	24,966	-47.8		29	19.6
20	17	26,440	-47.6		29	21.0
15	11	28,266	-47.8			
10						
7						

MAJURO, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	3	28.3	23.9	07	5.5
1000	29	87	27.1	19.5	07	6.4
950	29	539	23.3	17.4	07	8.0
900	29	1,009	20.3	13.8	09	8.0
850	29	1,501	17.6	10.1	09	7.4
800	29	2,018	15.3	5.9	09	6.6
750	29	2,563	12.8	1.0	09	5.3
700	29	[illegible]	[illegible]	-3.7	09	3.4
650	29	3,752	6.6	-7.4	09	2.6
600	29	4,405	3.0	-13.3	[illegible]	3.1
550	29	5,105	-.5	-17.7	09	2.9
500	29	5,861	-4.7	-21.8	09	2.4
450	29	6,682	-9.5	-28.1	06	1.6
400	29	7,582	-15.2	-33.3	34	1.8
350	29	8,581	-21.9	-40.0	32	3.8
300	29	9,694	-30.5	-47.7	31	6.2
250	29	10,962	-40.9	-55.7	30	6.1
200	29	12,441	-53.0		28	4.8
175	29	13,290	-59.5		29	4.1
150	29	14,237	-67.0		30	3.4
125	29	15,318	-74.5		35	2.9
100	[illegible]	16,593	-81.4		03	4.6
80	28	17,850	-78.9		02	1.8
70	28	18,621	-73.1		28	6.1
60	28	19,538	-67.7		27	12.0
50	28	20,645	-64.8		27	15.8
40	28	22,023	-59.9		27	13.0
30	28	23,839	-56.0		27	5.9
25	28	25,003	-54.9		12	1.7
20	[illegible]	26,434	-52.9		09	8.6
15	[illegible]	28,304	-49.5		09	17.1
10	22	30,999	-42.6		09	23.7
7	15	33,417	-37.8			

MEDFORD, OREG.
972 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	401	2.8	.3	33	.5
1000						
950	29	587	4.1	.4	28	.4
900	29	1,027	3.9	-1.1	20	2.8
850	29	1,490	1.7	-3.9	21	5.0
800	29	1,978	-.4	-6.0	24	7.4
750	29	2,491	-3.1	-10.0	25	8.5
700	29	3,035	-6.1	-14.3	26	10.5
650	29	3,612	-9.3	-18.7	26	11.7
600	29	4,227	-12.9	-24.2	27	14.0
550	29	4,885	-17.4	-29.2	27	15.2
500	29	5,591	-22.5	-33.3	27	17.4
450	29	6,357	-27.6	-37.2	27	19.7
400	29	7,194	-33.7	-42.7	27	23.6
350	29	8,120	-40.4	-46.2	27	25.6
300	29	9,150	-48.5		27	27.3
250	28	10,330	-56.3		27	28.8
200	28	11,731	-59.7		28	25.7
175	27	12,566	-58.8		28	24.2
150	27	13,538	-57.7		28	22.4
125	27	14,686	-58.7		28	20.6
100	27	16,087	-58.9		29	15.4
80	[illegible]	17,485	-58.8		29	10.1
70	25	18,323	-58.9		31	7.9
60	23	19,296	-57.8		32	6.5
50	21	20,450	-57.2		35	6.5
40	19	21,867	-55.9		01	7.1
30	16	23,697	-55.1		02	9.0
25	14	24,877	-53.8		03	10.8
20	11	26,319	-52.2		03	13.2
15	8	28,138	-49.8			
10	5	30,759	-49.4			
7						

MERIDA, MEXICO
1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	11	17.9	16.7	08	.8
1000	29	140	20.2	16.4	09	4.1
950	29	583	19.0	13.4	11	5.2
900	29	1,047	16.8	8.3	11	4.3
850	29	1,532	14.2	4.9	12	2.5
800	29	2,042	11.5	1.7	17	.6
750	29	2,579	9.0	-3.5	25	.9
700	29	3,148	6.2	-8.5	27	1.5
650	29	3,752	3.1	-14.8	26	3.0
600	29	4,396	-.4	-20.3	27	4.6
550	29	5,086	-4.4	-24.5	28	6.2
500	29	5,830	-9.2	-28.7	26	7.3
450	29	6,637	-14.6	-34.5	27	10.6
400	29	7,517	-21.2	-39.9	26	13.4
350	29	8,491	-28.7	-45.5	26	17.4
300	29	9,572	-37.4	-52.5	26	21.1
250	29	10,807	-46.5		25	25.8
200	29	12,259	-54.8		25	26.7
175	28	13,106	-58.6		25	30.6
150	28	14,064	-63.5		25	27.1
125	27	15,168	-69.5		26	24.6
100	26	16,482	-74.9		26	17.4
80	26	17,771	-76.0		26	9.5
70	25	18,546	-74.9		27	7.5
60	24	19,449	-71.0		27	5.4
50	23	20,545	-65.7		27	6.5
40	22	21,917	-60.7		24	3.0
30	22	23,723	-57.1		32	1.6
25	20	24,889	-54.1		01	.6
20	19	26,329	-51.8		15	1.7
15	16	28,210	-48.3		24	3.8
10	10	30,928	-43.2			
7						

MIAMI, FLA.
1018 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	4	17.1	13.8	32	1.0
1000	29	154	18.6	14.6	01	.8
950	29	593	16.4	11.2	19	.2
900	29	1,052	13.9	7.8	24	1.5
850	29	1,533	11.0	3.9	25	3.5
800	29	2,037	8.5	-.7	26	5.3
750	29	2,569	6.8	-6.9	26	6.1
700	29	3,133	3.9	-11.5	26	7.8
650	29	3,732	1.1	-16.2	27	9.9
600	29	4,372	-2.3	-18.6	27	11.7
550	[illegible]	5,057	-6.8	-22.9	27	13.5
500	29	5,794	-11.9	-26.5	27	15.9
450	29	6,592	-17.6	-31.4	26	18.1
400	29	7,463	-24.1	-36.2	26	21.3
350	29	8,426	-31.3	-42.4	26	23.6
300	29	9,496	-39.8	-48.5	27	25.6
250	29	10,717	-49.2		27	31.0
200	28	12,158	-55.4		26	39.2
175	28	13,004	-58.4		26	38.9
150	28	13,965	-62.9		26	36.8
125	28	15,073	-68.4		27	31.4
100	27	16,392	-73.0		26	23.8
80	27	17,692	-74.4		26	17.2
70	27	18,472	-72.8		26	14.3
60	26	19,386	-68.8		27	9.8
50	25	20,489	-63.8		26	7.4
40	23	21,872	-59.7		26	5.7
30	22	23,686	-55.7		25	5.3
25	22	24,852	-54.0		26	5.0
20	21	26,291	-52.6		26	5.4
15	18	28,165	-49.1		27	10.9
10	9	30,883	-44.5			
7						

MIDLAND, TEXAS
916 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	874	1.8	-2.9	23	1.7
1000						
950						
900	29	1,020	7.2	-3.4	22	3.2
850	29	1,493	9.1	-8.6	26	6.2
800	29	1,994	7.6	-12.1	28	8.0
750	29	2,522	4.3	-15.4	29	8.7
700	29	3,079	.5	-19.2	29	9.9
650	[illegible]	3,659	-3.4	-21.3	28	10.8
600	[illegible]	4,297	-7.8	-25.4	28	12.1
550	29	4,967	-12.6	-29.8	28	13.6
500	29	5,687	-17.7	-34.5	28	16.3
450	[illegible]	6,467	-23.2	-38.8	28	19.3
400	29	7,318	-29.9	-43.2	28	20.8
350	29	8,258	-37.0	-47.0	28	22.3
300	[illegible]	9,304	-44.9		29	27.9
250	[illegible]	10,501	-53.1		28	32.3
200	28	11,916	-59.1		27	33.3
175	28	12,753	-59.0		27	33.2
150	28	13,719	-60.0		27	30.6
125	[illegible]	14,847	-63.6		27	27.9
100	28	16,206	-66.8		27	22.3
80	[illegible]	17,546	-68.6		27	16.4
70	25	18,354	-66.7		28	11.2
60	[illegible]	19,291	-65.3		29	6.7
50	25	20,409	-62.0		29	3.9
40	24	21,803	-59.8		[illegible]	2.2
30	21	23,620	-58.0		05	6.0
25	20	24,788	-56.4		07	6.2
20	[illegible]	[illegible]	-54.6		06	6.1
15	14	[illegible]	-52.2		[illegible]	7.5
10	[illegible]	[illegible]	-49.4			

MONTERREY, MEXICO
955 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	423	10.0	7.2	32	1.1
1000						
950	29	583	12.6	6.6	34	.6
900	29	1,038	12.7	3.9	15	.8
850	29	1,517	12.2	-2.4	17	1.6
800	29	2,024	10.5	-5.4	22	2.0
750	29	2,559	8.0	-9.0	26	4.2
700	29	3,124	4.4	-11.6	27	6.9
650	29	3,723	.6	-15.4	26	8.7
600	29	4,361	-3.5	-19.5	26	10.5
550	29	5,042	-8.2	-23.0	26	12.7
500	29	5,775	-13.1	-27.1	26	16.1
450	29	6,569	-18.6	-31.4	26	18.1
400	29	7,438	-24.6	-37.2	26	21.5
350	[illegible]	8,399	-32.0	-44.0	26	23.9
300	29	9,465	-40.7	-51.8	26	25.8
250	29	10,680	-50.5		26	28.5
200	29	12,107	-57.7		26	29.8
175	29	12,948	-59.5		26	31.3
150	[illegible]	13,901	-62.3		26	31.0
125	[illegible]	15,014	-67.1		26	27.6
100	27	16,344	-72.5		26	21.9
80	27	[illegible]	-73.2		26	15.7
70	25	18,437	-71.5		26	10.9
60	25	19,352	-69.5		26	7.5
50	25	20,453	-64.6		26	5.3
40	[illegible]	21,835	-60.9		27	1.4
30	19	23,647	-57.9		36	.8
25	19	24,802	-55.1		[illegible]	1.3
20	19	26,227	-54.2		27	2.1
15	17	28,091	-50.5		26	4.4
10		30,739	-46.8			

MONETT, MO.
966 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	438	.3	-3.2	20	1.1
1000						
950	29	570	1.0	-4.7	23	2.2
900	29	1,006	2.2	-5.6	25	8.1
850	29	1,468	1.3	-8.8	27	9.5
800	29	1,954	-.9	-11.9	29	9.4
750	29	2,467	-3.4	-15.7	29	10.8
700	29	3,009	-6.4	-19.4	29	13.0
650	29	3,585	-9.4	-22.4	29	14.9
600	28	4,204	-13.1	-25.5	29	16.9
550	28	4,861	-17.5	-29.6	29	17.9
500	28	5,568	-22.2	-34.9	28	19.6
450	28	6,335	-27.5	-39.7	28	21.5
400	28	7,171	-33.8	-45.5	28	23.0
350	28	8,097	-40.6	-49.9	28	24.8
300	[illegible]	9,128	-47.9		28	27.8
250	28	10,313	-54.2		28	31.4
200	28	11,728	-58.2		28	33.7
175	[illegible]	12,569	-57.5		28	34.6
150	27	13,547	-57.4		28	33.5
125	27	14,694	-59.3		28	29.8
100	26	16,089	-61.4		28	23.1
80	[illegible]	17,468	-62.8		28	18.3
70	[illegible]	18,293	-62.0		29	15.3
60	25	19,246	-61.6		28	11.3
50	25	20,380	-60.0		29	9.0
40	[illegible]	21,776	-59.2		29	7.4
30	25	23,588	-57.0		30	5.6
25	23	24,754	-56.5		32	3.9
20	20	26,195	-55.6		36	2.0
15	18	28,047	-53.5		[illegible]	4.8
10	12	30,648	-49.9			

MONTGOMERY, ALA.
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	29	57	6.6	3.1	05	.5
1000	29	165	7.1	1.3	05	.3
950	29	588	7.3	.8	27	2.7
900	29	1,032	6.2	-2.3	28	5.8
850	29	1,500	4.8	-4.8	29	7.3
800	29	1,993	2.5	-7.4	29	8.6
750	29	2,513	-.1	-10.5	28	9.8
700	[illegible]	3,063	-2.6	-14.5	28	11.7
650	[illegible]	3,648	-5.4	-19.6	27	14.5
600	29	4,272	-9.0	-23.1	28	16.9
550	29	4,940	-13.3	-27.4	27	19.4
500	29	5,659	-18.0	-31.7	27	23.5
450	29	6,438	-23.3	-34.5	27	25.8
400	[illegible]	7,289	-29.6	-38.6	26	29.8
350	29	8,231	-36.4	-45.4	26	35.0
300	29	9,281	-43.6		26	38.8
250	28	10,486	-52.1		26	42.2
200	28	11,907	-58.3		26	45.8
175	26	12,742	-58.4		27	46.0
150	26	13,710	-59.7		27	41.6
125	26	14,841	-63.2		27	37.5
100	[illegible]	16,202	-66.4		27	30.6
80	26	17,551	-67.1		27	20.9
70	26	18,359	-65.9		27	17.0
60	26	19,300	-63.7		27	12.0
50	26	20,426	-61.0		28	8.4
40	25	21,824	-58.9		26	6.6
30	23	23,638	-56.5		27	4.9
25	23	24,798	-55.3		27	4.1
20	21	26,239	[illegible]		27	3.2
15	18	[illegible]	-51.1		25	2.8
10	9	[illegible]	-47.4			

NASHVILLE, TENN.
998 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	[illegible]	180	1.4	-2.7	33	.8
1000						
950	29	574	1.5	-5.7	26	3.2
900	29	1,009	.7	-8.1	28	6.2
850	29	1,468	-.3	-10.0	28	8.2
800	29	1,952	-2.1	-11.6	28	10.0
750	29	2,463	-4.2	-13.4	28	12.2
700	29	3,004	-6.7	-18.6	28	14.7
650	28	3,583	-9.8	-21.3	28	16.8
600	28	4,196	-13.2	-24.8	28	18.4
550	28	4,854	-17.4	-29.1	27	21.5
500	[illegible]	5,561	-22.3	-33.8	27	23.9
450	28	6,327	-27.5	-39.6	27	26.2
400	28	7,164	-33.6	-44.8	27	28.7
350	28	8,091	-40.4	-49.9	27	31.9
300	28	9,123	-47.5		27	37.7
250	27	10,316	-54.7		27	38.7
200	27	11,726	-59.2		27	39.7
175	27	12,563	-59.0		27	39.9
150	27	13,533	-58.3		27	38.8
125	27	14,675	-60.0		27	32.6
100	26	16,063	-62.3		27	26.8
80	26	17,437	-62.8		27	21.1
70	[illegible]	18,263	-62.6		27	17.9
60	[illegible]	19,215	-62.0		27	14.2
50	24	20,346	-60.6		28	11.9
40	[illegible]	21,739	-59.7		28	9.4
30	[illegible]	23,547	-57.6		29	7.5
25	[illegible]	24,702	-56.2		28	6.3
20	23	26,121	-54.6		27	7.1
15	20	27,967	-52.5		29	5.6
10	9	30,616	-48.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1972

[illegible]

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	[illegible]	-15.5	-22.7	04	[illegible]
1000	28	[illegible]	-11.4	[illegible]	[illegible]	[illegible]
950	29	574	-10.7	-22.2	05	4.8
900	29	[illegible]	-11.1	-22.9	05	[illegible]
850	29	1,427	-11.9	-23.0	03	[illegible]
800	29	[illegible]	-12.8	-24.2	02	[illegible]
750	29	[illegible]	-15.1	-26.4	02	7.8
700	29	2,900	-18.1	-29.2	02	8.3
650	29	3,450	-21.2	-33.2	02	9.1
600	29	4,037	-24.4	-35.5	01	9.1
550	29	[illegible]	-28.5	-38.5	01	10.2
500	29	[illegible]	-33.0	-41.1	36	9.9
450	29	6,076	-37.9	-44.0	35	8.8
400	29	6,879	-43.1	-47.1	34	8.9
350	29	7,770	-48.6		34	10.2
300	29	8,769	-53.8		[illegible]	11.3
250	29	9,930	-57.1		32	10.8
200	29	11,346	-54.3		[illegible]	12.0
175	29	12,207	-51.8		29	12.0
150	29	13,209	-51.0		29	11.9
125	[illegible]	14,398	-50.3		28	13.1
100	29	15,855	-50.2		28	14.5
80	29	17,313	-50.1		28	14.1
70	29	[illegible]	-50.0		28	15.7
60	29	19,195	-49.2		27	16.8
50	29	20,393	-48.7		27	16.1
40	24	21,819	-49.2		27	18.1
30	[illegible]	[illegible]	-48.6		28	19.2
25	23	24,915	-48.4		27	18.0
20	[illegible]	26,398	-47.4		28	16.0
15	19	28,283	-46.5		29	18.6
10	11	30,987	-45.2			

NORTH PLATTE, NEBR.
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	[illegible]	-7.7	-11.5	33	1.1
1000						
950						
900	29	993	-3.9	-11.2	30	4.0
850	29	1,448	-.1	-10.9	31	4.2
800	29	1,933	-1.6	-12.7	31	[illegible]
750	29	2,444	-4.0	-15.4	30	[illegible]
700	29	2,985	-7.3	-17.7	30	13.5
650	29	3,559	-11.0	-20.4	30	15.0
600	29	4,169	-15.1	-24.1	29	15.9
550	29	4,822	-19.5	-28.5	29	17.8
500	29	5,523	-24.2	-34.1	30	21.1
450	29	6,283	-29.9	-39.9	29	23.7
400	29	7,111	-36.2	-45.8	30	23.9
350	29	8,027	-43.1	-47.6	30	26.2
300	29	9,046	-50.5		30	28.0
250	29	10,217	-56.9		30	30.8
200	29	11,622	-57.8		29	29.2
175	29	12,466	-57.1		29	28.3
150	29	13,444	-56.6		29	28.2
125	28	14,594	-57.5		29	23.8
100	[illegible]	16,001	-58.3		29	21.2
80	[illegible]	17,400	-59.3		29	19.4
70	26	18,232	-59.2		29	16.5
60	26	19,196	-59.7		29	14.5
50	25	20,346	-58.6		30	12.8
40	24	21,750	[illegible]		31	10.3
30	23	23,587	-55.9		[illegible]	9.0
25	22	24,767	-54.8		33	6.0
20	[illegible]	26,219	-53.9		01	6.0
15	15	28,079	-53.1		03	10.5

OAKLAND, CALIF.
1020 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	5	8.9	6.6	[illegible]	.7
1000	29	170	9.9	5.3	[illegible]	.3
950	29	595	8.7	2.5	28	.7
900	[illegible]	1,042	7.5	-2.5	24	2.4
850	29	1,512	6.1	-7.9	24	4.0
800	29	2,007	3.7	-10.0	26	[illegible]
750	29	2,528	.8	-12.1	27	6.0
700	29	3,079	-2.3	-15.8	27	7.6
650	[illegible]	3,664	-5.6	-18.8	27	9.3
600	29	4,287	-9.6	-23.6	27	10.8
550	29	4,954	-13.8	-28.5	27	11.6
500	29	5,670	-19.1	-33.5	27	13.3
450	29	6,447	-24.4	-37.4	27	14.5
400	29	7,293	-31.0	-42.6	27	16.3
350	29	8,229	-38.4	-48.1	27	18.3
300	[illegible]	9,267	-47.0		27	21.0
250	29	10,450	-55.9		27	23.4
200	29	11,847	-61.5		28	24.4
175	[illegible]	12,677	-59.6		27	21.5
150	[illegible]	13,642	-59.3		27	21.9
125	29	14,783	-60.5		28	18.1
100	[illegible]	16,164	-62.6		28	14.1
80	28	17,540	-62.6		29	10.2
70	28	18,365	-62.2		29	7.1
60	[illegible]	19,320	-61.1		[illegible]	5.5
50	27	20,462	-59.7		36	4.7
40	27	21,862	-58.3		03	5.2
30	27	23,681	-56.3		05	8.3
25	[illegible]	24,843	-55.2		05	9.2
20	27	26,271	-54.1		06	12.0
15	24	28,152	-51.6		06	13.8
10	13	30,825	-48.5			

OMAHA, NEBR.
969 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	403	-7.9	-11.4	36	1.2
1000						
950	29	556	-6.4	-11.0	32	1.6
900	29	980	-3.8	-11.4	29	5.5
850	29	1,433	-2.1	-11.9	30	9.3
800	29	1,915	-3.2	-13.7	30	10.8
750	29	2,423	-5.7	-17.3	29	12.6
700	29	2,961	-8.8	-20.5	30	13.8
650	29	3,531	-12.5	-23.1	30	15.8
600	29	4,138	-16.6	-25.8	29	17.7
550	29	[illegible]	-21.2	-28.3	29	19.4
500	29	5,483	-25.8	-33.3	29	21.5
450	29	6,238	-31.2	-38.6	29	22.3
400	29	7,062	-37.5	-44.5	29	24.8
350	29	7,972	-44.7		29	26.4
300	29	8,985	-51.5		29	30.2
250	29	10,153	-57.0		29	31.4
200	29	11,558	-57.8		28	31.8
175	29	12,403	-57.0		28	29.7
150	29	13,381	-56.4		28	27.6
125	29	14,535	-57.4		29	26.1
100	29	15,940	-59.3		28	22.2
80	27	17,322	-59.9		29	21.6
70	27	18,158	-59.6		29	18.7
60	27	19,120	-60.1		29	17.3
50	[illegible]	20,258	-59.7		29	15.9
40	26	21,675	-58.1		30	12.2
30	26	23,492	-56.8		31	10.2
25	26	24,647	-56.9		32	9.2
20	26	26,064	-55.8		32	11.0
15	24	27,916	-53.8		34	7.8
10	11	30,539	-50.6			

*** PAGO PAGO, AMERICAN SAMOA**
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	5	28.5	24.0	09	2.1
1000	29	91	27.1	20.3	08	1.9
950	29	544	23.7	18.3	06	2.4
900	29	1,015	20.4	15.3	05	2.8
850	29	1,507	17.3	11.7	05	3.2
800	29	2,024	14.7	8.2	06	3.2
750	[illegible]	2,568	12.1	4.1	06	3.1
700	29	3,143	9.1	.1	06	3.3
650	29	3,754	5.8	-5.1	07	3.1
600	29	4,405	2.2	-9.4	07	3.3
550	29	5,103	-1.6	-13.8	07	3.3
500	29	5,856	-6.0	-20.1	09	2.8
450	29	6,674	-10.6	-24.4	10	2.8
400	29	7,571	-16.3	-30.8	10	2.8
350	29	8,565	-23.2	-38.5	12	3.1
300	29	9,672	-31.4	-46.5	14	4.4
250	29	10,936	-41.8		17	6.1
200	29	12,408	-54.0		17	7.8
175	29	13,253	-60.4		17	7.7
150	29	14,197	-67.5		17	6.6
125	29	15,278	-74.0		16	5.9
100	28	16,560	-79.1		14	4.4
80	28	17,831	-76.8		11	6.2
70	[illegible]	18,608	-72.5		09	7.5
60	[illegible]	19,522	-68.9		09	8.2
50	[illegible]	20,623	-65.0		09	8.5
40	28	21,998	-60.9		09	10.2
30	[illegible]	23,804	-56.6		09	13.7
25	28	24,967	-54.0		09	17.2
20	[illegible]	26,410	-50.8		09	23.2
15	20	28,296	-47.1		09	29.1
10	12	31,003	-41.8			

*** PEORIA, ILL.**
9[illegible]4 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	[illegible]	-5.5	-9.3	32	.5
1000						
950	29	555	-5.5	-10.8	26	3.1
900	29	981	-4.0	-12.2	28	7.3
850	29	1,432	-4.5	-13.6	28	10.0
800	29	1,908	-6.2	-15.1	28	11.9
750	29	2,411	-7.9	-16.4	28	13.8
700	29	2,945	-10.8	-20.2	29	14.9
650	29	3,512	-13.8	-23.2	29	16.4
600	29	4,116	-17.3	-26.3	29	18.0
550	29	4,763	-21.4	-30.1	[illegible]	19.8
500	29	5,459	-26.1	-35.1	28	22.2
450	29	6,213	-31.2	-39.3	[illegible]	25.0
400	29	7,037	-37.7	-43.8	28	27.9
350	29	7,947	-44.6		28	30.6
300	29	8,962	-51.1		27	35.8
250	29	10,133	-56.2		28	37.5
200	29	11,544	-57.3		28	35.6
175	29	12,390	-56.1		28	33.5
150	29	13,371	-55.9		28	31.3
125	[illegible]	14,529	-57.0		28	30.0
100	[illegible]	15,942	-58.8		28	24.6
80	26	17,338	-59.4		28	22.0
70	26	18,174	-59.7		27	21.3
60	24	19,128	-60.4		28	17.9
50	23	20,282	-58.7		28	15.4
40	19	21,710	-57.6		29	10.8
30	[illegible]	23,532	-56.0		30	8.1
25	19	24,694	-55.3		[illegible]	6.8
20	17	26,137	-54.1		30	4.9
15	14	27,945	-53.3		29	9.4
10	[illegible]	30,539	-48.8		27	11.0
7	[illegible]	32,861	-46.6			

*** PITTSBURGH, PA.**
974 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	359	-4.8	-9.0	27	1.9
1000						
950	29	552	-5.3	-9.4	27	3.5
900	29	976	-6.7	-10.5	27	6.6
850	29	1,422	-7.5	-13.8	28	9.4
800	29	1,893	-8.5	-16.9	28	10.9
750	29	2,392	-10.1	-18.4	28	12.5
700	29	2,921	-12.7	-22.2	28	15.4
650	29	3,484	-15.1	-24.2	28	18.8
600	29	4,086	-18.1	-27.2	28	21.2
550	29	4,731	-22.0	-30.4	28	23.9
500	29	5,426	-26.6	-35.7	28	25.9
450	29	6,180	-31.6	-40.8	28	28.6
400	29	7,002	-37.6	-45.8	27	31.8
350	29	7,913	-44.1		27	35.6
300	29	8,929	-50.7		27	39.5
250	29	10,105	-55.0		27	41.3
200	29	11,526	-55.7		27	38.9
175	29	12,378	-54.9		27	35.9
150	29	13,362	-55.8		27	33.3
125	29	14,518	-57.3		27	33.6
100	27	15,927	-58.7		27	28.8
80	27	17,327	-59.1		27	23.6
70	26	18,166	-59.2		27	22.0
60	24	19,138	-58.8		27	19.7
50	24	20,285	-58.4		27	17.0
40	24	21,692	-57.4		27	14.8
30	24	23,516	-56.3		27	9.8
25	24	24,693	-54.9		27	7.2
20	23	26,127	-53.1		30	4.0
15	20	27,993	-52.5		29	3.1
10	18	30,654	-49.1		01	4.6
7	8	32,927	-46.5			

PONAPE, CAROLINE IS.
1004 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	39	27.7	23.8	06	3.7
1000	29	70	26.5	20.6	06	4.3
950	29	522	23.1	18.1	07	8.1
900	29	992	20.0	14.8	08	9.0
850	29	1,484	17.2	10.0	08	8.9
800	29	2,001	15.6	4.6	08	8.1
750	29	2,546	13.0	.6	09	5.8
700	29	3,123	9.6	-3.1	09	4.3
650	29	3,734	6.1	-7.8	09	4.9
600	29	4,386	2.9	-13.1	10	4.9
550	29	5,085	-.9	-17.4	10	4.7
500	29	5,840	-5.3	-22.9	09	4.5
450	29	6,660	-9.8	-27.9	08	4.5
400	29	7,560	-15.0	-32.4	05	5.5
350	29	8,560	-21.8	-38.8	05	4.5
300	29	9,673	-30.2	-46.9	11	1.4
250	29	10,942	-40.9	-54.7	14	2.5
200	29	12,419	-53.4		18	3.0
175	29	13,265	-60.2		18	3.1
150	29	14,209	-67.8		13	3.0
125	29	15,286	-75.3		08	5.4
100	29	16,554	-82.2		08	8.7
80	28	17,803	-79.6		07	2.6
70	29	18,573	-73.1		27	4.7
60	28	19,486	-69.4		27	10.6
50	28	20,585	-65.4		27	12.3
40	27	21,956	-61.3		27	12.7
30	26	23,758	-57.9		27	6.9
25	26	24,913	-56.2		25	1.3
20	25	26,339	-54.2		10	6.8
15	23	28,191	-50.3		09	17.6
10	17	30,879	-44.7		09	25.6

PORTLAND, MAINE
1013 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	20	-8.3	-14.0	32	1.6
1000	26	142	-8.5	-15.1	32	1.7
950	29	515	-7.8	-14.2	28	3.7
900	29	934	-9.2	-15.7	27	5.7
850	29	1,375	-10.4	-17.7	27	7.9
800	29	1,841	-11.5	-19.1	27	10.8
750	29	2,335	-12.9	-22.3	27	13.6
700	29	2,859	-15.4	-23.8	27	15.4
650	29	3,415	-18.1	-27.0	26	17.3
600	29	4,010	-21.4	-32.1	26	20.1
550	29	4,647	-25.1	-35.7	26	23.2
500	29	5,333	-29.6	-39.7	26	26.0
450	29	6,078	-34.4	-42.6	27	27.4
400	29	6,892	-40.0	-47.1	26	29.8
350	29	7,795	-45.6		26	35.6
300	29	8,807	-51.1		26	40.6
250	29	9,982	-54.6		26	42.9
200	29	11,411	-54.4		26	35.6
175	29	12,267	-53.9		26	33.1
150	29	13,257	-54.5		26	31.6
125	29	14,423	-55.3		26	29.4
100	29	15,843	-56.6		26	29.4
80	29	17,255	-57.4		26	25.0
70	29	18,099	-57.5		26	24.2
60	29	19,072	-57.7		26	20.5
50	29	20,225	-56.6		26	21.1
40	28	21,653	-56.2		26	16.9
30	28	23,486	-55.3		27	14.0
25	28	24,652	-54.5		27	13.9
20	28	26,083	-53.9		27	10.7
15	27	27,937	-52.2		27	8.8
10	19	30,608	-50.3			

*** QUILLAYUTE, WASH.**
1007 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	58	3.4	1.8	16	1.7
1000						
950	29	531	2.9	-.1	19	7.5
900	29	967	.7	-2.8	20	9.0
850	29	1,425	-1.4	-5.4	22	10.1
800	29	1,906	-3.4	-7.8	23	11.7
750	29	2,414	-5.9	-13.0	24	11.7
700	29	2,952	-9.0	-16.1	25	12.7
650	29	3,522	-12.5	-20.0	25	14.5
600	29	4,129	-16.2	-24.2	25	16.6
550	29	4,779	-20.8	-28.2	26	16.1
500	29	5,477	-25.7	-33.3	26	17.8
450	28	6,234	-31.4	-38.3	26	19.1
400	28	7,057	-37.6	-42.3	26	20.3
350	28	7,968	-44.3		26	22.6
300	28	8,984	-50.7		26	23.4
250	28	10,156	-56.4		26	24.4
200	28	11,570	-55.8		27	21.6
175	28	12,422	-54.9		27	19.9
150	25	13,404	-54.2		27	19.5
125	25	14,573	-54.7		28	17.7
100	23	15,991	-55.1		28	15.0
80	20	17,410	-55.2		30	12.8
70	20	18,264	-55.1		30	11.8
60	20	19,247	-55.8		31	9.9
50	17	20,420	-54.3		32	9.8
40	14	21,852	-54.4		34	10.9
30	14	23,701	-53.2		35	11.7
25	12	24,913	-51.9			
20	7	26,401	-49.8			
15	7	28,284	-49.5			

RAPID CITY, S. DAK.
9[illegible]2 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	966	-7.1	-12.1	34	2.5
1000						
950						
900						
850	29	1,434	-2.6	-11.4	31	7.6
800	29	1,915	-3.6	-13.2	31	10.8
750	29	2,422	-6.6	-15.8	31	12.7
700	29	2,958	-10.1	-18.8	31	14.3
650	29	3,525	-13.6	-22.7	30	16.6
600	29	4,130	-17.4	-27.1	[illegible]	17.9
550	29	4,776	-21.9	-31.1	29	19.1
500	29	5,471	-26.6	-36.6	29	21.4
450	29	6,223	-32.1	-40.3	29	24.0
400	29	7,044	-38.5	-43.8	29	26.2
350	29	7,950	-45.5		29	28.4
300	29	8,959	-52.6		30	30.2
250	[illegible]	10,121	-57.9		[illegible]	31.4
200	29	11,522	-58.7		29	30.9
175	29	12,364	-57.1		29	29.7
150	29	13,342	-56.0		29	27.9
125	29	14,501	-56.6		29	25.4
100	29	15,910	-58.5		[illegible]	[illegible]
80	27	17,322	-58.8		[illegible]	18.8
70	27	18,161	-58.3		30	17.5
60	25	19,122	-58.0		30	15.8
50	[illegible]	20,270	-58.2		30	14.9
40	23	21,702	-57.2		31	12.9
30	[illegible]	23,522	-55.4		32	11.7
25	[illegible]	24,708	-54.7		[illegible]	[illegible]
20	[illegible]	26,194	-53.7		36	7.2
15	16	28,047	-52.9		[illegible]	10.2
10						
7						
5						

ST CLOUD, MINN.
981 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	24	316	-17.5	-22.3	34	2.5
1000						
950	24	556	-14.9	-17.7	36	2.9
900	24	967	-13.1	-16.8	[illegible]	3.3
850	24	1,404	-11.7	-18.1	30	6.6
800	24	1,869	-11.8	-19.6	30	9.0
750	24	2,362	-13.0	-21.0	29	12.1
700	24	2,886	-15.4	-22.1	30	13.2
650	24	3,442	-18.6	-24.9	30	15.2
600	24	4,035	-21.9	-28.2	29	18.0
550	24	4,671	-26.0	-33.3	29	21.5
500	24	5,354	-31.0	-38.4	29	23.0
450	24	6,093	-36.4	-41.5	29	24.3
400	24	6,900	-42.0	-45.9	29	26.9
350	24	7,795	-48.0		29	28.6
300	24	8,796	-53.5		29	32.0
250	24	9,959	-55.7		29	33.1
200	24	11,376	-55.6		29	31.0
175	24	12,229	-54.6		29	30.8
150	24	13,217	-54.6		29	29.4
125	24	14,381	-55.7		29	28.2
100	24	15,800	-56.8		29	26.5
80	24	17,212	-57.2		29	22.7
70	24	18,058	[illegible]		29	21.3
60	24	19,033	-57.6		29	18.9
50	23	20,172	-57.6		29	17.2
40	24	21,584	-56.9		30	14.0
30	23	23,414	-55.5		31	10.1
25	[illegible]	[illegible]	-54.3		31	9.6
20	18	26,083	-53.7		32	6.3
15	16	27,913	-53.1		[illegible]	4.3
10	10	30,794	-49.2			

*** ST PAUL IS., ALASKA**
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	10	-10.0	-11.9	04	5.6
1000	25	162	-8.4	-12.3	05	5.4
950	28	535	-8.2	-15.4	05	6.1
900	28	955	-7.9	-17.2	05	5.3
850	28	1,399	-8.4	-18.3	05	5.6
800	28	1,868	-10.1	-20.7	04	5.8
750	28	2,364	-12.4	-22.9	04	6.7
700	28	2,888	-15.2	-25.3	03	7.3
650	28	3,445	-18.2	-28.0	03	7.7
600	28	4,038	-21.9	-31.0	02	7.3
550	28	4,674	-25.7	-35.3	36	7.8
500	28	5,359	-30.1	-38.9	36	8.7
450	28	6,101	-35.1	-42.2	35	9.7
400	28	6,913	-40.6	-45.5	35	10.8
350	27	7,814	-46.3		34	10.0
300	28	8,824	-51.4		33	9.0
250	28	9,999	-54.2		33	7.1
200	28	11,434	-51.5		31	4.3
175	28	12,305	-49.6		29	4.4
150	28	13,317	-49.1		29	5.1
125	28	14,513	-49.3		28	4.3
100	28	15,975	-49.2		26	3.7
80	28	17,438	-49.4		26	4.1
70	28	18,314	-49.2		27	3.6
60	28	19,326	-49.0		26	2.5
50	26	20,527	-48.5		26	2.6
40	25	21,997	-48.7		25	2.3
30	25	23,890	-48.3		28	1.9
25	24	25,086	-48.1		30	1.9
20	24	26,559	-47.4		32	1.0
15	24	28,466	-46.7		23	1.1
10	18	31,205	-44.6		[illegible]	2.0
7	[illegible]	33,637	-44.0			
5	5	35,915	-41.7			

SALEM, ILL.
998 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	174	-2.8	-5.9	33	.7
1000						
950	29	563	-1.2	-7.9	26	3.7
900	29	994	-1.2	-10.6	28	6.8
850	29	1,450	-2.0	-12.8	29	9.4
800	29	1,930	-3.7	-14.7	29	11.3
750	29	2,438	-6.1	-15.9	29	12.8
700	29	2,975	-8.8	-18.6	29	14.4
650	29	3,546	-11.9	-22.5	28	16.7
600	29	4,155	-15.3	-25.7	28	18.9
550	29	4,807	-19.4	-30.1	28	21.4
500	29	5,510	-24.0	-33.7	27	23.4
450	29	6,270	-29.4	-38.1	27	26.2
400	29	7,101	-35.2	-44.1	27	30.0
350	29	8,021	-42.2	-45.1	27	31.7
300	29	9,045	-49.4		27	35.3
250	29	10,221	-55.7		27	37.3
200	29	11,633	-57.9		27	36.6
175	29	12,478	-56.7		27	33.5
150	[illegible]	13,448	-56.5		27	31.1
125	28	14,601	-58.0		27	27.4
100	[illegible]	16,002	-59.8		27	23.7
80	[illegible]	17,391	-60.9		27	17.1
70	28	18,222	-61.1		28	15.1
60	27	19,189	-60.4		28	13.7
50	27	20,325	-60.5		29	10.9
40	26	21,719	-58.9		30	8.0
30	[illegible]	23,530	-57.7		32	6.8
25	[illegible]	24,701	-56.6		33	7.5
20	23	26,113	-55.7		33	7.1
15	20	27,946	-53.7		32	6.1
10	17	30,563	-49.7		32	6.3
7	5	32,741	-44.8			

SALEM, OREG.
10.1 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	61	4.4	2.1	19	2.9
1000	29	147	5.0	2.4	19	3.7
950	29	566	4.2	1.5	21	7.2
900	29	1,005	2.8	-1.9	22	9.0
850	29	1,466	.3	-5.3	23	11.3
800	29	1,950	-2.0	-8.4	24	11.9
750	29	2,461	-4.6	-13.7	25	12.9
700	29	3,001	-7.7	-18.5	25	13.9
650	29	3,574	-11.3	-23.5	26	14.7
600	29	4,184	-15.0	-26.4	26	15.5
550	29	4,837	-19.2	-31.4	26	16.7
500	29	5,539	-23.9	-36.2	27	18.7
450	29	6,299	-29.6	-39.8	27	20.4
400	29	7,129	-36.0	-43.2	27	22.0
350	28	8,055	-42.2	-50.5	27	25.9
300	28	9,079	-49.6		27	28.5
250	28	10,252	-57.0		28	28.9
200	28	11,655	-58.5		28	26.2
175	28	12,498	-57.0		28	23.7
150	28	13,476	-56.7		28	21.7
125	28	14,629	-57.8		[illegible]	19.1
100	28	16,037	-57.3		29	16.9
80	28	17,449	-57.4		29	11.5
70	28	18,292	-57.8		31	9.3
60	27	19,261	-57.8		32	9.5
50	27	20,416	-56.5		33	8.1
40	27	21,833	-56.3		35	9.4
30	27	23,667	-54.6		36	8.7
25	25	24,842	-54.0		01	10.0
20	24	26,298	-53.0		02	10.2
15	[illegible]	28,156	-51.2		03	11.8
10	16	30,792	-48.6		[illegible]	10.9

[illegible] reference notes at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH
[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	1,288	-.5	-5.3	[illegible]	.8
1000						
950						
900						
850	[illegible]	[illegible]	[illegible]	-7.9	[illegible]	2.1
800	[illegible]	1,995	.0	-10.8	[illegible]	3.7
750	29	2,509	-3.3	-13.1	27	4.7
700	29	3,051	-7.0	-15.7	28	8.5
650	[illegible]	[illegible]	-10.3	-19.1	28	10.3
600	29	4,238	-14.1	-23.7	28	12.7
550	29	4,893	-18.1	-27.9	28	15.6
500	[illegible]	5,599	-22.8	-32.5	29	18.7
450	29	6,363	-28.2	-37.2	29	20.1
400	[illegible]	7,198	-34.5	-43.9	29	22.2
350	[illegible]	[illegible]	-41.0	-46.1	30	24.1
300	29	9,150	-48.6		29	26.3
250	[illegible]	10,328	-56.3		29	30.1
200	29	11,729	-59.7		29	29.7
175	[illegible]	12,566	-58.3		29	27.1
150	29	13,539	-57.9		29	23.4
125	29	14,685	-58.9		29	22.0
100	29	16,079	-60.6		29	18.8
80	29	17,467	-60.6		30	12.8
70	29	18,298	-60.7		[illegible]	[illegible]
60	29	19,260	-59.6		[illegible]	[illegible]
50	28	20,400	-58.5		[illegible]	7.6
40	26	21,812	-57.1		35	7.5
30	[illegible]	23,637	-56.4		36	8.4
25	[illegible]	24,824	-55.1		02	7.9
20	[illegible]	26,249	-53.8		[illegible]	9.8
15	[illegible]	28,133	-51.7		05	[illegible]
10	[illegible]	[illegible]	-47.3			
7						

SAN DIEGO, CALIF.
[illegible]

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	124	[illegible]	5.1	04	1.4
1000	[illegible]	153	10.5	3.1	04	1.2
950	[illegible]	[illegible]	[illegible]	-1.6	[illegible]	.9
900	[illegible]	[illegible]	12.2	-5.8	31	1.5
850	[illegible]	[illegible]	10.2	-8.2	31	2.9
800	[illegible]	[illegible]	7.4	-11.0	29	3.8
750	[illegible]	[illegible]	4.5	-14.7	28	5.3
700	29	3,099	1.1	-18.0	28	6.4
650	29	3,691	-2.5	-20.3	28	7.1
600	29	[illegible]	-6.3	-24.5	28	8.3
550	29	4,995	-10.8	-27.3	27	8.9
500	[illegible]	[illegible]	-16.3	-30.5	27	9.7
450	[illegible]	6,505	-21.8	-35.4	28	11.5
400	29	7,361	-28.7	-40.3	28	13.2
350	[illegible]	8,305	-36.2	-45.2	28	14.4
300	29	9,353	-44.8		28	16.6
250	[illegible]	10,547	-54.2		28	19.5
200	29	[illegible]	-60.6		28	25.8
175	29	12,784	-60.1		27	24.3
150	29	13,747	-60.3		27	25.7
125	29	14,878	-62.6		27	22.3
100	[illegible]	16,242	-66.7		27	16.9
80	[illegible]	17,587	-66.9		28	12.0
70	[illegible]	18,400	-65.8		29	8.5
60	27	19,339	-64.7		31	5.6
50	27	[illegible]	-61.6		35	3.5
40	27	21,851	-59.4		04	5.1
30	27	23,664	-56.8		05	6.6
25	26	24,829	-55.5		06	7.8
20	25	26,255	-54.3		06	8.8
15	23	28,127	-51.9		07	10.4
10	[illegible]	30,782	-48.0		07	10.0
7						

SAN JUAN, P. R.
1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	6	22.8	17.5	12	1.8
1000	29	150	22.3	18.8	09	4.8
950	[illegible]	595	19.3	16.3	09	8.0
900	29	1,059	16.2	12.6	10	7.2
850	29	1,543	13.0	8.9	10	6.8
800	29	2,051	10.9	2.5	10	7.0
750	29	2,589	9.7	-7.8	09	6.4
700	29	3,158	6.8	-14.4	09	4.7
650	29	3,763	3.8	-18.4	10	3.5
600	29	4,409	.5	-21.5	10	2.1
550	29	5,101	-3.9	-24.7	07	1.5
500	29	5,846	-9.0	-29.7	32	2.1
450	29	6,654	-14.0	-33.9	30	4.0
400	29	7,537	-20.3	-39.5	29	6.5
350	29	8,515	-27.4	-45.7	29	10.2
300	29	9,604	-34.7	-51.7	29	17.2
250	[illegible]	10,855	-43.3	-56.5	28	23.9
200	28	12,319	-54.5		28	24.6
175	[illegible]	13,163	-60.4		28	22.0
150	28	14,109	-66.6		28	18.4
125	28	15,196	-72.6		28	14.0
100	28	16,487	-77.9		29	6.7
80	[illegible]	17,756	-79.2		29	2.9
70	[illegible]	18,519	-77.0		28	1.5
60	[illegible]	19,416	-72.3		32	1.7
50	27	[illegible]	-65.9		32	2.3
40	27	21,878	-61.3		03	2.5
30	[illegible]	23,685	-56.5		07	4.4
25	[illegible]	24,850	-53.7		08	4.4
20	23	26,294	-50.7		[illegible]	3.0
15	21	28,171	-48.2		26	1.0
10	13	30,873	-45.5		24	1.4
7	7	33,290	-41.0			

SAN NICOLAS IS., CALIF.
995 MB

INSUFFICIENT OBSERVATIONS.

* SAULT STE MARIE, MICH.
989 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	221	-13.6	-16.2	03	.7
1000						
950	29	527	-13.0	-16.3	31	2.3
900	29	939	-13.8	-16.5	30	4.7
850	29	1,373	-14.7	-19.2	29	6.7
800	29	1,831	-15.4	-20.9	29	8.8
750	29	2,318	-16.5	-22.8	29	11.5
700	29	2,835	-18.2	-24.8	29	13.9
650	29	3,386	-20.7	[illegible]	29	15.9
600	29	3,975	-23.8	-31.5	29	17.7
550	29	4,605	-27.8	-35.1	28	19.4
500	29	5,284	-32.3	-39.8	28	20.8
450	29	6,020	-37.2	-41.6	28	23.0
400	29	6,824	-43.1	-43.9	27	23.8
350	29	7,715	-49.0		27	25.3
300	29	8,712	-54.4		27	27.0
250	29	9,871	-57.3		27	30.4
200	29	11,291	-54.4		27	29.9
175	29	12,147	-54.4		27	29.8
150	27	13,141	-53.7		27	28.4
125	26	14,306	-54.9		27	29.1
100	26	15,731	-55.4		28	27.8
80	[illegible]	17,150	-56.5		28	27.0
70	26	17,998	-56.2		28	26.9
60	25	18,970	-56.2		28	26.0
50	25	20,125	-57.0		28	24.8
40	23	21,557	-56.0		28	24.0
30	21	23,383	-56.6		28	23.0
25	[illegible]	24,541	-56.1		28	23.6
20	[illegible]	25,958	-55.6		29	23.0
15	[illegible]	27,681	-55.9		29	26.0
10	13	30,302	-53.1		29	28.9
7	9	32,386	-47.9			

* SHEMYA, ALASKA
1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	.9	-2.9	[illegible]	4.1
1000						
950	29	503	-3.1	-4.6	11	7.0
900	29	930	-5.2	-7.7	13	7.3
850	29	1,377	-7.5	-13.6	13	7.0
800	29	1,848	-8.8	-17.8	14	7.0
750	29	2,347	-10.6	-20.7	14	7.3
700	29	2,875	-13.4	-23.1	14	8.1
650	29	3,435	-16.5	-25.7	14	8.9
600	29	4,033	-20.0	-29.5	14	9.3
550	29	4,673	-24.2	-33.5	15	9.2
500	29	5,362	-28.8	-36.6	15	8.9
450	29	6,108	-34.0	-41.3	15	8.7
400	29	6,923	-39.9	-44.9	16	9.3
350	29	7,825	[illegible]		16	9.7
300	[illegible]	8,832	-52.6		17	9.1
250	29	9,997	-56.4		[illegible]	8.6
200	[illegible]	11,421	-53.1		20	6.8
175	29	12,286	-51.3		21	7.0
150	29	13,291	-50.2		21	6.5
125	29	[illegible]	-50.0		21	6.3
100	26	15,939	-50.3		21	6.1
80	28	17,395	-50.4		21	5.3
70	27	18,265	-50.2		21	5.3
60	27	19,272	-50.0		20	5.0
50	27	[illegible]	-49.3		19	5.1
40	26	21,926	-49.2		19	4.3
30	26	23,815	-48.9		17	5.1
25	25	25,012	-48.3		17	5.1
20	[illegible]	26,483	-48.0		16	4.9
15	24	28,385	-46.7		16	5.7
10	18	31,102	-45.0		12	10.1
7	11	33,494	-43.4			
5						

* SHREVEPORT, LA.
[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	79	6.3	4.0	22	.7
1000	27	164	7.5	1.1	21	1.5
950	29	[illegible]	7.9	.2	22	5.1
900	29	1,026	6.8	-2.8	25	6.2
850	29	1,495	5.5	-6.8	27	7.7
800	29	1,989	3.3	-11.8	28	9.6
750	29	2,510	1.0	-17.2	28	10.9
700	29	3,061	-2.1	-20.0	28	12.8
650	29	3,646	-5.8	-22.7	28	14.0
600	29	4,268	-10.1	-26.3	28	15.8
550	29	4,933	-14.1	-30.1	27	18.6
500	29	5,650	-18.7	-35.1	27	21.2
450	29	6,427	-24.5	-39.5	27	23.5
400	29	7,274	-30.5	-45.4	27	27.3
350	[illegible]	8,213	-37.3	-50.2	27	30.5
300	[illegible]	9,258	-44.7		27	33.4
250	[illegible]	10,457	-52.4		27	36.6
200	[illegible]	11,876	-58.6		27	37.9
175	29	12,716	-58.5		27	37.4
150	[illegible]	13,688	-60.1		27	37.2
125	28	14,818	-63.4		27	34.2
100	27	16,180	-67.3		27	29.0
80	23	17,529	-67.6		27	21.7
70	[illegible]	18,335	-66.7		27	14.3
60	[illegible]	19,278	-64.8		27	9.2
50	[illegible]	20,399	-62.1		28	4.2
40	20	21,795	-59.7		34	2.3
30	20	23,601	-57.9		04	2.0
25	20	24,754	-56.7		05	[illegible]
20	19	26,175	-55.2		04	3.1
15	18	28,019	-53.7		05	4.5
10	15	30,644	-50.0		01	2.8
7	13	33,015	-45.1		33	2.6
5	[illegible]	35,277	-43.5			

SPOKANE, WASH.
931 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	720	-2.0	-5.3	20	3.1
1000						
950						
900	29	986	-.7	-4.0	21	6.3
850	29	1,442	-2.0	-7.2	23	9.0
800	29	1,923	-3.9	-11.0	24	10.2
750	29	2,430	-6.4	-13.6	25	11.6
700	29	2,966	-9.5	-17.1	25	12.7
650	29	3,536	-12.7	-20.5	26	14.5
600	[illegible]	4,142	-16.5	-23.8	26	16.2
550	29	4,792	-20.6	-27.8	27	18.3
500	29	5,490	-25.6	-32.2	27	20.2
450	29	6,245	-31.2	-36.7	27	21.2
400	29	7,069	-37.5	-42.9	28	23.3
350	29	7,980	-44.1		28	26.0
300	29	8,995	-51.2		28	29.9
250	29	10,163	-57.3		28	33.6
200	[illegible]	11,566	-57.8		29	29.9
175	28	12,414	-54.5		28	28.0
150	[illegible]	13,404	-54.2		29	25.0
125	27	14,568	-55.4		29	21.2
100	27	15,990	-55.9		29	18.9
80	27	17,409	-55.8		30	16.8
70	27	18,261	-55.4		30	15.1
60	27	19,245	-55.6		31	14.4
50	27	20,407	-55.6		32	13.5
40	27	21,831	-55.1		33	13.4
30	24	23,669	-54.4		34	14.2
25	24	24,838	-54.1		35	12.8
20	21	26,315	-52.7		36	12.9
15	17	28,250	-50.6		03	6.9
10	[illegible]	30,988	-47.7			

* SWAN ISLAND, W. I.
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	10	24.7	20.0	07	3.5
1000	29	130	24.1	19.3	06	4.8
950	29	577	20.2	17.6	07	5.8
900	29	1,043	17.0	13.1	08	5.3
850	29	1,529	14.2	8.3	09	4.7
800	29	2,039	11.5	4.1	[illegible]	4.1
750	29	2,576	9.1	-4.0	10	3.1
700	29	3,146	7.0	-10.5	11	1.7
650	29	3,751	4.1	-14.3	13	.6
600	29	4,400	1.5	-17.9	27	.7
550	29	5,095	-2.4	-22.5	27	2.9
500	29	5,845	-7.2	-25.8	26	4.5
450	29	6,657	-12.9	-30.9	26	6.6
400	28	7,544	-19.6	-35.6	27	10.8
350	28	8,524	-27.2	-41.6	27	15.4
300	28	9,613	-35.6	-48.6	26	21.6
250	28	10,856	-45.1		25	27.3
200	28	12,315	-54.7		24	29.5
175	28	13,159	-60.0		25	27.2
150	28	14,108	-66.1		25	22.8
125	27	15,198	-71.9		26	18.1
100	27	16,492	-77.6		26	10.1
80	27	17,766	-78.1		26	4.4
70	27	18,533	-75.3		27	4.6
60	27	19,437	-70.8		27	4.2
50	27	20,532	-65.6		26	4.2
40	25	21,909	-60.5		28	2.1
30	23	23,725	-55.5		01	1.2
25	20	24,887	-53.3		06	2.4
20	15	26,335	-50.5		06	1.6
15	11	28,218	-46.0			

TAMPA, FLA.
1018 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	[illegible]	12.2	9.5	04	1.8
1000	29	158	13.6	8.9	05	1.9
950	29	590	13.0	5.4	33	.8
900	29	1,044	11.4	1.3	27	2.7
850	29	1,520	9.7	-3.1	27	4.7
800	[illegible]	2,022	7.5	-5.3	28	5.8
750	29	2,551	4.7	-8.3	27	7.5
700	29	3,110	1.7	-13.4	26	10.0
650	29	3,704	-1.1	-17.2	26	12.4
600	29	4,339	-4.6	-21.2	27	14.9
550	29	5,018	-8.8	-24.3	26	17.9
500	29	5,750	-13.6	-26.9	26	19.1
450	29	6,543	-19.1	-31.3	26	21.8
400	29	7,408	-25.4	-38.2	26	24.3
350	29	8,366	-32.7	-45.2	26	27.6
300	29	9,429	-41.4	-55.1	26	30.4
250	29	10,643	-50.2		27	34.9
200	29	12,073	-57.4		27	36.6
175	29	12,914	-59.5		26	43.5
150	[illegible]	13,870	-62.6		26	42.8
125	27	14,988	-66.6		27	37.3
100	27	16,324	-70.9		26	26.1
80	27	17,639	-72.0		27	22.4
70	27	18,427	-71.1		27	16.9
60	27	19,346	-68.1		27	10.8
50	27	20,454	-64.0		26	7.6
40	27	21,833	-60.5		29	3.3
30	[illegible]	23,640	-56.8		01	.6
25	[illegible]	24,799	-55.5		34	1.6
20	25	26,230	-53.6		27	1.5
15	[illegible]	28,096	-50.6		[illegible]	2.9
10	17	30,749	-45.5			

TOPEKA, KANS.
987 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	268	-3.9	-7.6	33	1.4
1000						
950	29	566	-2.5	-7.5	27	3.9
900	29	998	.3	-8.9	28	7.4
850	29	1,457	.2	-9.9	29	8.7
800	29	1,941	-1.9	-12.8	29	9.5
750	29	2,452	-4.5	-15.7	29	10.8
700	29	2,992	-7.4	-18.8	30	13.2
650	29	3,566	-10.7	-21.7	30	14.4
600	29	4,177	-14.7	-25.1	29	15.1
550	29	4,830	-19.2	-28.7	29	17.0
500	29	5,533	-23.9	-34.0	29	19.8
450	29	6,294	-29.3	-38.9	29	22.0
400	29	7,124	-35.8	-44.9	28	23.4
350	29	8,042	-42.7	-47.2	29	25.8
300	29	9,062	-50.0		28	29.1
250	29	10,237	-55.8		28	31.4
200	[illegible]	11,647	-58.1		28	32.8
175	[illegible]	12,491	-57.1		28	31.4
150	[illegible]	13,474	-56.8		28	29.9
125	[illegible]	14,627	-57.9		28	26.0
100	[illegible]	16,027	-60.0		28	21.3
80	[illegible]	17,417	-60.4		28	17.0
70	[illegible]	18,248	-60.6		29	15.9
60	[illegible]	19,209	-60.2		29	12.9
50	[illegible]	20,360	-59.3		29	9.7
40	[illegible]	21,762	-58.3		31	7.1
30	[illegible]	23,576	-56.6		31	[illegible]
25	25	[illegible]	-55.9		35	5.2
20	23	26,189	-54.5		01	[illegible]
15	[illegible]	[illegible]	-53.0		[illegible]	[illegible]
10	[illegible]	30,758	-49.4			
7						
5						

TRUK, CAROLINE IS.
• 1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	2	27.6	23.5	05	5.2
1000	[illegible]	87	26.9	20.7	06	6.0
950	[illegible]	539	23.4	18.1	07	9.5
900	29	1,010	20.4	14.2	08	8.7
850	[illegible]	1,502	17.5	9.7	08	7.8
800	[illegible]	[illegible]	15.3	4.4	08	6.9
750	[illegible]	2,564	12.9	1.6	09	6.2
700	[illegible]	3,141	9.9	-2.4	10	5.0
650	29	3,753	6.5	-6.8	10	4.9
600	29	4,406	[illegible]	-12.0	10	5.1
550	29	[illegible]	-.5	-16.7	09	5.1
500	29	5,862	-4.9	-21.9	08	6.2
450	29	6,684	-9.2	-26.3	08	6.7
400	[illegible]	7,585	-14.9	-32.3	07	6.3
350	29	8,585	-21.8	-38.9	08	5.5
300	[illegible]	9,698	-30.3	-46.5	09	4.8
250	29	[illegible]	-40.6	-53.7	13	4.0
200	[illegible]	12,447	-53.1		15	5.6
175	29	13,293	-60.4		15	6.2
150	[illegible]	14,237	-67.9		13	6.5
125	[illegible]	15,312	-75.7		09	[illegible]
100	[illegible]	16,578	-82.1		09	11.3
80	[illegible]	17,827	-79.0		09	4.2
70	[illegible]	[illegible]	-73.2		27	3.8
60	[illegible]	19,509	-69.6		27	[illegible]
50	[illegible]	20,609	-64.6		27	11.0
40	[illegible]	21,984	-61.4		27	11.9
30	26	[illegible]	-57.5		27	6.6
25	27	[illegible]	-55.5		22	1.6
20	27	26,374	-53.7		10	7.3
15	26	[illegible]	-50.5		[illegible]	17.8
10	[illegible]	[illegible]	-44.8		[illegible]	24.3
7	16	33,335	-38.8			

* TUCSON, ARIZ.
926 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	789	6.2	-8.6	15	3.6
1000						
950						
900	29	1,027	12.7	-7.9	14	2.0
850	29	1,505	11.2	-10.2	21	.0
800	[illegible]	2,008	7.7	-12.4	25	1.9
750	29	2,535	3.9	-15.1	25	4.1
700	29	3,092	.5	-18.1	26	5.7
650	29	3,683	-3.1	-22.3	27	6.1
600	29	4,312	-6.9	-26.0	28	8.2
550	29	4,985	-11.7	-29.0	28	10.2
500	29	5,708	-16.7	-32.9	28	11.7
450	[illegible]	6,490	-22.6	-36.9	28	13.9
400	[illegible]	7,343	-29.2	-42.0	28	15.6
350	29	8,286	-36.6	-46.1	28	18.4
300	29	9,333	-44.6		28	21.5
250	29	10,529	-53.6		28	26.8
200	28	11,942	-60.7		28	31.1
175	28	12,773	-60.1		27	29.3
150	28	13,735	-60.5		27	27.1
125	27	14,867	-63.6		27	25.8
100	27	16,224	-67.4		27	20.4
80	27	17,564	-68.6		28	13.9
70	27	18,366	-67.0		28	11.1
60	27	19,301	-65.0		30	7.0
50	27	20,420	-62.2		[illegible]	3.8
40	26	21,805	-60.2		36	3.5
30	25	23,612	-58.0		[illegible]	4.8
25	[illegible]	24,765	-56.7		05	4.6
20	[illegible]	26,186	-55.0		04	5.8
15	16	28,040	-52.7		[illegible]	6.4
10	[illegible]	30,738	-50.5			

* VANDENBERG AFB, CALIF.
1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	100	8.4	5.8	[illegible]	1.0
1000	27	163	10.0	5.8	03	1.5
950	27	592	11.8	.8	01	3.0
900	27	1,043	11.0	-3.6	[illegible]	2.4
850	27	1,519	8.9	-8.2	33	2.8
800	27	2,018	6.3	-11.8	30	3.1
750	27	2,544	3.4	-15.2	30	4.5
700	27	3,100	-.2	-17.9	29	5.4
650	27	3,689	-3.8	-20.5	29	6.4
600	27	4,316	-7.9	-25.1	28	7.7
550	27	4,986	-12.2	-28.4	27	7.9
500	[illegible]	5,708	-17.3	-32.5	28	8.7
450	27	6,489	-22.9	-35.4	27	11.1
400	27	7,341	-29.5	-41.1	27	14.0
350	27	8,283	-36.9	-46.4	27	16.4
300	27	9,328	-45.2		27	18.6
250	27	10,520	-54.5		27	20.4
200	27	11,920	-61.7		27	23.4
175	27	12,749	-60.3		27	22.1
150	27	13,712	-59.9		27	21.5
125	27	14,846	-62.0		27	19.9
100	27	16,216	-64.8		28	15.6
80	27	17,573	-65.3		29	10.1
70	[illegible]	18,388	-64.4		29	7.2
60	27	19,334	-63.2		31	5.0
50	26	20,466	-61.1		35	2.7
40	25	21,857	-59.3		04	4.7
30	25	23,670	-56.8		06	7.1
25	[illegible]	24,828	-55.8		06	7.6
20	25	26,253	-54.7		06	10.3
15	[illegible]	28,102	-52.2		[illegible]	9.9
10	19	30,764	-49.2		07	13.0
7	8	33,149	-45.8			

VICTORIA, TEXAS
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	33	10.1	8.3	03	1.1
1000	29	151	12.3	7.9	12	.9
950	[illegible]	582	11.9	4.7	19	3.8
900	29	1,034	11.1	-1.9	21	4.2
850	29	1,510	9.8	-6.7	25	3.8
800	29	2,012	7.9	-10.6	27	4.5
750	29	2,541	4.8	-13.7	28	6.0
700	29	3,100	1.6	-17.5	28	8.4
650	29	3,693	-2.2	-18.5	28	11.5
600	29	4,324	-6.4	-22.0	27	14.2
550	29	4,998	-11.0	-26.4	27	17.1
500	29	5,724	-15.5	-29.8	27	19.5
450	29	6,511	-20.7	-33.7	27	22.8
400	29	7,372	-26.8	-39.1	27	25.5
350	29	8,324	-33.9	-45.0	27	29.4
300	29	9,383	-42.2	-49.9	27	33.9
250	29	10,591	-51.4		27	36.0
200	29	12,016	-57.9		27	37.7
175	[illegible]	12,861	-58.5		27	[illegible]
150	[illegible]	13,825	-61.2		27	34.2
125	28	14,946	-65.6		27	31.5
100	26	16,293	-70.1		27	25.3
80	26	17,613	-71.7		27	[illegible]
70	26	18,404	-69.8		27	13.2
60	26	19,328	-67.2		27	9.1
50	26	20,438	-63.6		26	4.7
40	25	21,813	-61.1		27	3.3
30	[illegible]	23,612	-58.1		29	2.5
25	22	24,763	-56.9		28	1.9
20	22	26,184	-54.8		26	1.5
15	16	28,040	-52.2		28	4.2
10	9	30,712	-49.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	* WAKE ISL., PACIFIC AREA 1014 MB						* WALLOPS IS., VA. NASA 1016 MB						WASHINGTON DULLES INT. AP [illegible] MB						WAYCROSS, GA. 1014 MB						WINNEMUCCA, NEV. 872 MB					
	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.S.	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.S.	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.S.	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.S.	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	29	[illegible]	23.3	19.0	06	[illegible]	29	[illegible]	2.1	-2.9	[illegible]	3.0	29	85	-3.2	-8.6	31	[illegible]	29	44	7.2	4.4	34	1.0	29	1,312	-2.2	-5.1	17	1.3
1000	29	[illegible]	22.4	17.3	06	4.8	27	147	1.2	-5.0	30	3.6							29	155	8.3	2.9	35	1.5						
950	[illegible]	[illegible]	18.2	16.3	[illegible]	[illegible]	29	544	.6	-6.1	29	6.3	[illegible]	548	-1.5	-9.3	32	4.6	29	579	8.3	1.3	31	2.4						
900	[illegible]	1,028	15.3	12.1	06	3.8	29	978	-.7	-8.3	29	7.4	29	978	-2.8	-11.4	29	7.6	29	1,026	7.6	-.7	28	4.3						
850	29	1,512	12.8	6.6	[illegible]	2.5	29	1,433	-2.6	-8.9	28	8.9	29	[illegible]	-4.6	-12.4	29	[illegible]	29	1,496	6.2	-5.2	27	7.1	29	1,513	2.3	-5.2	20	2.8
800	29	2,019	10.7	[illegible]	[illegible]	1.5	[illegible]	1,913	-3.5	-11.4	28	11.9	29	[illegible]	-5.1	-15.4	29	11.8	29	1,991	4.2	-10.5	28	9.7	29	2,001	.2	-8.2	23	5.6
750	29	[illegible]	9.2	-6.0	35	1.7	29	2,422	-5.2	-14.1	27	15.2	29	[illegible]	-6.6	-19.4	28	13.8	29	2,514	1.6	-13.3	27	11.9	29	2,516	-2.9	-11.2	25	7.8
700	[illegible]	[illegible]	6.9	-11.7	31	3.2	29	2,962	-7.4	-16.8	27	18.7	29	[illegible]	-8.8	-20.9	28	16.9	29	3,067	-1.4	-15.6	27	13.4	29	3,059	-5.9	-15.6	26	9.6
650	29	3,731	3.9	-16.5	29	5.7	29	3,536	-10.5	-19.0	27	21.0	29	[illegible]	-11.4	-22.3	28	19.6	29	3,654	-4.3	-20.6	27	14.3	29	3,637	-8.9	-18.7	27	11.7
600	[illegible]	4,377	.2	-20.1	29	7.4	[illegible]	4,148	-14.2	-22.9	27	23.1	29	[illegible]	-14.9	-25.6	27	20.8	29	4,281	-7.9	-23.7	26	17.5	29	4,252	-12.8	-23.4	27	13.1
550	29	5,069	-3.9	[illegible]	[illegible]	8.7	29	4,803	-18.3	-26.0	26	24.2	29	[illegible]	-19.2	-30.0	27	23.4	29	4,952	-11.9	-27.4	27	20.9	29	4,911	-16.9	-28.8	28	15.1
500	[illegible]	5,814	-8.7	-27.5	28	10.9	29	5,508	-23.0	-31.9	26	27.2	29	[illegible]	-23.9	-33.8	27	26.5	29	5,675	-16.5	-30.0	26	24.2	29	5,620	-21.7	-34.2	28	15.6
450	29	6,621	-14.3	[illegible]	[illegible]	13.7	29	6,272	-28.2	-36.1	26	30.3	29	6,249	-28.8	-37.6	27	29.8	29	6,460	-21.7	-33.8	26	26.9	29	6,387	-27.0	-39.4	28	17.4
400	29	7,506	-18.9	[illegible]	[illegible]	[illegible]	29	7,107	-34.3	-41.7	26	32.4	29	7,081	-35.1	-44.7	26	32.5	29	7,316	-28.0	-39.6	26	30.0	29	7,226	-33.3	-43.6	29	18.0
350	[illegible]	8,492	-25.1	-41.9	29	22.7	[illegible]	8,031	-40.6	-44.9	26	35.9	29	[illegible]	-41.5	-46.1	26	35.9	29	8,265	-34.8	-45.5	26	33.9	29	8,152	-40.4	-45.0	28	18.8
300	[illegible]	9,594	-32.2	-48.5	29	26.1	29	9,063	-47.9		26	41.6	29	[illegible]	-47.8		26	40.8	29	9,320	-42.9		26	37.2	29	[illegible]	-48.3		28	22.2
250	29	10,856	-41.7	-54.9	29	[illegible]	29	10,246	-54.9		26	43.1	29	10,216	-54.9		26	44.6	29	10,524	-52.1		26	40.6	29	10,361	-56.8		29	22.6
200	29	12,331	-53.2		28	27.3	[illegible]	11,660	-57.8		26	40.1	[illegible]	11,631	-57.0		26	43.5	29	11,945	-58.4		26	45.1	29	11,757	-61.1		28	21.8
175	[illegible]	13,180	-59.4		29	25.4	[illegible]	12,504	-57.3		26	37.0	29	12,479	-55.9		27	41.4	29	12,782	-59.7		26	44.5	29	12,590	-59.4		27	22.8
150	[illegible]	14,128	[illegible]		29	23.1	29	13,479	-57.4		26	35.7	28	13,464	-56.4		26	38.2	29	13,743	-61.6		27	44.6	29	13,559	-58.4		29	21.0
125	[illegible]	15,216	-73.1		29	19.1	[illegible]	14,627	-59.3		26	30.0	28	14,619	-57.5		26	33.2	29	14,866	-64.5		27	39.3	29	14,704	-59.1		28	17.8
100	[illegible]	16,500	-79.6		29	12.9	29	16,018	-60.8		26	24.9	28	16,024	-59.1		26	28.9	[illegible]	16,218	-67.9		27	31.0	27	16,090	-60.2		28	15.0
80	21	17,772	-80.1		29	6.0	27	17,404	-61.9		27	18.6	28	17,420	-59.8		27	23.1	29	17,555	-68.5		26	24.6	27	17,480	-60.8		29	10.2
70	21	18,532	-77.1		27	2.6	25	18,240	-60.9		27	14.1	28	18,255	-59.7		27	21.0	29	18,357	-67.6		27	19.3	27	18,312	-60.5		30	8.7
60	21	[illegible]	-72.7		28	.6	25	19,199	-60.4		27	12.3	27	19,221	-59.1		27	19.3	27	19,296	-65.2		27	13.5	27	19,274	-59.5		31	5.9
50	21	20,516	-66.2		09	.3	25	20,340	-58.9		27	9.1	27	20,367	-58.3		27	14.8	26	20,417	-62.5		26	8.6	26	20,413	-58.7		32	6.0
40	21	[illegible]	-60.2		08	1.1	[illegible]	21,742	-58.4		28	7.8	27	21,775	-56.9		27	11.7	[illegible]	21,803	-60.5		27	6.6	24	21,814	-57.5		35	6.1
30	[illegible]	23,704	-56.0		08	2.0	24	23,552	-57.0		30	4.5	[illegible]	23,590	-55.7		26	10.0	25	23,612	-57.3		26	3.9	24	23,639	-55.9		01	6.7
25	20	24,870	-53.6		05	2.6	23	24,706	-56.1		35	3.5	[illegible]	24,754	-54.6		26	9.2	25	24,768	-55.8		25	3.6	23	24,812	-55.0		02	7.8
20	20	26,313	-51.5		04	2.2	[illegible]	26,149	-54.7		05	3.8	[illegible]	26,178	-53.1		26	10.9	24	26,201	-54.1		25	3.6	20	26,259	-53.6		04	10.1
15	18	28,198	-48.3		02	[illegible]	20	27,994	-53.4		03	5.3	21	[illegible]	-51.3		26	7.1	24	28,058	-51.5		25	2.5	16	28,132	-51.9		04	12.1
10	[illegible]	30,888	-44.0				15	30,626	-48.5		03	1.8	16	30,681	-47.5		27	10.8	17	30,692	-47.8		26	9.5	10	30,709	-50.2			
7							13	32,989	-46.0				5	32,822	-45.6				5	33,051	-44.0									

Standard pressure surface (mb)	WINSLOW, ARIZ. 843 MB						YAKUTAT, ALASKA 1016 MB						+ YAP, CAROLINE IS. 1008 MB						YUCCA FLAT, NEV. 883 MB					
SURFACE	29	1,487	-2.5	-12.2	18	.9	29	12	-7.5	-11.3	09	2.8	29	14	27.3	23.5	07	4.2	29	1,198	-1.9	-9.0	34	.6
1000													29	81	26.3	21.0	07	5.3						
950							29	455	-4.1	-13.5	09	5.8	29	533	22.9	18.4	07	8.8						
900							29	890	-6.8	-15.1	09	4.8	29	1,002	19.8	15.0	08	8.8						
850							29	1,334	-9.8	-17.0	08	4.4	29	1,493	16.9	10.3	08	7.6	29	1,509	6.9	-8.2	31	1.3
800	29	2,007	4.0	-12.1	26	3.6	29	1,799	-12.5	-20.0	10	2.8	29	2,010	14.9	5.7	09	7.4	29	2,005	4.3	-10.5	24	1.6
750	29	2,530	1.7	-14.7	27	5.7	[illegible]	2,289	-15.3	-23.0	13	1.6	29	2,554	12.6	.7	09	6.5	29	2,527	1.6	-13.2	26	3.0
700	29	3,082	-1.7	-17.7	29	6.7	29	2,807	-18.6	-24.7	18	1.8	29	3,130	9.6	-4.5	09	5.7	29	3,080	-1.5	-16.7	27	4.9
650	[illegible]	3,668	-5.2	-20.0	29	7.6	29	3,356	-21.9	-27.2	18	2.0	29	3,743	7.1	-8.9	09	6.3	29	3,666	-5.2	-21.6	28	6.7
600	[illegible]	4,292	-9.4	-23.7	29	9.4	29	3,941	-25.3	-31.8	25	1.6	29	4,397	3.4	-13.7	09	7.0	29	4,290	-9.1	-24.8	29	9.0
550	[illegible]	4,959	-13.9	-28.2	29	11.5	29	4,568	-29.0	-35.6	26	2.9	29	5,097	-.8	-17.5	08	6.9	29	4,958	-13.5	-28.5	28	11.2
500	[illegible]	5,676	-18.8	-31.7	28	14.0	29	5,244	-33.5	-39.8	27	3.8	29	[illegible]	-5.1	-22.7	09	6.1	29	5,675	-18.8	-32.8	28	13.1
450	[illegible]	[illegible]	-24.3	-36.6	29	14.7	[illegible]	5,976	-38.6	-41.7	27	4.8	[illegible]	6,672	-10.0	-27.0	09	5.9	[illegible]	6,452	-24.3	-37.4	28	14.6
400	[illegible]	[illegible]	-31.0	-42.9	29	16.6	29	6,775	-43.9	-45.5	27	6.7	29	7,571	-15.6	-33.4	10	5.2	29	7,300	-30.6	-41.7	29	16.1
350	29	8,235	-38.3	-46.7	29	18.7	29	[illegible]	-48.4		29	7.7	[illegible]	8,569	-22.3	-39.5	11	4.8	[illegible]	8,237	-38.1	-46.3	28	17.6
300	29	9,274	-46.6		29	23.5	29	[illegible]	-51.4		29	10.4	[illegible]	9,680	-30.7	-47.0	12	3.8	[illegible]	9,276	-46.7		29	20.9
250	[illegible]	10,460	-55.5		29	26.3	29	9,854	-51.4		30	11.8	29	10,947	-41.1		14	4.5	29	10,462	-55.5		29	23.7
200	28	11,861	-60.6		28	28.3	29	11,312	-48.9		29	12.3	29	12,424	-53.4		15	5.4	29	11,862	-61.5		28	24.1
175	[illegible]	12,694	-59.8		28	27.4	29	12,190	-48.4		29	14.1	29	13,270	[illegible]		14	6.0	29	12,692	-60.3		28	23.2
150	28	13,659	-59.8		28	26.1	29	13,205	-48.2		29	15.1	[illegible]	14,214	-67.8		14	6.4	29	13,656	-59.1		28	21.1
125	28	14,792	-62.4		28	23.1	29	14,407	-48.5		30	14.9	29	15,290	-75.7		12	8.4	29	14,795	-61.2		28	21.1
100	[illegible]	16,159	-65.2		28	18.3	29	15,876	-48.5		30	15.2	29	16,555	-82.6		10	12.7	29	16,173	-63.2		28	15.5
80	28	17,517	-65.7		29	14.6	29	17,340	-49.6		30	15.8	29	17,804	-79.5		10	5.9	28	17,542	-63.2		29	11.7
70	28	18,330	-64.7		29	10.8	28	18,218	-49.3		30	16.0	29	18,572	-74.3		19	.5	28	18,365	-62.2		29	9.1
60	27	19,272	-63.4		30	7.7	28	19,229	-49.3		31	16.2	28	19,476	-70.4		27	6.0	28	19,318	-61.9		31	6.3
50	24	20,409	-61.3		32	5.3	28	20,425	-49.3		31	17.1	28	20,573	-65.6		27	8.3	28	20,453	-59.8		33	5.0
40	[illegible]	21,807	-59.7		36	3.1	28	21,888	-49.3		31	16.4	28	21,942	-61.3		27	8.1	28	21,853	-58.3		36	4.6
30	20	23,611	-57.8		02	4.4	[illegible]	23,791	-48.7		32	17.7	[illegible]	23,745	-57.3		27	4.5	28	23,671	-56.6		03	7.1
25	20	[illegible]	-57.1		04	6.4	25	24,985	-48.3		32	18.6	[illegible]	24,905	-54.5		12	1.7	27	24,835	-55.3		04	7.3
20	[illegible]	26,204	-54.8		03	6.5	24	26,454	-48.3		32	18.3	[illegible]	26,343	-52.1		10	8.1	26	26,260	-54.3		04	8.8
15	[illegible]	28,021	-52.2		02	7.0	[illegible]	28,374	-46.8		32	17.5	[illegible]	[illegible]	-50.1		09	14.9	25	28,125	-52.1		05	10.4
10	5	30,642	-47.7				[illegible]	31,026	-47.4				20	30,884	-45.5		09	21.1	20	30,781	-49.2		05	10.3
7													18	33,289	-40.4		09	24.5						
5													7	35,625	-33.7									
4													5	37,215	-33.2									

[illegible] refers to those of dynamic height only. Although the number of temperature observations at [illegible] are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by ra[illegible] height (geopotential) in units of .98 dynamic meter, temperature and de[illegible] Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

FEBRUARY 1972

Sun's zenith distance

ALBUQUERQUE, N. MEX.

Air mass

Date	A M 78.7°	A M 75.7°	A M 70.7°	A M 60.0°	*	P M 60.0°	P M 70.7°	P M 75.7°	P M 78.7°
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
1-----	----	----	----	----	----	1.35	1.14	1.00	.89
2-----	D(0.92)	D(1.09)	D(1.20)	D(1.33)	D(1.16)	D(1.17)	D(.86)	D(.85)	D(0.74)
3-----	1.08	1.16	1.24	1.39	1.43	1.35	1.23	1.13	1.04
4-----	(1.06)	----	----	----	----	----	----	----	----
6-----	.91	1.00	1.13	1.29	1.33	----	----	----	----
7-----	.93	1.02	1.12	1.28	1.35	(1.24)	1.16	1.04	.94
8-----	1.00	1.10	1.21	1.34	1.38	(1.28)	(1.09)	(.93)	(.81)
11----	----	----	1.20	1.37	1.45	1.37	1.22	1.13	1.03
12----	1.05	1.18	1.27	1.40	1.47	1.38	1.24	1.13	1.03
13----	1.07	1.16	1.27	1.40	1.46	1.36	1.22	1.13	1.03
14----	1.03	1.12	(1.18)	1.35	----	----	----	----	----
15----	----	----	----	----	----	1.33	1.13	1.09	.93
17----	1.02	1.13	1.21	1.34	1.41	1.33	1.17	1.07	.98
18----	1.02	(1.08)	----	----	----	----	----	----	----
20----	----	----	----	1.34	----	1.29	----	(1.03)	(.92)
21----	(1.00)	----	(1.20)	----	----	----	----	----	----
22----	----	----	----	----	----	H(1.10)	H(.89)	H(.76)	H(.59)
23----	(.89)	1.08	1.21	1.32	1.44	----	----	----	----
24----	1.04	1.12	(1.19)	(1.35)	1.45	----	----	----	----
25----	.96	1.06	1.19	1.32	1.36	----	(1.02)	----	----
26----	(.86)	----	----	----	(1.21)	----	----	----	----
27----	----	(1.20)	----	----	(1.42)	(1.32)	----	----	----
28----	----	----	----	----	(1.44)	1.35	1.20	1.08	.96
29----	1.03	1.13	(1.23)	----	----	----	----	----	----
Averages	1.01	1.11	1.21	1.35	1.41	1.34	1.19	1.09	0.98

TUCSON, ARIZ.

Air mass

Date	A M 78.7°	A M 75.7°	A M 70.7°	A M 60.0°	*	P M 60.0°	P M 70.7°	P M 75.7°	P M 78.7°
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
2-----	----	----	----	----	----	1.11	----	1.14	1.05
3-----	1.09	----	1.21	1.42	1.54	----	----	1.14	1.06
6-----	----	----	----	----	----	----	----	1.00	[illegible]
7-----	.82	.95	1.07	1.26	----	----	----	1.05	[illegible]
8-----	.91	.97	1.12	1.30	----	----	----	----	----
10----	----	----	----	----	----	1.21	1.07	.93	[illegible]
11----	.90	1.00	1.11	1.30	1.58	1.28	1.13	[illegible]	[illegible]
14----	----	----	1.11	1.33	1.46	1.32	1.18	[illegible]	[illegible]
15----	----	----	1.14	1.29	1.45	1.33	1.13	[illegible]	[illegible]
17----	1.03	1.10	1.22	1.39	1.49	1.35	1.19	[illegible]	[illegible]
18----	----	----	----	----	1.45	----	----	----	----
19----	----	1.08	----	1.36	----	----	----	----	----
20----	.96	1.04	1.15	1.31	1.43	1.23	1.09	[illegible]	----
21----	----	----	----	----	1.42	----	----	----	----
22----	----	----	----	----	----	1.24	1.12	.93	.87
23----	.93	1.03	1.15	1.33	1.46	1.41	1.26	1.15	[illegible]
24----	1.00	1.08	1.20	----	1.43	----	----	----	----
25----	1.00	1.09	1.17	1.32	1.46	1.54	1.19	----	----
26----	.92	1.04	1.16	1.33	1.44	----	----	----	----
27----	.96	1.08	1.19	1.34	1.46	1.29	1.13	1.01	----
28----	.96	1.05	1.18	1.31	1.47	1.27	1.04	.94	.85
29----	.93	----	1.11	----	1.42	1.24	.97	[illegible]	[illegible]
Averages	0.95	1.04	1.16	1.33	1.45	1.30	1.12	1.01	0.91

OMAHA, NEBR.

Air mass

Date	A M 78.7°	A M 75.7°	A M 70.7°	A M 60.0°	*	P M 60.0°	P M 70.7°	P M 75.7°	P M 78.7°
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
3-----	0.90	1.02	1.14	1.31	----	----	----	----	----
4-----	HS .92	HS1.06	HS1.18	HS1.33	HS1.37	1.33	----	----	----
6-----	----	----	HS1.01	HS1.21	HS1.26	HS1.21	HS0.74	HS0.50	HS0.18
10----	----	----	----	----	----	HM .85	HM .61	HM .46	HS .37
11----	----	----	----	----	----	HM1.11	HM .90	HS .66	HM .56
12----	.65	.73	HM .91	HM1.15	----	----	----	----	----
16----	----	----	----	----	----	1.24	1.11	----	----
17----	HS .98	HS1.05	HS1.16	HS1.34	HS1.32	----	----	----	----
18----	----	.90	HS1.14	----	----	----	1.18	1.07	.97
20----	HS .86	HS .97	HS1.08	----	----	----	----	----	----
21----	----	HS .81	----	HS1.26	----	----	----	----	----
26----	HI .60	HI .70	----	----	----	----	----	----	----
Averages	0.82	0.91	1.09	1.27	1.42	1.15	0.91	0.69	0.52

MADISON, WIS.

Air mass

Date	A M 78.7°	A M 75.7°	A M 70.7°	A M 60.0°	*	P M 60.0°	P M 70.7°	P M 75.7°	P M 78.7°
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
4-----	S 0.95	S 1.06	S 1.16	S 1.33	S 1.33	S 1.33	S [illegible]	S 1.05	S [illegible]
6-----	----	----	----	S 1.28	S 1.31	S 1.29	----	----	S .92
7-----	S 1.00	S 1.09	S 1.21	S 1.33	S 1.37	S 1.33	S 1.18	S 1.06	S .92
9-----	S .78	S .96	S 1.04	S 1.24	S [illegible]	S 1.25	S 1.10	----	----
15----	----	----	----	----	----	M 1.12	M .96	M .81	M .71
16----	M .79	M .89	M 1.03	----	----	----	----	----	----
19----	S .95	S 1.05	S 1.15	S 1.28	S 1.33	S 1.28	S 1.14	S 1.01	S [illegible]
22----	S .82	S .92	S 1.06	S 1.01	----	----	----	----	----
26----	S .83	S .93	S 1.09	S 1.24	S 1.32	M 1.18	M 1.00	M .90	----
Averages	0.87	0.99	1.11	1.21	1.32	1.25	1.16	0.97	0.88

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BS	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

[illegible]

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	153	[illegible]	---	[illegible]	[illegible]	441	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	371	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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FLAMING GORGE UTAH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	344	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	414	[illegible]	[illegible]	[illegible]	408	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
FORT WORTH TEXAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	211	48	[illegible]	413	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
FRESNO CALIFORNIA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	314	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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GLASGOW MONTANA	[illegible]	[illegible]	[illegible]	[illegible]	181	[illegible]	[illegible]	[illegible]	147	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	312	316	[illegible]	[illegible]	[illegible]	[illegible]	122	[illegible]	[illegible]	333	165	[illegible]	[illegible]			[illegible]
GLOUCESTER POINT VA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	377	[illegible]	365	341	189	196	353	385	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
GRAND JUNCTION COLO.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	328	[illegible]	[illegible]	366	351	356	[illegible]	[illegible]	316	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	221	[illegible]	[illegible]	452	174			[illegible]
GREAT FALLS MONTANA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	266	211	[illegible]	[illegible]	208	181	74	[illegible]	242	217	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	276	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
GREENSBORO N.C.	145	54	54	[illegible]	[illegible]	[illegible]	[illegible]	367	[illegible]	343	341	73	273	398	349	[illegible]	[illegible]	[illegible]	[illegible]	451	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	438	[illegible]	445			274
INDIANAPOLIS INDIANA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	344	[illegible]	315	[illegible]	[illegible]	[illegible]	37	360	112	477	[illegible]	[illegible]	---	384	[illegible]	---	---	147	[illegible]	[illegible]	351	[illegible]	[illegible]			[illegible]
ITHACA NEW YORK	204	[illegible]	124	182	[illegible]	168	[illegible]	267	282	245	333	[illegible]	47	79	153	[illegible]	249	[illegible]	43	225	230	344	[illegible]	137	[illegible]	98	358	276	[illegible]			211
LAKE CHARLES LA.	149	121	[illegible]	416	[illegible]	[illegible]	[illegible]	291	435	368	55	291	333	235	[illegible]	[illegible]	---	[illegible]	408	[illegible]	417	---	412	[illegible]	[illegible]	317	[illegible]	[illegible]	[illegible]			[illegible]
LAKELAND FLORIDA	66	[illegible]	76	448	450	398	208	207	92	355	344	[illegible]	[illegible]	403	125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	465	457	424	[illegible]	477	[illegible]	387	439			334
LANDER WYOMING	[illegible]	---	---	[illegible]	[illegible]	[illegible]	256	[illegible]	172	365	[illegible]	[illegible]	[illegible]	326	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	141	273	335	346	[illegible]	347	377			297
LAS VEGAS NEVADA	341	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	352	280	277	381	390	384	[illegible]	[illegible]	395	374	[illegible]	[illegible]	391	415	[illegible]	[illegible]	368	[illegible]	[illegible]	384	441	445	[illegible]			361
LITTLE ROCK ARKANSAS	78	121	[illegible]	376	[illegible]	75	370	391	357	185	354	285	410	399	415	[illegible]	177	450	[illegible]	[illegible]	[illegible]	[illegible]	176	177	[illegible]	404	[illegible]	414	191			[illegible]
LOS ANGELES CALIF.	[illegible]	319	[illegible]	[illegible]	121	287	331	145	313	320	368	407	413	349	373	[illegible]	[illegible]	[illegible]	411	414	181	[illegible]	416	[illegible]	397	317	435	214	412			324
LOS ANGELES CALIF.U	[illegible]	339	303	---	154	[illegible]	356	156	283	326	359	407	410	335	358	[illegible]	361	287	[illegible]	[illegible]	247	447	[illegible]	385	[illegible]	[illegible]	419	[illegible]	[illegible]			[illegible]
MADISON WISCONSIN	147	144	[illegible]	[illegible]	[illegible]	318	346	---	331*	314	88	129	146	[illegible]	344	[illegible]	[illegible]	229	306	[illegible]	[illegible]	[illegible]	86	375	[illegible]	[illegible]	176	357	[illegible]			[illegible]
MANHATTAN KANSAS	51	133	376	[illegible]	274	[illegible]	357	148	272	147	233	275	379	277	373	258	[illegible]	415	[illegible]	404	[illegible]	[illegible]	291	[illegible]	131	407	[illegible]	391	[illegible]			[illegible]
MATANUSKA ALASKA	[illegible]	[illegible]	62	[illegible]	97	85	51	75	64	77	80	130	124	88	78	144	[illegible]	153	160	---	---	164	176	190	196	194	[illegible]	[illegible]	223			124
MEDFORD OREGON	306	283	167	94	184	134	189	264	301	295	144	175	269	117	202	129	[illegible]	183	243	[illegible]	208	[illegible]	83	187	136	243	[illegible]	149	214			199
MIAMI FLORIDA	196	[illegible]	319	400	[illegible]	392	342	260	84	305	357	406	361	436	339	344	346	278	475	[illegible]	407	293	473	450	451	409	478	[illegible]	425			[illegible]
MIDLAND TEXAS	---	---	---	---	---	---	---	---	337	80	303	459	463	453	[illegible]	456	460	462	443	469	468	248	[illegible]	498	383	413	[illegible]	515	511			417
NASHVILLE TENNESSEE	77	[illegible]	47	[illegible]	[illegible]	27	359	352	326	280	341	27	48	372	275	329	174	[illegible]	392	407	[illegible]	242	184	62	178	103	432	406	403			242
NEW YORK CENTRAL PRK	227	38	18	[illegible]	329	27	254	337	271	331	331	243	10	121	268	325	71	93	11	368	230	395	191	161	236	18	358	377	371			215
NORTH OMAHA NEBRASKA	106	166	346	[illegible]	[illegible]	352	216	261	---	338	369	343	348	151	311	316	396	386	306	[illegible]	184	256	388	356	163	414	[illegible]	412	420			308
OAK RIDGE TENNESSEE	85	59	66	349	352	39	290	354	326	314	335	65	142	366	156	234	124	121	218	416	165	331	44	50	155	236	425	395	396			228
OKLAHOMA CITY OKLA.	40	63	397	---	74	309	370	465	---	189	78	327	405	---	301	403	415	386	392	409	[illegible]	[illegible]	336	[illegible]	322	317	451	438	462			310
PALMER ALASKA	20	26	[illegible]	75	79	72	48	60	53	68	75	105	[illegible]	78	74	124	132	132	135	141	141	137	149	161	166	165	184	181	185			108

SOLAR RADIATION TOTALS Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

FEBRUARY 1972

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PHOENIX ARIZONA	264	368	353	254	279	447	354	348	162	351	394	394	406	392	388	377	410	262	329	366	347	411	432	405	418	422	436	453	428			[illegible]
PORTLAND MAINE	[illegible]	140	250	158	251	238	[illegible]	273	284	187	284	266	83	74	250	381	256	145	34	272	283	[illegible]	156	254	252	69	362	282	298			[illegible]
RAPID CITY S.DAK.	148	300	223	271	189	244	181	235	162	304	296	298	85	286	249	196	333	216	311	293	326	288	312	266	211	390	328	254	118			[illegible]
RENO NEVADA	---	---	---	---	---	---	---	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			--
RICHLAND 25 NW WASH.	272	151	180	133	180	140	224	141	97	81	229	224	254	132	195	322	65	76	135	312	247	197	254	265	220	245	259	248	358			[illegible]
RIVERSIDE CALIFORNIA	379	416	373	261	148	326	413	239	266	396	424	478	465	400	428	448	444	360	444	468	277	398	445	424	417	409	505	478	162			[illegible]
RUSTON LOUISIANA	205	152	---	383	---	---	---	370	383	256	226	466	415	355	206	355	---	398	450	147	312	[illegible]	394	229	329	266	308	449	[illegible]			[illegible]
SAINT CLOUD MINN.	145	237	255	300	166	285	287	294	297	311	250	222	191	262*	335	166	169	367	[illegible]	242	335	292	[illegible]*	329	378	243	311	[illegible]	257			[illegible]
SALT LAKE CITY	---	---	---	---	---	---	---	244	262	355	345	295	230	174	127	324	286	328	360	337	279	328	372	335	423	141	385	375	[illegible]			[illegible]
SAN ANTONIO TEXAS	241	262	458	447	46	347	343	367	412	91	[illegible]	342	405	309	[illegible]	447	477	481	447	359	432	282	342	453	332	463	476	385	[illegible]			[illegible]
SANTA MARIA CALIF.	294	350	342	119	103	311	[illegible]	[illegible]	270	370	367	386	391	---	---	391	389	317	397	403	311	355	428	442	[illegible]	434	445	213	[illegible]			[illegible]
SAULT STE MARIE MICH	---	---	--	---	---	---	--	---	---	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			--
SEATTLE TACOMA WASH.	239	237*	212	102	74	61	121	53	147	148	120	26	81	66	44	36	74	252	57	311	127	127	[illegible]	128	201	79	56	65	277			132
SEATTLE WASH. [1]	222	226	205	128	77	68	152	82	165	169	127	47	98	[illegible]	66	94	105	231	80	260	159	161	211	[illegible]	173	133	119	69	261			139
SPOKANE WASHINGTON	251	232	233	164	163	97	132	[illegible]	136	239	104	92	216	134	171	269	77	221	159	[illegible]	261	152	245	[illegible]	128	150	142	151	122			167
STERLING VIRGINIA	207	[illegible]	48	355	[illegible]	55	333	368	323	367	359	324	---	319	[illegible]	386	76	70	---	456	328	462	245	187	271	63	369	332	308			279
SWAN ISLAND W.I.	455	495*	483	271	477	458	477*	530	437	513	518	517	550	521	530	538	513	489	525	493	460*	[illegible]	257	[illegible]	454	[illegible]*	537	562	539*			[illegible]
TAMPA FLORIDA	---	33	13	431	439	407	---	179	60	370	158	383	382	446	60	[illegible]	263	375	502	506	487	470	457	472	241	485	433	388	476			336
TUCSON ARIZONA	113	356	394	241	324	475	342	392	181	248	420	425	426	438	425	411	452	334	361	446	377	384	473	467	472	471	---	499	477			385
UPPER MARLBORO MD	204	69	40	320	336	93	324	348	293	344	328	296	56	326	312	362	49	69	96	414	440	[illegible]	[illegible]	207	323	44	366	274	299			[illegible]
WAKE ISLAND PACIFIC	509	451	464	489	508	529	493	543	239	527	517	533	511	394	449	500	461	532	385	554	521	---	566	[illegible]	578	578	507	492	581			[illegible]

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Charts VII, A, and B, of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

[1] Indicates urban sites

NET RADIATION

Net radiation in langleys [illegible]

[illegible] 19[illegible]

Date. . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	[illegible]	[illegible]	[illegible]	151	-218	-18	[illegible]	-117	-99	109	87	61	74	-10	84	-111	-136	175	164	-102	-83	[illegible]	-31	11	[illegible]	41	[illegible]	[illegible]	[illegible]			[illegible]

The [illegible] instrument [illegible] net radiometer [illegible] The [illegible] the total incoming [illegible] the total outgoing [illegible] at all wave lengths.

These data are [illegible] experimental [illegible] Station. [illegible] instrument [illegible] checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average ([illegible]) at Ames, Iowa

Date. . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. .	9.24	9.68	11.37	11.78	9.55	11.58	9.95	10.97	9.01	9.95	8.83	8.91	[illegible]	10.05	[illegible]	[illegible]	9.98	10.91	11.78	12.39	11.48	11.88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.19	11.57			10.84

These data are from an [illegible] Eppley total ultra violet sensor and [illegible] (Leeds Northrup Recorder). It is at the same location (Agronomy Building, Iowa State University, Ames) as the [illegible] total solar radiation instrumentation. The instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA.

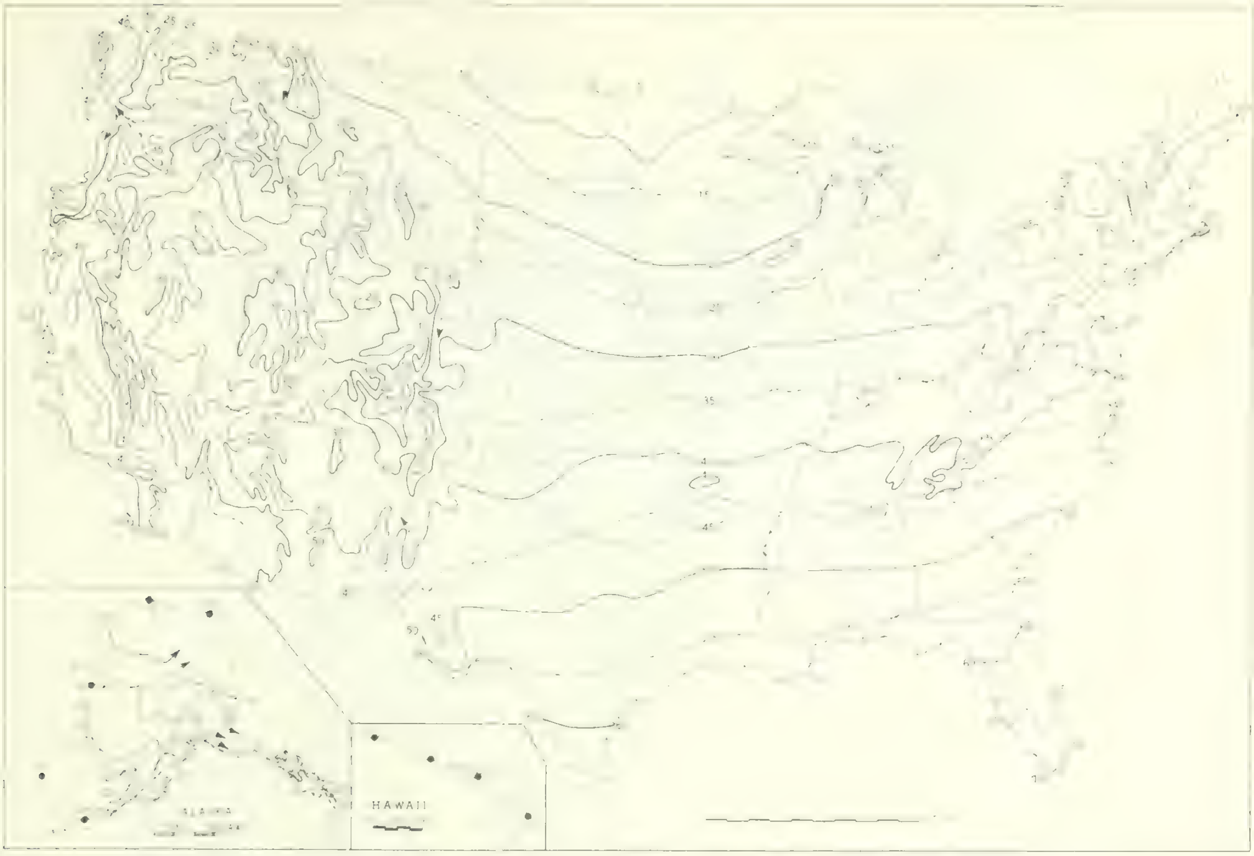
Units: Milli atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O.

Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column [illegible] is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure; e.g., 310 milli atmo-cm ozone implies an ozone layer 0.310 centimeter thick. The code [illegible] designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), February



B. Temperature Departure from 30 - Year Mean (°F 1931-60), February 1972.

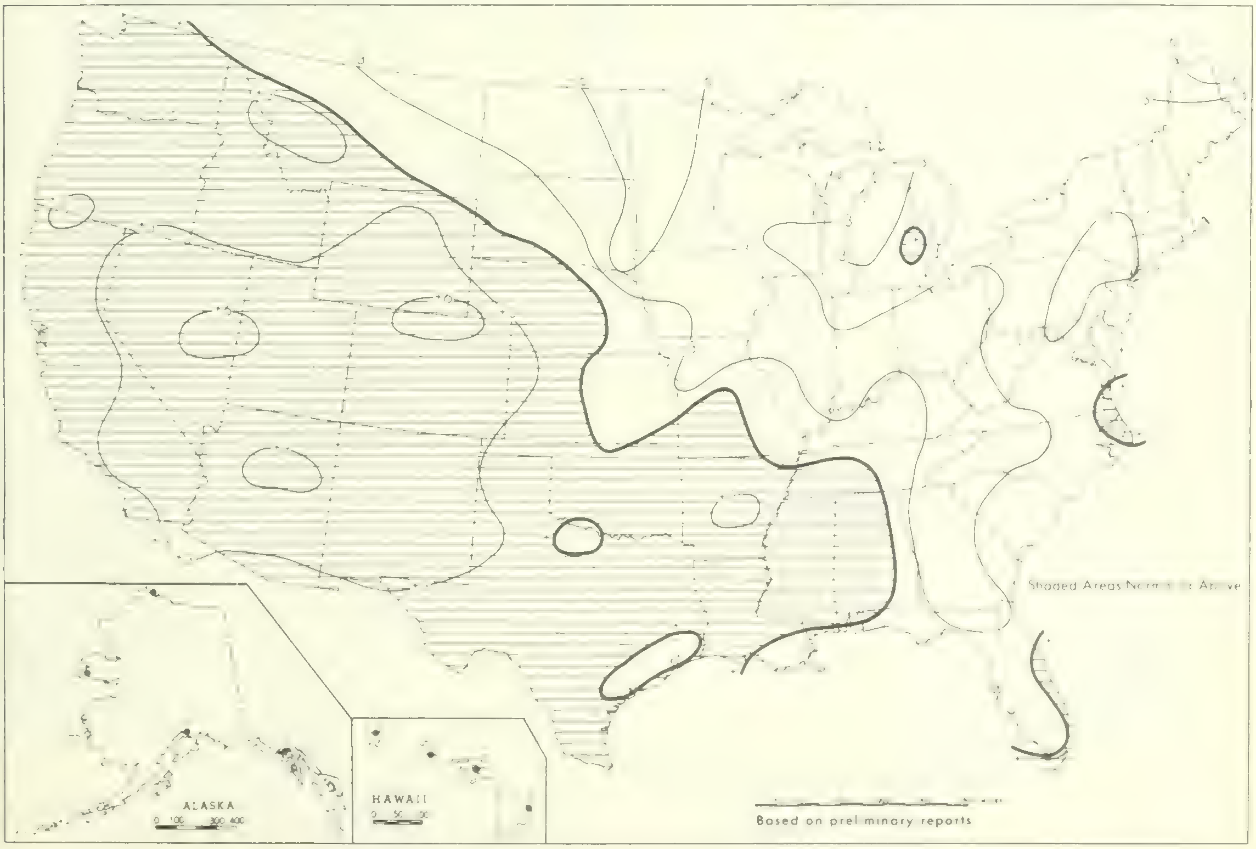
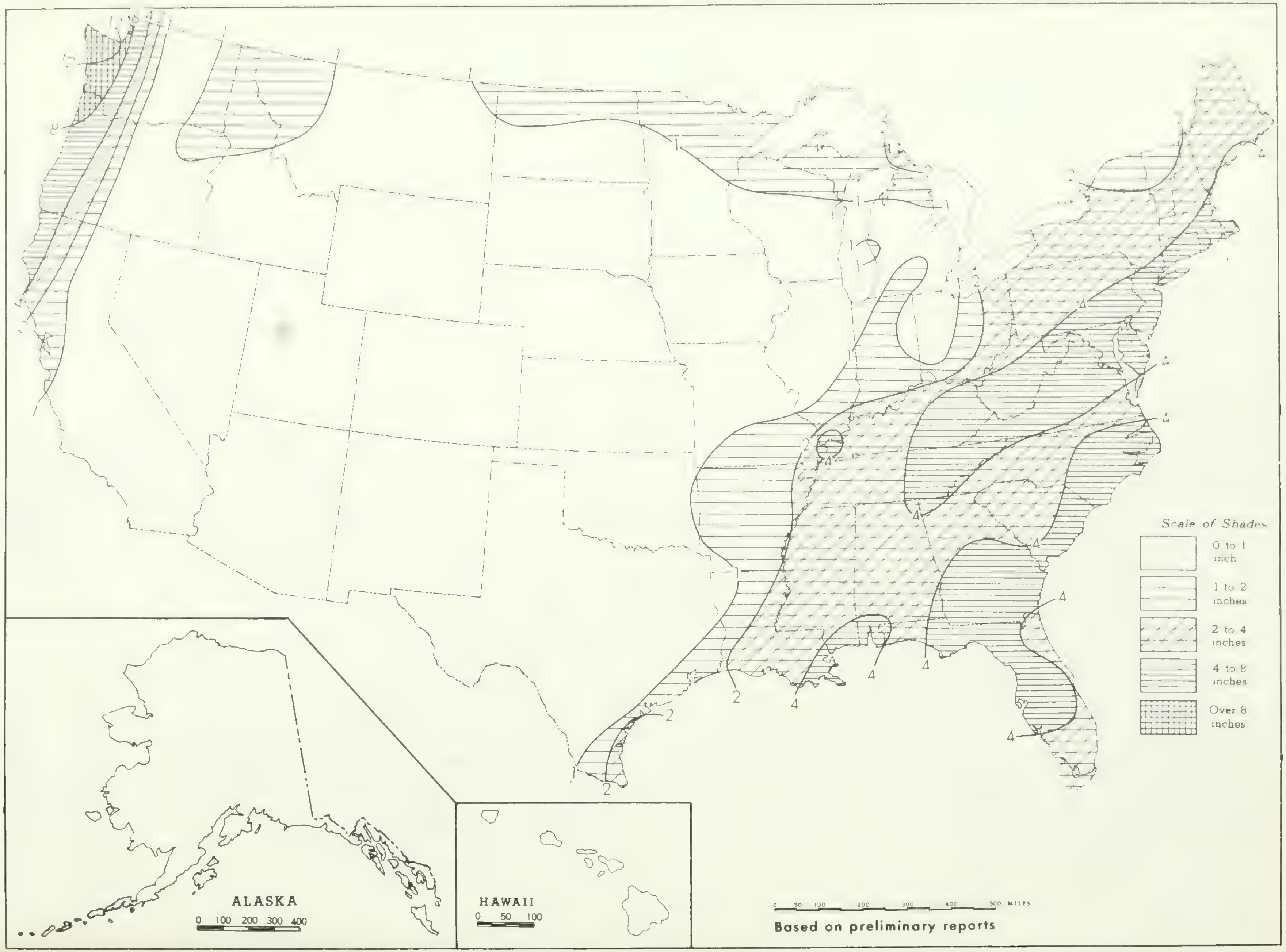
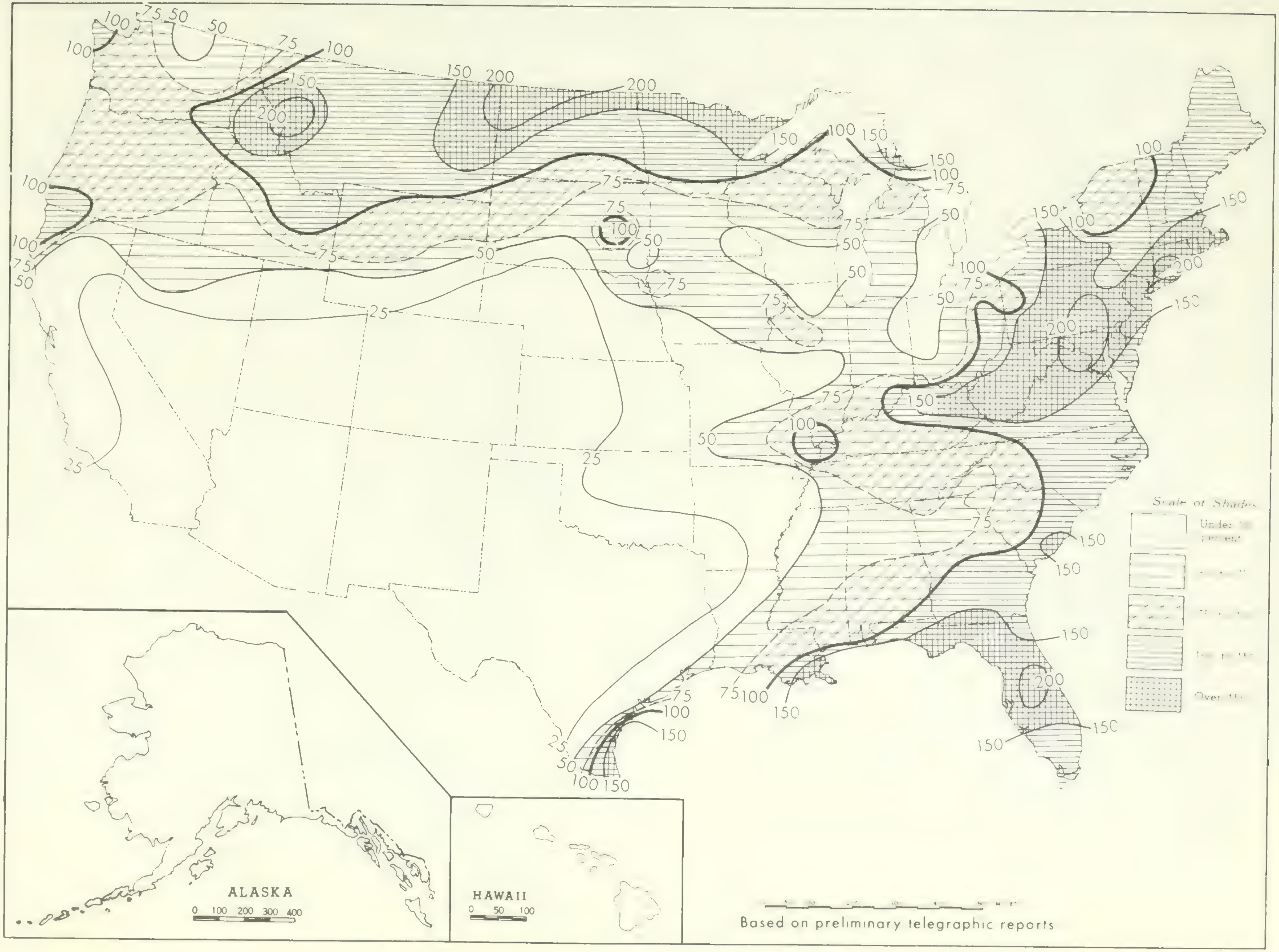


Chart II Total Precipitation (Inches), February 1972



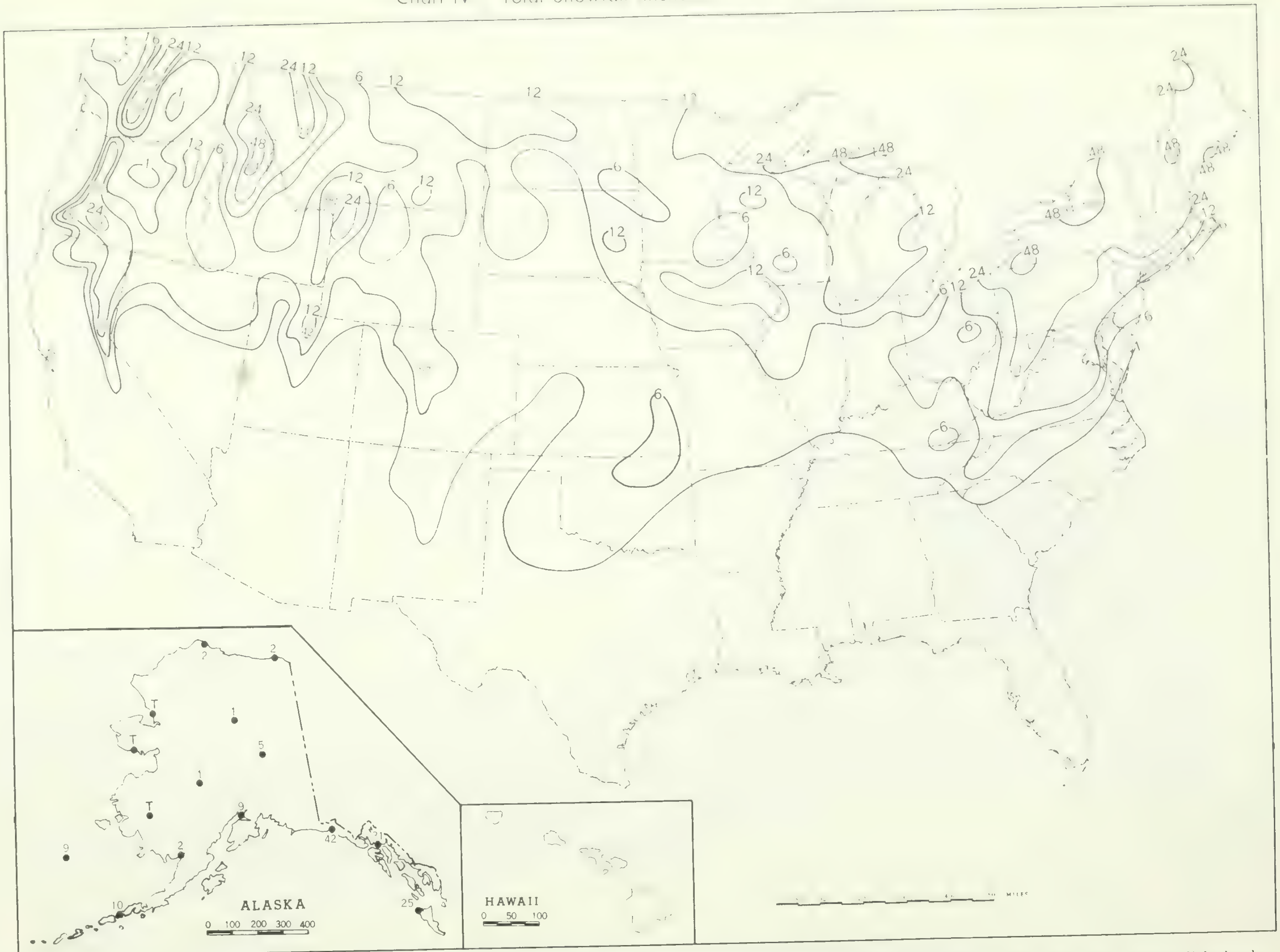
Based on preliminary reports

Chart III. Percentage of Normal Precipitation, **February 1972**



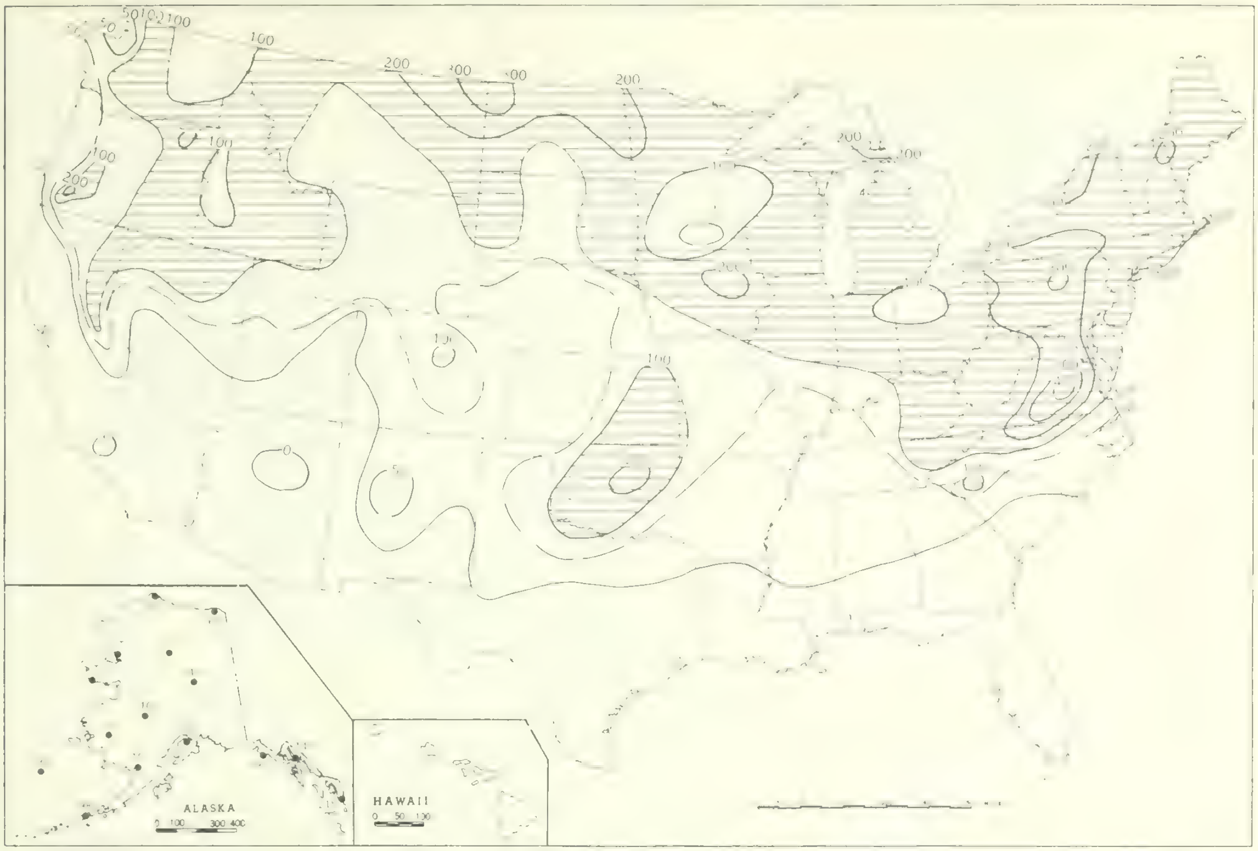
Based on preliminary telegraphic reports

Chart IV Total Snowfall (Inches) February 1972

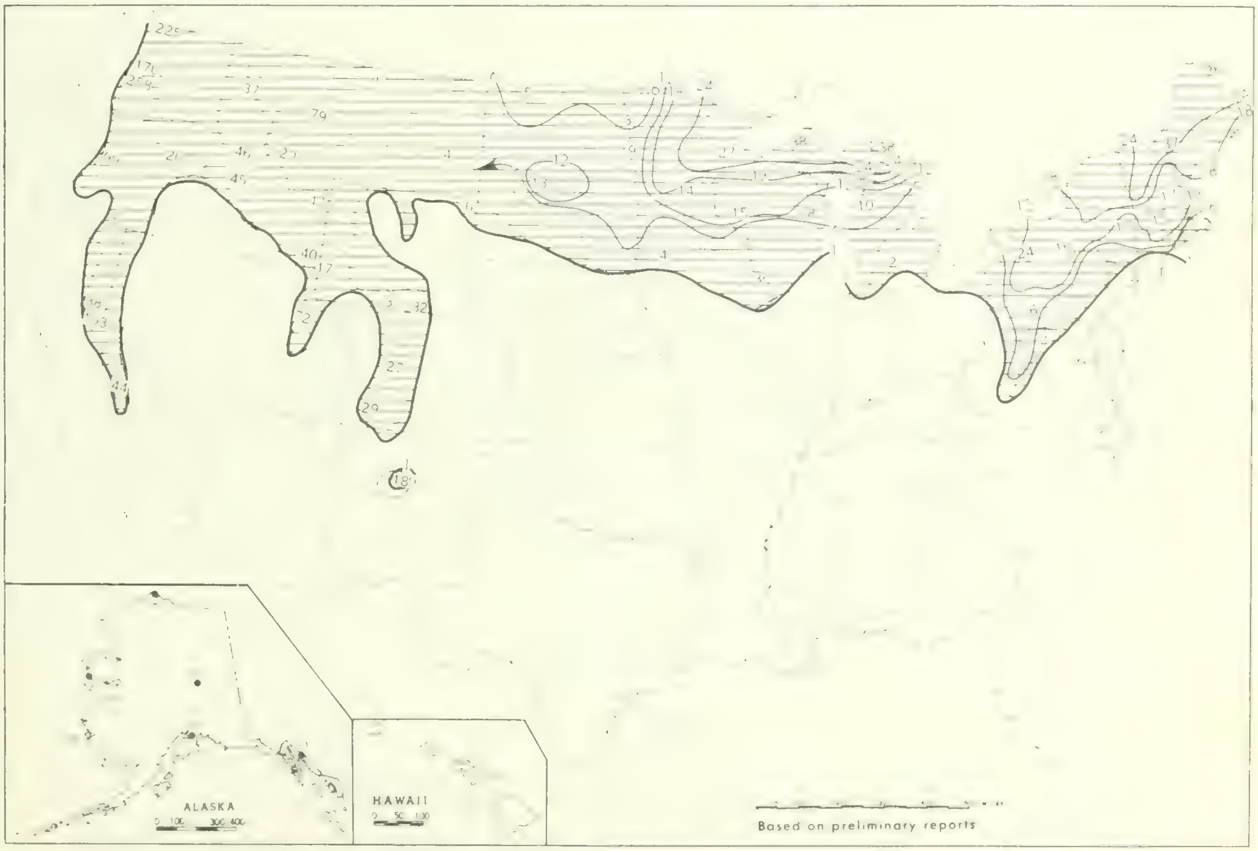


This is the total of unmelted snowfall recorded during the month at **National Weather Service** and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the Far West, earlier and later in the year

Chart V. A. Percentage of Mean Monthly Snowfall, February 1972

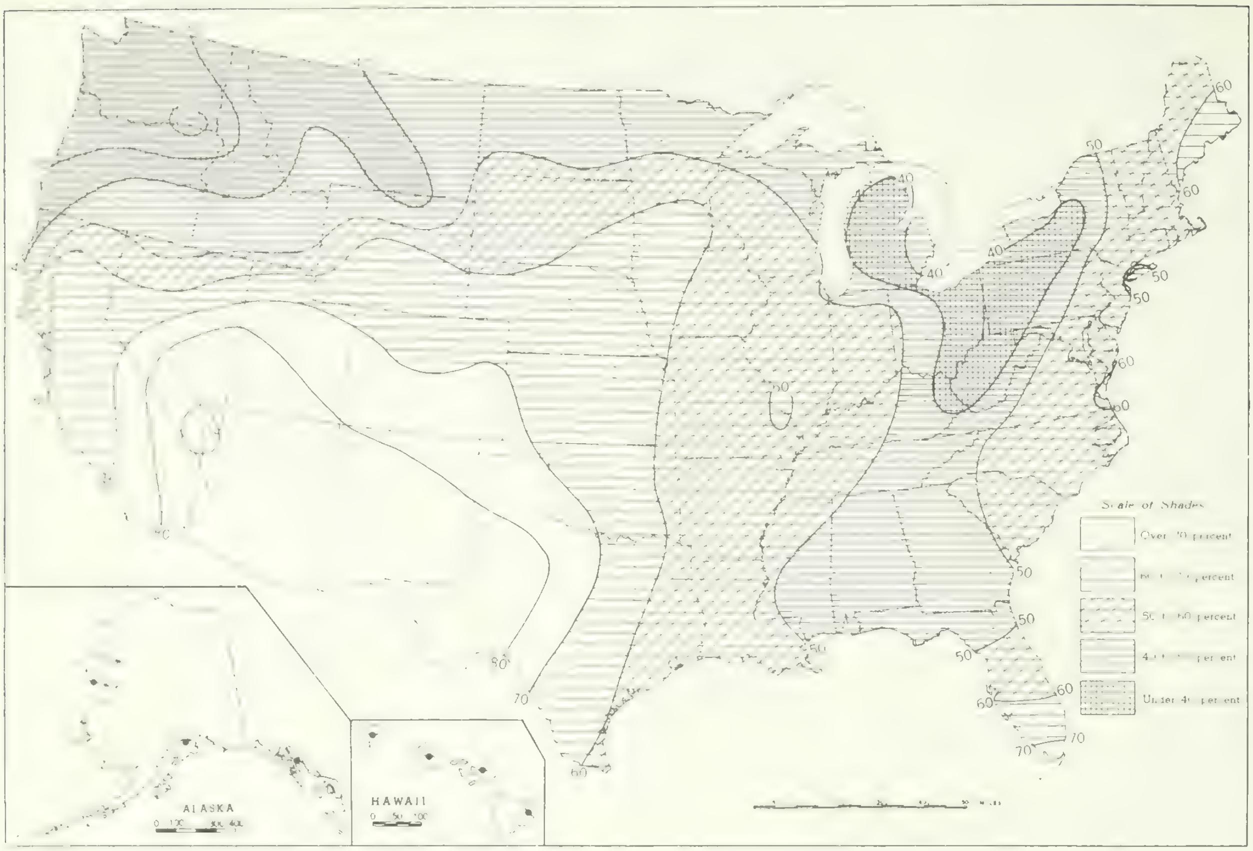


B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., February 28, 1972

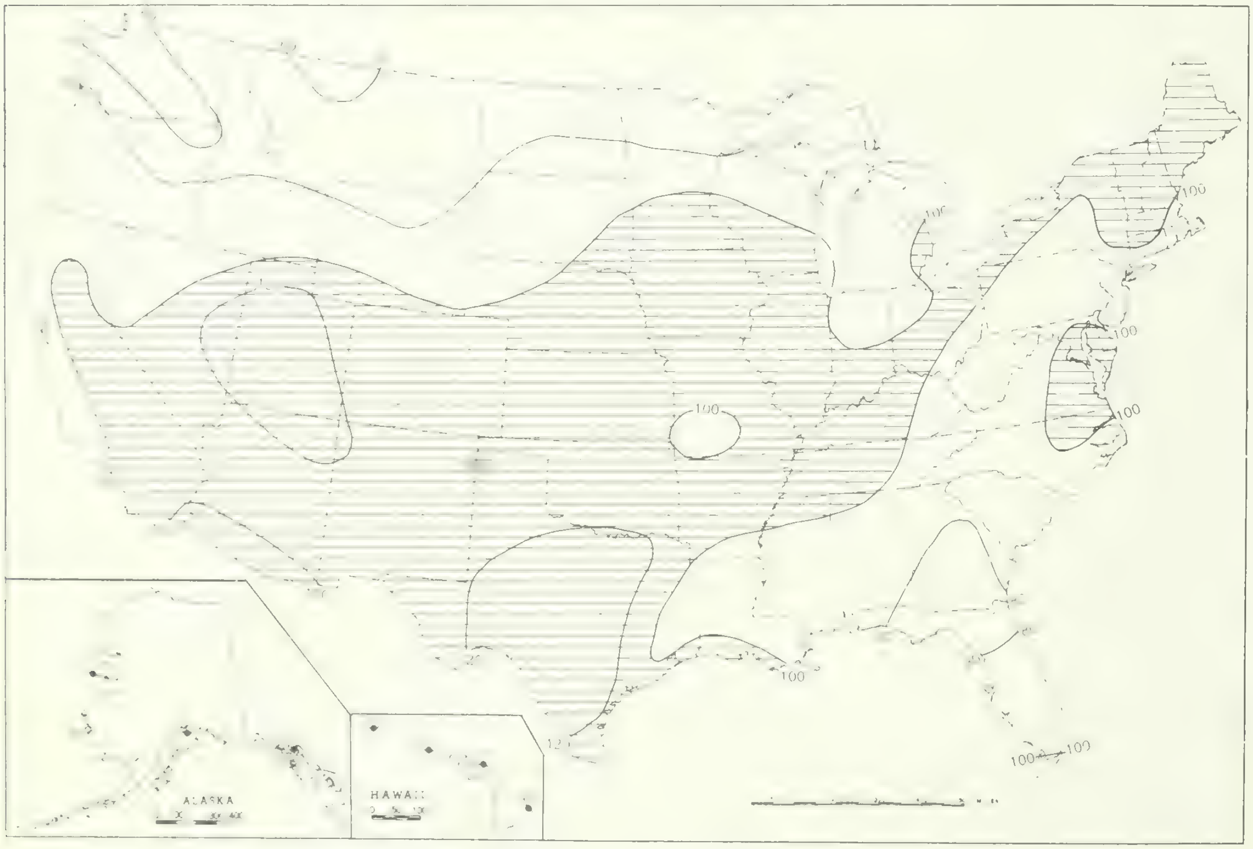


A. Amount of mean monthly snowfall is computed for **National Weather Service** stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. e.s.t., of the Monday nearest the end of the month.
It is based on reports from **National Weather Service** and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, February 1972.

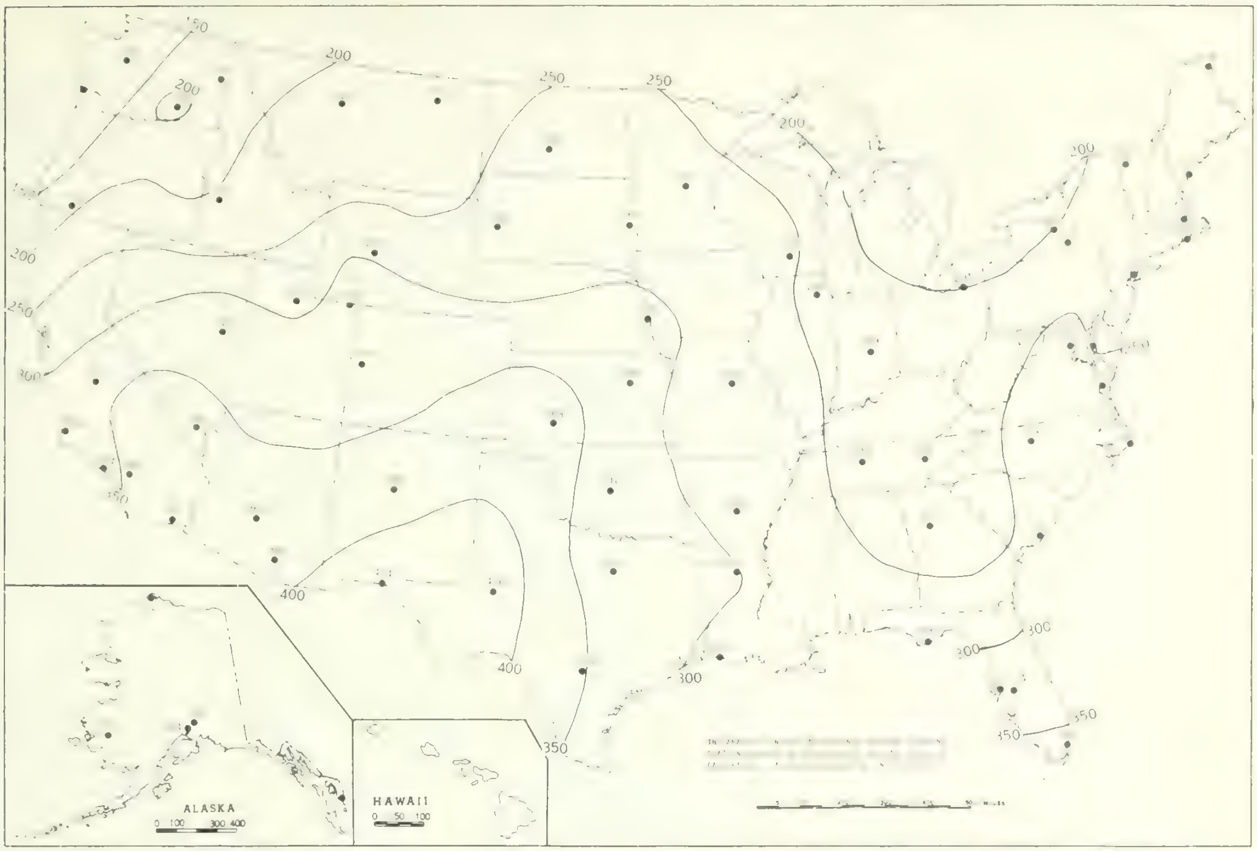


B. Percentage of Mean Monthly Sunshine, February 1972

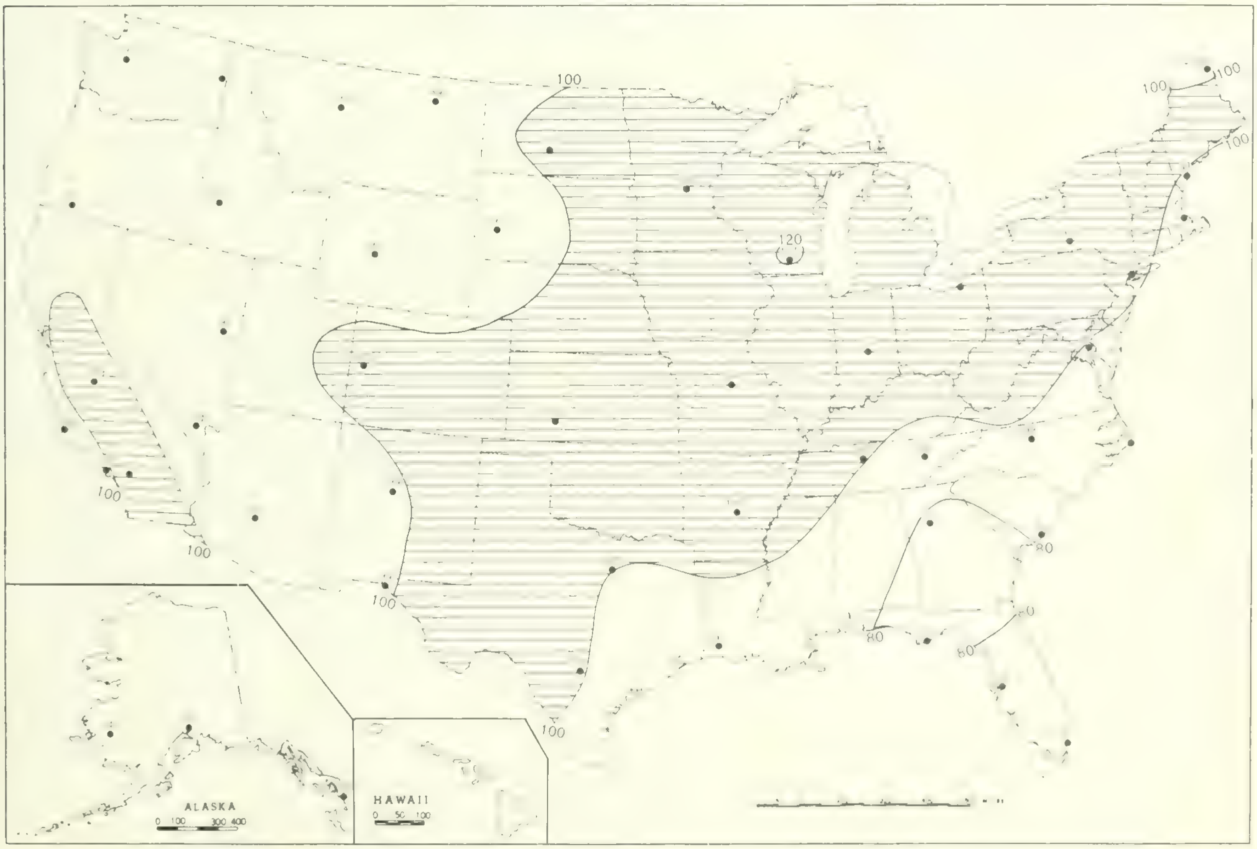


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, February 1972

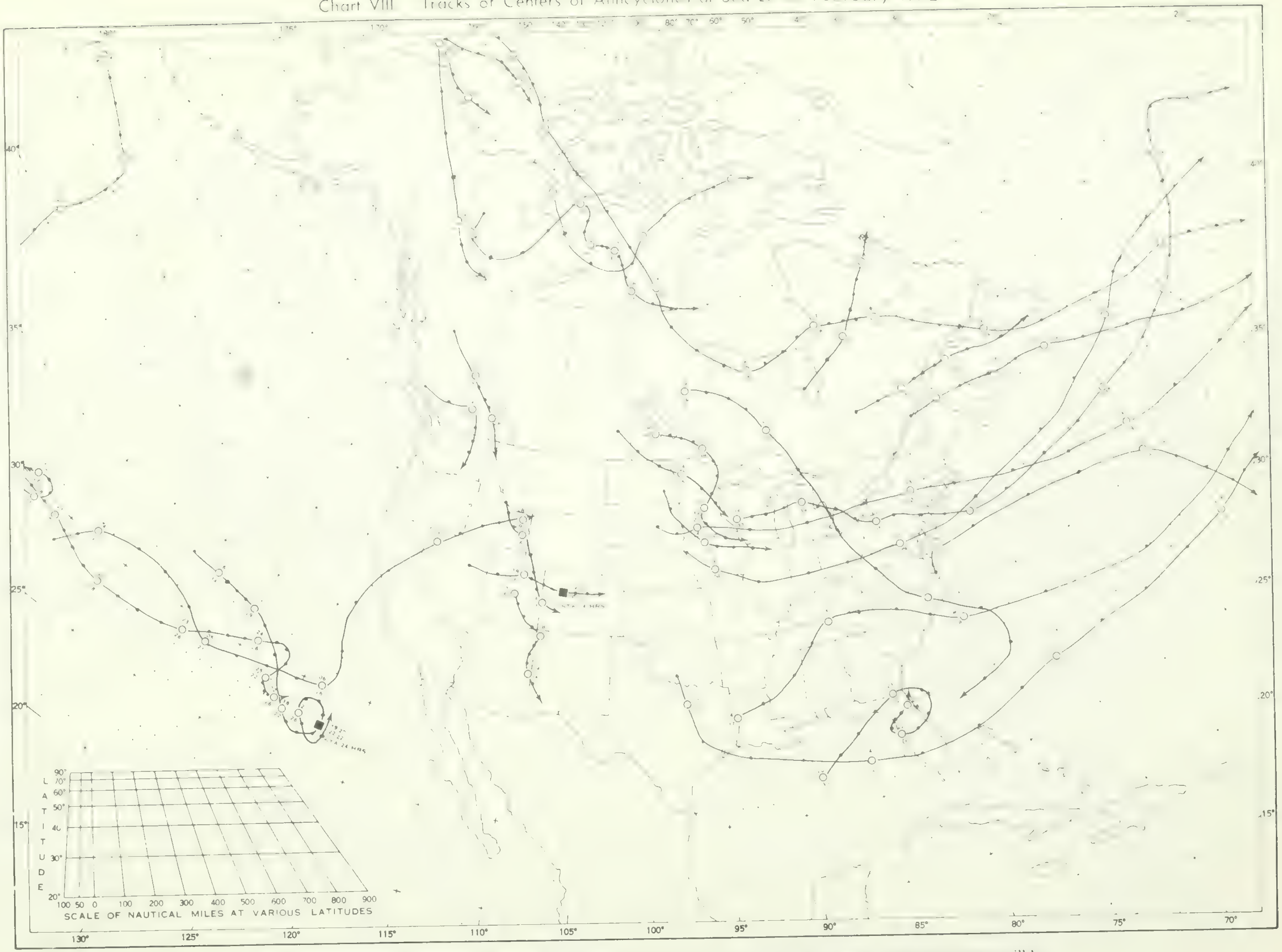


B. Percentage of Mean Daily Solar Radiation, February 1972.



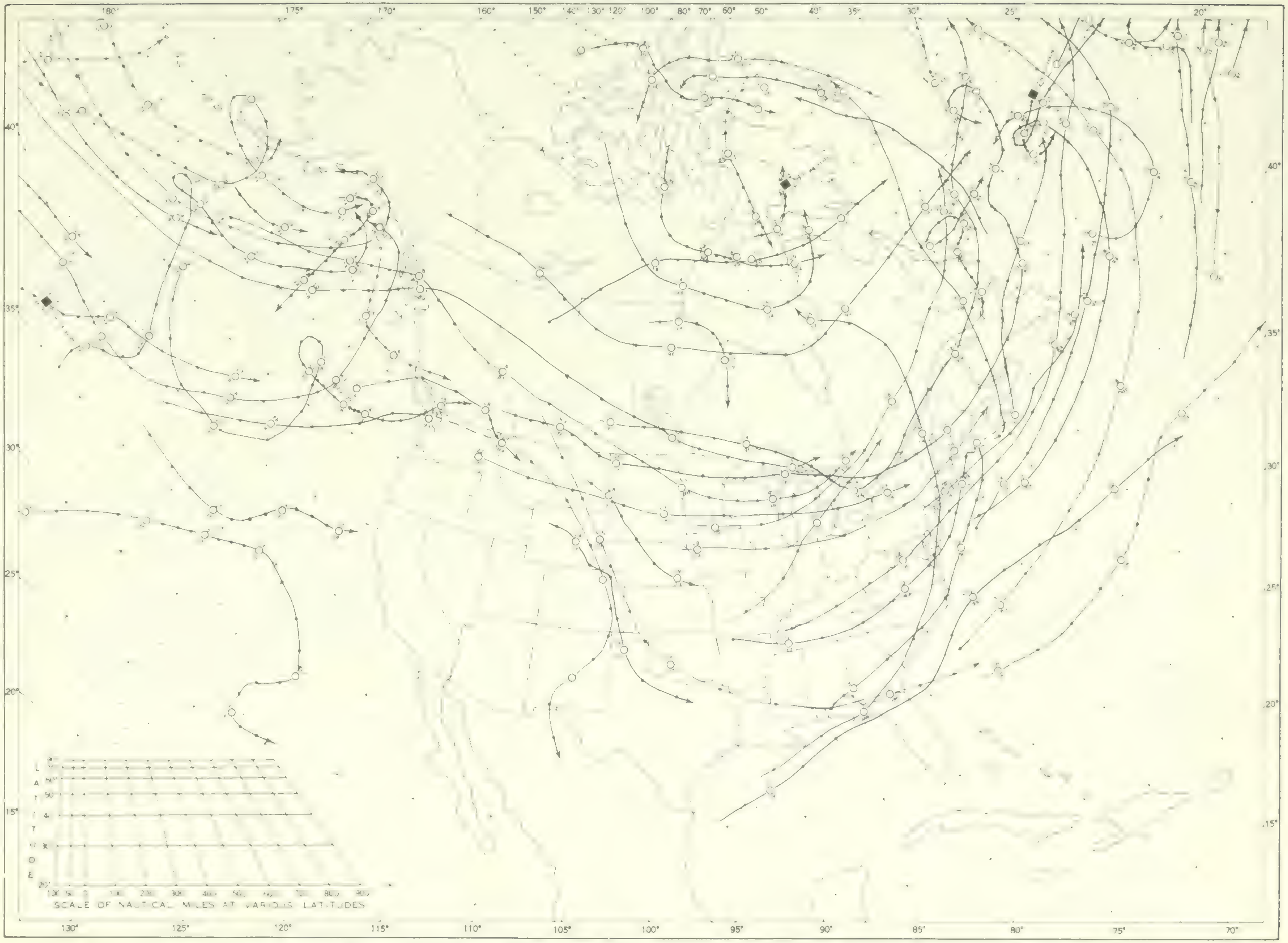
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level February 1972



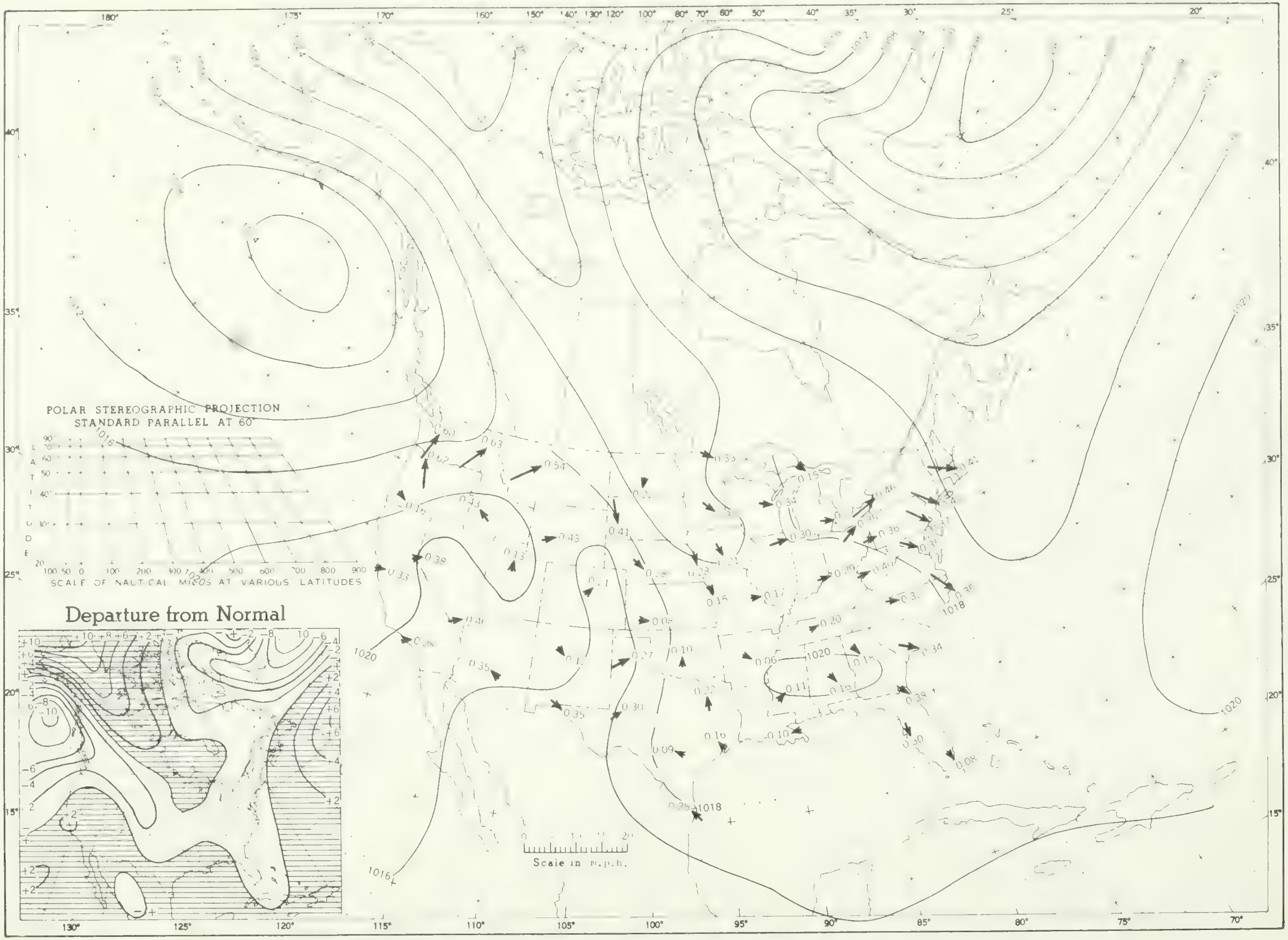
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX   Tracks of Centers of Cyclones at Sea Level **February 1972.**



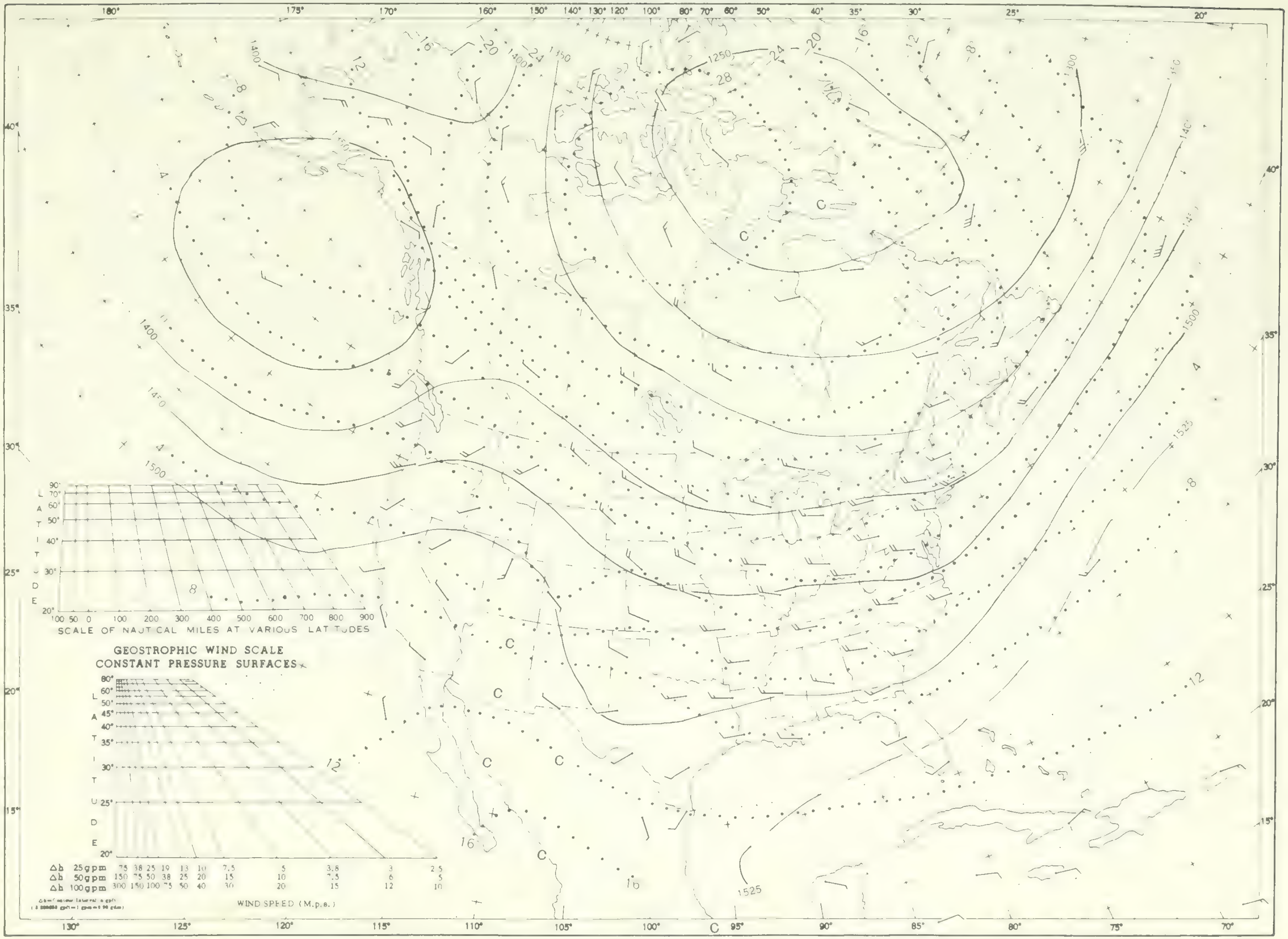
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6 hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X   Average Sea Level Pressure (mb) and Resultant Surface Wind, February 1972   Inset   Departure of Average Pressure (mb) from Normal February 1972



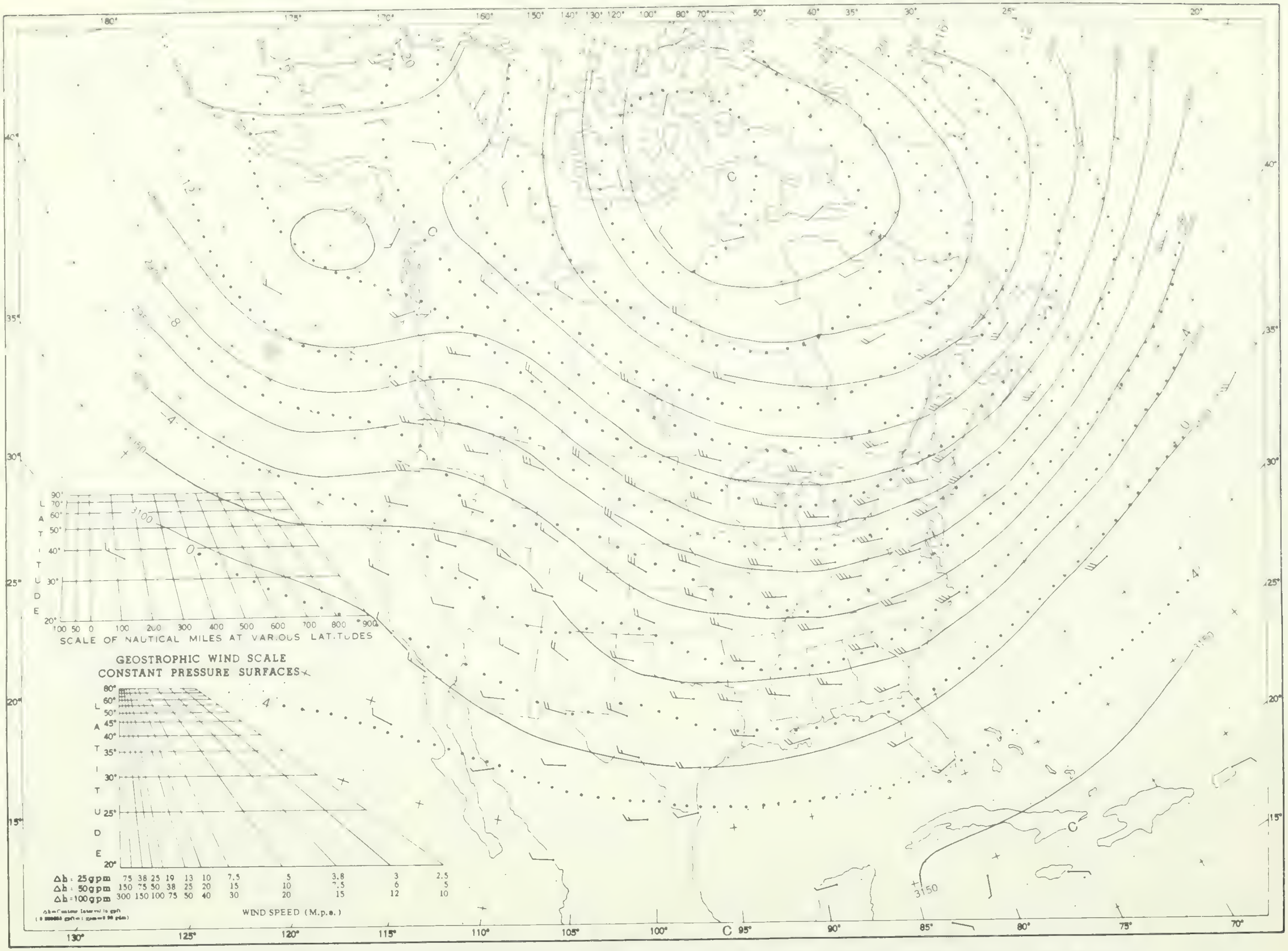
Average sea level pressures are obtained from eight daily 3 hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 350-mb Surface, 1200 G.m.t., February 1972. Average Height and Temperature, and Resultant Winds



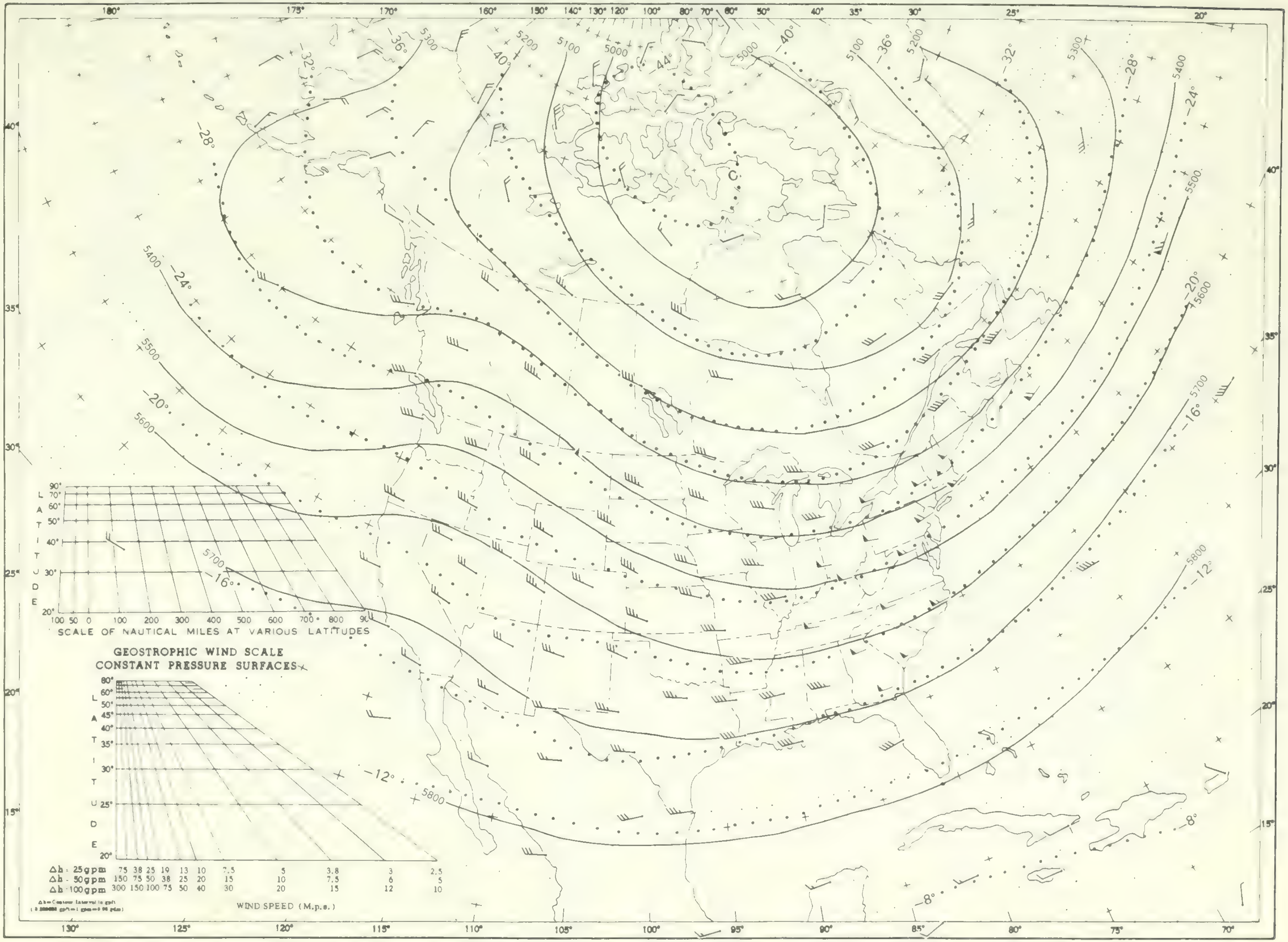
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700 mb Surface 1200 G m t February 1972 Average Height and Temperature and Resultant Winds



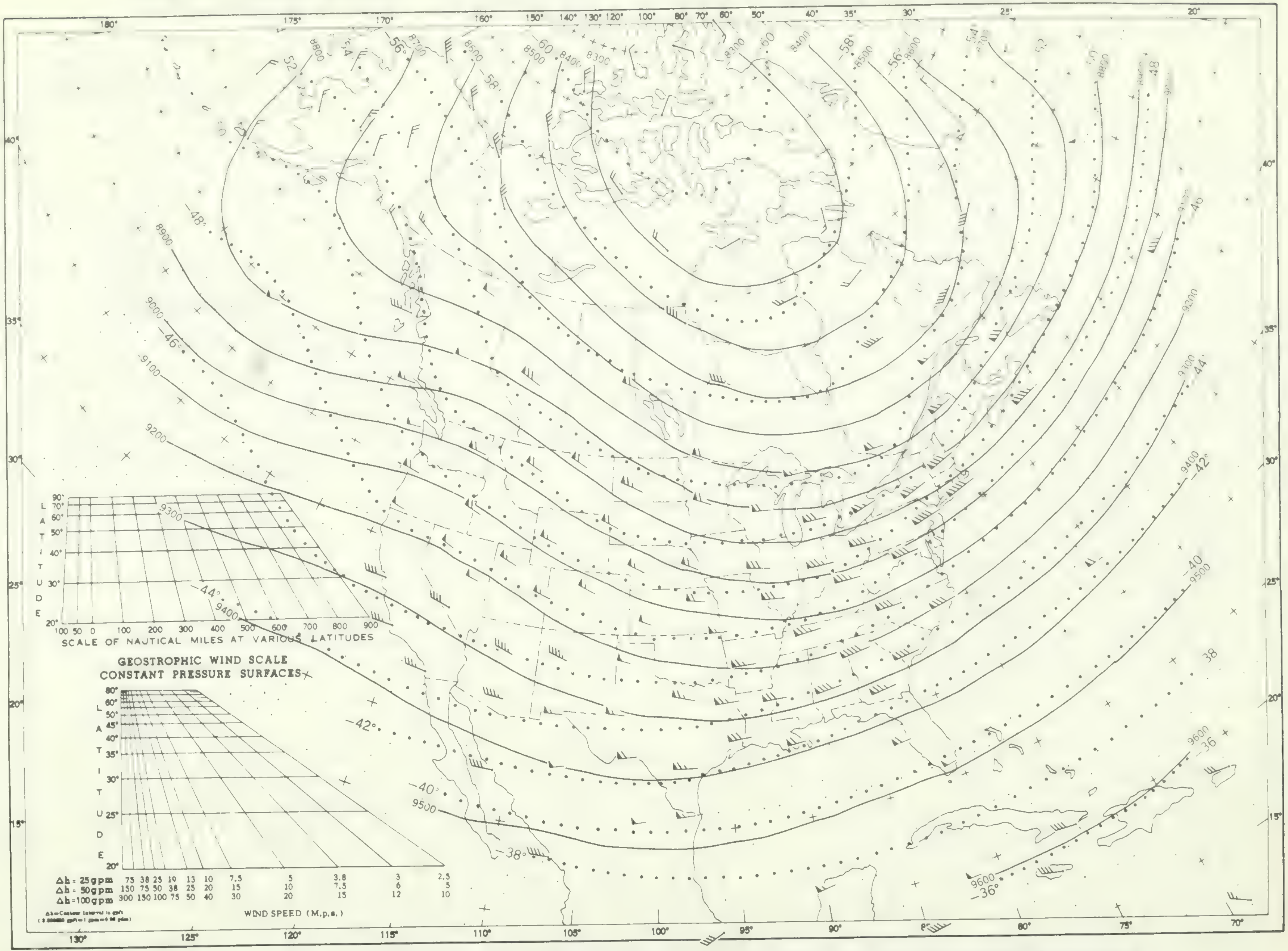
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb. Surface, 1200 G.m.t., February 1972. Average Height and Temperature, and Resultant Winds



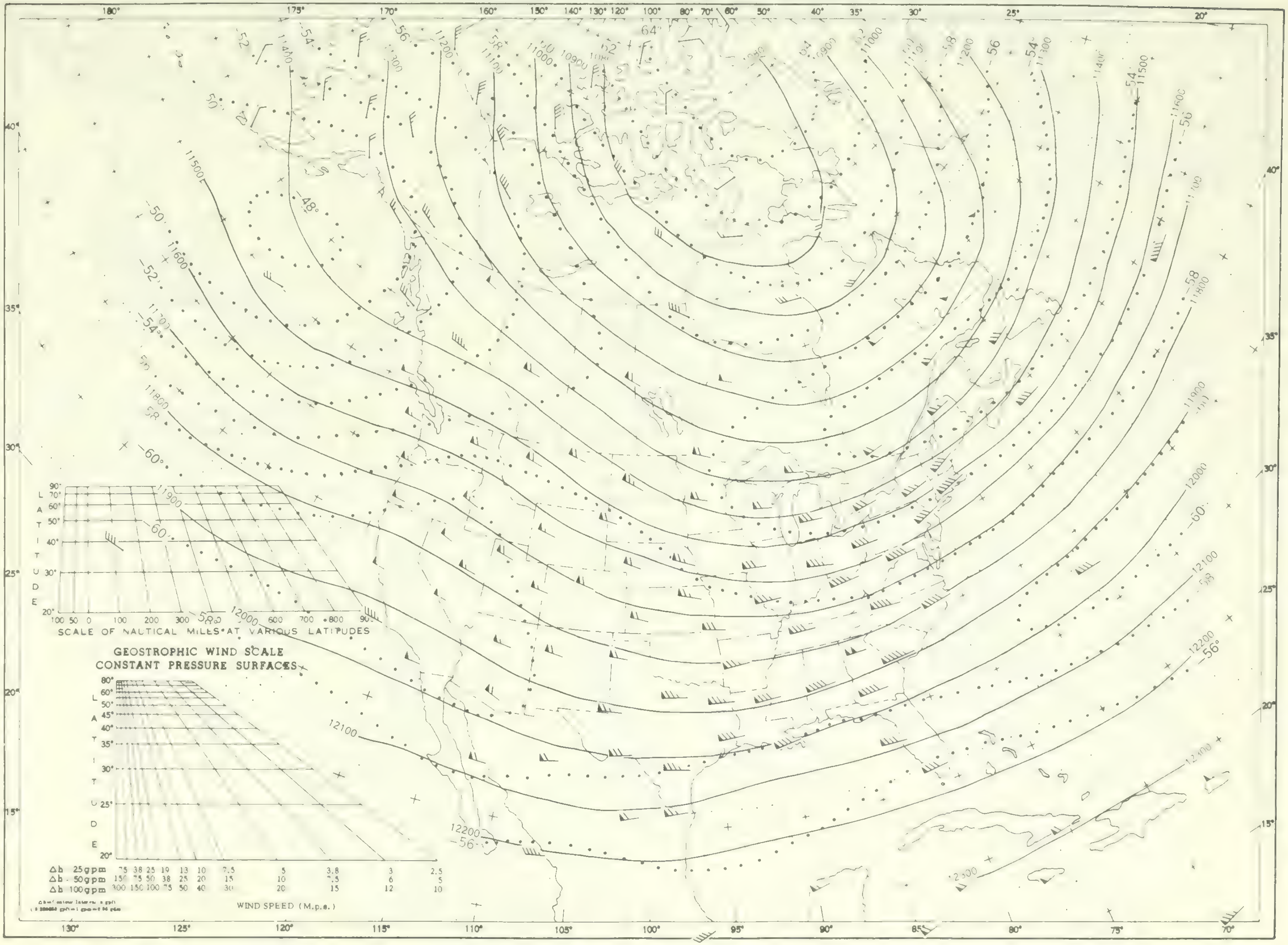
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300 mb Surface, 1200 G.m.t., February 1972. Average Height and Temperature, and Resultant Winds



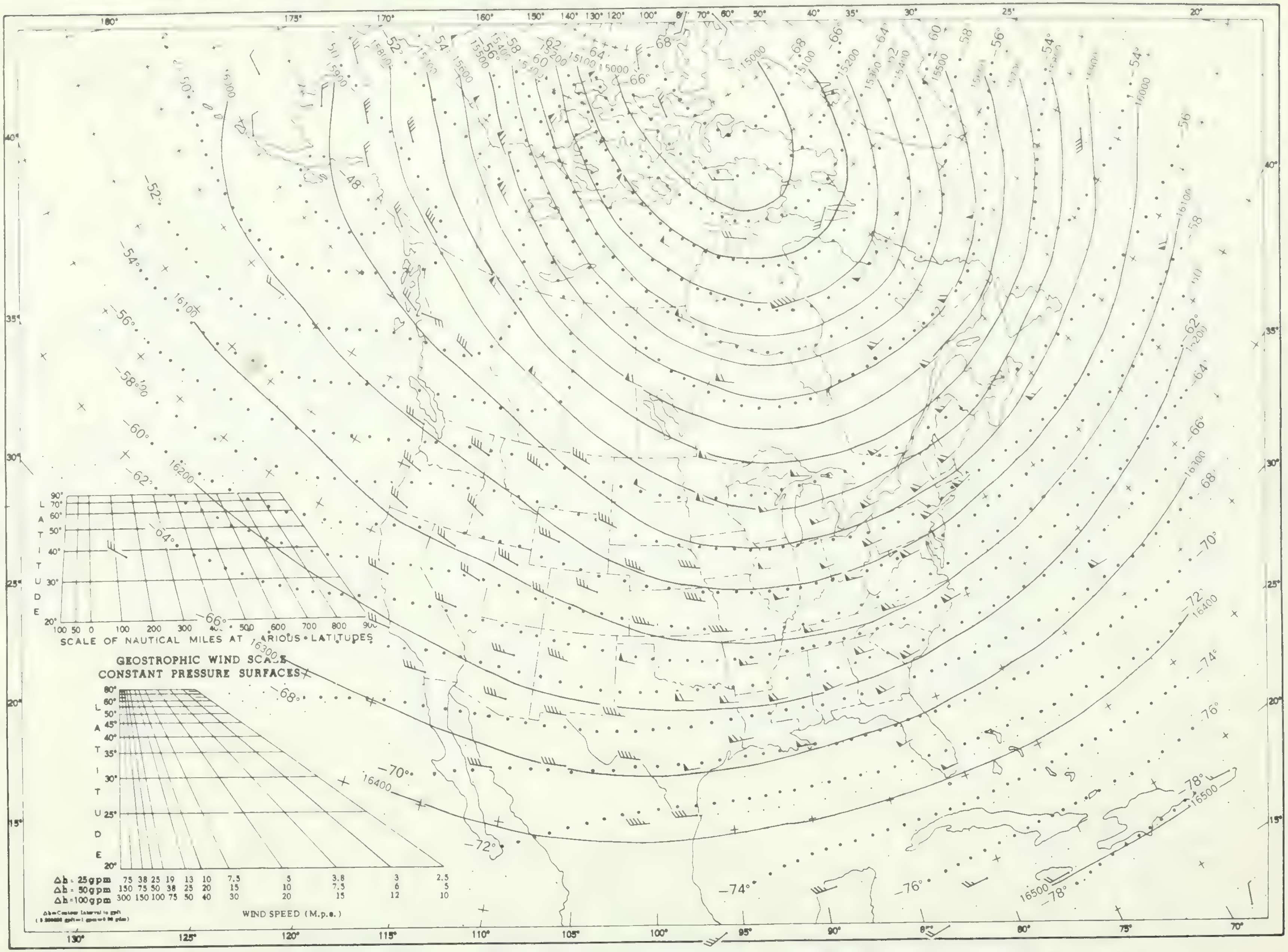
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200 mb Surface, 1200 G.m.t., February 1972. Average Height and Temperature, and Resultant Winds



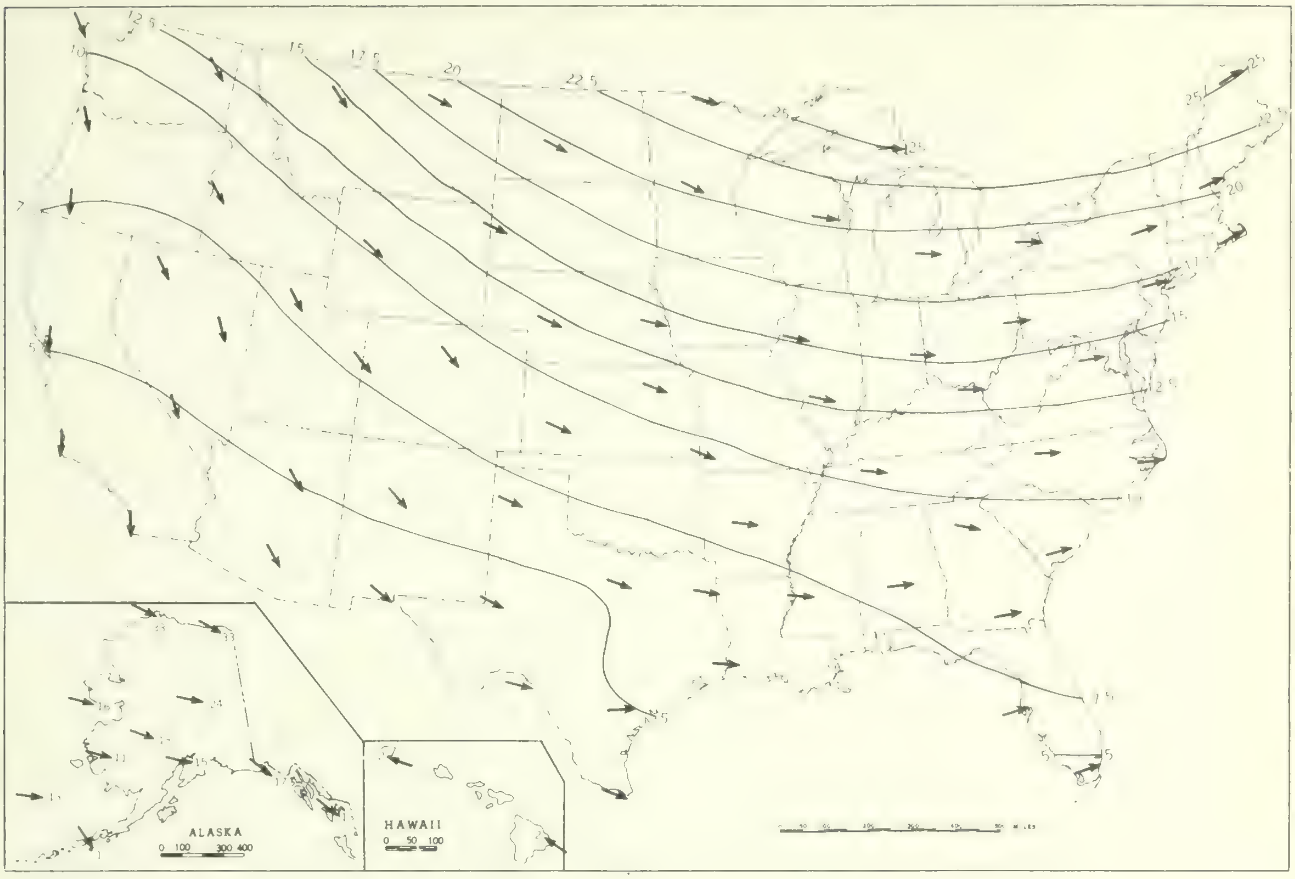
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100 mb Surface, 1200 G.m.t., February 1972. Average Height and Temperature, and Resultant Winds

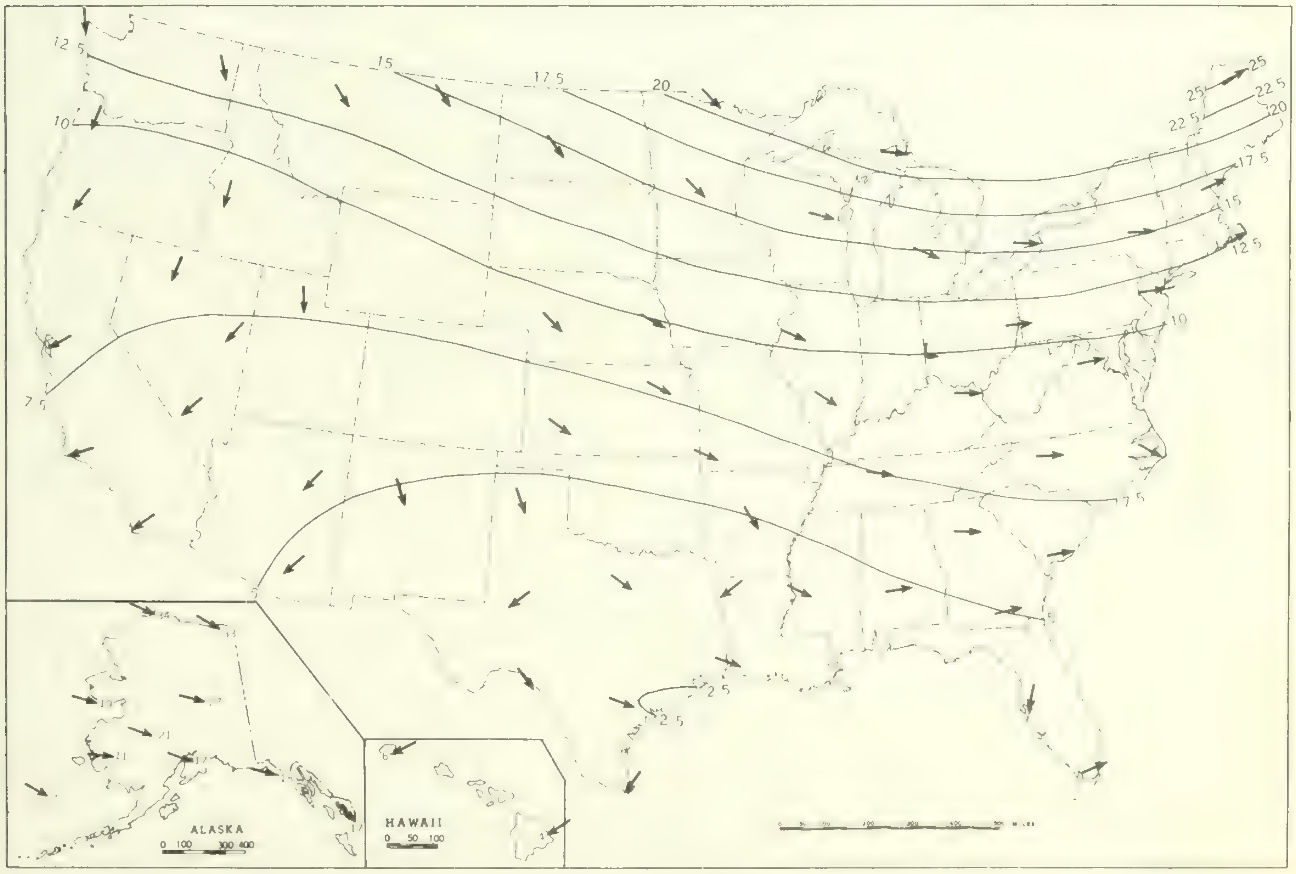


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., February 1972. Resultant Winds



B. 30-mb. Surface, 1200 G.m.t., February 1972. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 23 No. 3

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

MARCH 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. March had relatively mild temperatures.
2. March was a stormy month. The storms included snowstorms, blizzards, thunderstorms, tornadoes, and dust and sand storms.

TEMPERATURE (°F.) Most of the Nation averaged warmer than normal in March. The main exceptions were a large area from Wisconsin to New England and a smaller area from Ohio to northern Alabama.

Arctic air poured into the northern Great Plains during the last few days of February, and by March 1 the cold air covered Nebraska and Iowa and was advancing across Kansas and Missouri. By the morning of the 2d, some Iowa stations were recording subzero temperatures. Devils Lake, N. Dak., registered 28° below zero on the 2d. The leading edge of the cold airmass moved southeastward and by the 6th had reached the Atlantic coast. Jacksonville, Fla., registered 33° on that date. Near the end of the first week of March a storm center moved from southern Alberta to the Great Lakes Region and continued on to Ontario and Quebec early in the second week. The arctic air pushed into the northern Great Plains and spread southward and eastward. A long front marked the advance of the cold arctic air. Southwesterly winds warmed the area south of the front. Hill City, Kans., warmed to 93° on the afternoon of the 6th. Grand Island, Nebr., registered 84° with less than 5 percent relative humidity. Strong winds picked up dust from the dry areas. In some of the duststorms one could not see more than 1/2 mile. Cold northerly winds behind the eastward-moving storm brought falling temperatures. Subzero weather came to the Great Lakes on the 6th, to New England on the 7th, and to the northern portions of North Dakota and Minnesota on the 8th. In some places the winds gusted to 50 m.p.h. They picked up snow and dust which reduced the visibility to less than 2 miles. Worthington, Minn., registered a 75 m.p.h. gust. Mild weather continued along the Gulf of Mexico, with afternoon temperatures climbing to the seventies and eighties at most locations. The Far Southwest was hot with temperatures reaching the nineties on most days. Phoenix and Yuma, both in Arizona, registered 94° on the 9th.

Warm weather prevailed over most of the Nation in the third week of March. Temperatures reached the fifties and sixties, 20° to 30° above normal, over the northern Great Plains. The warm temperatures melted the snow rapidly in western North Dakota. The snowmelt, combined with ice jams on some streams, caused severe flooding of lowland fields, highways, and a few suburban areas. Rising waters on the Cannonball River forced the evacuation of 30 families from their homes in the western part of Mott, N. Dak., on the Knife River. At Beulah, N. Dak., the water was in 200 houses and some families moved out. Severe flooding also occurred at Hazen and Zap, both in North Dakota.

Near the end of the third week of March, a large high was centered over the Great Plains. Warming occurred in the central Rocky Mountains on the back side of the high. Maxima in the central Rockies reached the sixties and seventies by the 22d. A few small areas failed to warm to 32° on that date: the Red River of the North Valley, Upper Michigan, nearby portions of Minnesota and Wisconsin, and northern New England. Northerly winds kept afternoon temperatures in the thirties and forties from the Great Lakes to the Ohio River. Afternoon maxima reached the nineties in the Southwestern Deserts and the eighties over parts of Oklahoma, most of Texas, and parts of Florida. The cold air in the East pushed far southward. Subfreezing weather occurred in the Carolinas on the morning of the 24th.

Northerly winds and deep snow kept temperatures low over the North-Central States in the last few days of March. In contrast, temperatures reached the seventies and eighties across the South. The 28th was especially mild in the South. On that date, McAllen, Tex., registered 100° and temperatures in the nineties were common in the Lower Rio Grande Valley.

PRECIPITATION--March was very dry in the Southwest, continuing the long dry spell which began near the end of December 1971. Rain was badly needed for watering livestock, growing crops, lawns, etc. Rainfall exceeded the March normals in the Far Northwest, from the Great Lakes to New England, over most of the Florida Peninsula, and a few localities which received generous precipitation on 1 or 2 days. For instance, the Houston, Texas, vicinity was soaked with about 7.50 inches of rain during a thunderstorm in the late afternoon and evening of the 20th.

Rains fell on many days in the Pacific Northwest. They were heavier early in the month but began to taper off late in March, as is normal. Rains are generally much lighter in April than in March in the Northwest.

Except in the dry Southwest, the weather was fairly typical of early March. Storms and fronts distributed the rains fairly well over the Nation. A few tornadoes occurred in the South. Heavy rains produced flash floods in western New York, western Pennsylvania, extreme southeastern Ohio, West Virginia, and the eastern portions of Kentucky and Tennessee early in the month. Miserable mixtures of snow, sleet, and freezing rain fell along an area that separated snow in the North from rain over the South. The mixtures slicked the highways and byways and made automobile travel dangerous.

The storm centered over southern Alberta on the 6th caused gusty winds over portions of the Rocky Mountains, the Great Plains, and the Great Lakes Region. Gusts reached 100 m.p.h. at Lander, Wyo., and 107 m.p.h. at Cheyenne, Wyo. Much of the city of Lander was without power on the afternoon of the 6th. Windy weather plagued motorists in North Dakota on the 7th. Blowing snow, reducing visibility and snow drifts, caused traffic difficulties. Showers preceded, accompanied, or followed the passage of a front that stretched from New York along the Appalachians to the gulf coast early in the second week of March. A storm centered south of the Great Lakes on the 13th moved eastward to the Atlantic Ocean, spreading wet and windy weather from the Great Lakes to the Ohio River Valley and eastward to New England. Snow fell in the northern areas; thunderstorms occurred in the southern parts of the storm. About the time the storm reached the Atlantic Ocean, another disturbance developed in the Oklahoma Panhandle. It set off thunderstorms in the central Great Plains and duststorms in the Texas Panhandle. Moving eastward across the Ohio River Valley, the storm spread light snow over the Upper Great Lakes, rain and thunderstorms from the Lower Great Lakes to the Gulf of Mexico, and heavy snow over New York and portions of New England. Utica, N. Y., received 14 inches of snow in 6 hours early on the 15th. In the last week of March, light rain dampened the Pacific Northwest and the Florida Peninsula. Severe local thunderstorms broke out ahead of a cold front in eastern Oklahoma and eastern Texas. As the front moved eastward, it brought rain and winds to much of the East. Snow flurries swirled across the Great Lakes with local squalls, blowing, and drifting. On March 25, a storm dumped heavy snow in parts of Montana. Gusty winds piled the snow in 2-foot drifts in north-central Montana. Freezing rain and freezing drizzle slicked the roads in parts of South Dakota and Minnesota. Strong winds kicked up dust and sand in the Far Southwest. The duststorms were especially severe in the deserts. As thunderstorms dampened the middle Mississippi, the Ohio, and the Tennessee River Valleys, another storm dumped locally heavy snow in the mountains in western Carolina before moving to the Atlantic Ocean.

The disagreeable weather continued to the end of the month. In the last few days of March, heavy snow fell in the northern Great Plains from Montana to the Great Lakes. Intermittent snow glazed the highways from the Great Lakes to New England. Gusty winds, blowing snow, and drifting snow snarled automobile traffic, delayed air travel, and closed schools. Eleven inches of snow fell in 12 hours on the 29th at Moline, Ill., and 9 inches accumulated at Madison, Wisc. Rain and drizzle fell in the warm sector of the storm. Hail nearly the size of baseballs fell in spots in Arkansas and Louisiana. Tornadoes and other windstorms uprooted trees and damaged buildings in Arkansas and western Tennessee.

So March roared out!

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

MARCH 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In
Alabama	Red Bay	89	29	4 Stations	20	7+	Beatrice 1 E	14.52	Tuscaloosa FAA AP	3.47
Alaska	Kake	59	30	2 Stations	-55	9+	Little Port Walter	23.47	3 Stations	.00
Arizona	Casa Grande	101	4+	2 Stations	5	30+	Lukachukai	D .25	159 Stations	[illegible]
Arkansas	2 Stations	88	27	Evening Shade 1 NE	16	9	Dermott 3 NE	8.21	Ozark	.63
California	2 Stations	100	17+	White Mountain 2	- 5	27	Gasquet Ranger Station	22.37	219 Stations	.00
Colorado	2 Stations	86	12+	Antero Reservoir	-20	30	Berthoud Pass	4.84	6 Stations	T
Connecticut	West Thompson Dam	66	2	Norfolk 2 SW	- 1	10	Colchester 2 W	8.96	Cream Hill	3.49
Delaware	Lewes 1 SW	78	1	Wilmgton Porter Resvr	15	4	Wilmgton Porter Resvr	2.81	Dover	1.89
Florida	La Belle	92	29	Smith Creek	27	6	Fountain 3 SSE	9.11	Flamingo Ranger Sta	.04
Georgia	Louisville 3 S	87	2	5 Stations	20	7+	Dalton	7.73	Mount Vernon 3 WNW	1.75
Hawaii	Hilo WSO 87 AP, Hawaii	93	23	Mauna Loa Slope Obs,Hawaii	25	30	Panileihulu 259.2, Maui	16.23	Puu oo 82, Hawaii	.56
Idaho	Glenns Ferry	82	22	Island Park Dam	-15	28	Powell	7.03	Mackay Ranger Station	.14
Illinois	3 Stations	83	13	Stockton	- 1	5	Shawneetown New Town	5.94	Marshall 1 E	.90
Indiana	Spurgeon 2 N	79	13	Waterloo	3	5	Spurgeon 2 N	5.91	Martinsville 2 SW	.85
Iowa	Sidney	85	11	3 Stations	-10	2	Clinton No 1	3.19	Corning	D .29
Kansas	3 Stations	93	19+	Kirwin	4	2	Circleville 7 SW	2.69	Geneseo	T
Kentucky	2 Stations	81	20+	Falmouth 5 WNW	10	9	Elkton 2 S	6.55	Freeburn 2 SW	2.22
Louisiana	4 Stations	88	29+	4 Stations	27	4+	Eunice	11.55	Hosston	1.31
Maine	Sanford 2 NNW	63	1	Clayton Lake 2	-30	11	Belfast	9.95	Harris Station	2.82
Maryland	Conowingo Dam	84	2	Savage River Dam	2	6	Bittinger 2 NW	4.95	Benson Police Barracks	1.12
Massachusetts	2 Stations	70	2	Chester 2	-10	10	Buffumville Dam	8.47	Stockbridge	3.64
Michigan	Willis 5 SSW	71	21	Dunbar Forest Exp Sta	-35	3	Herman	5.74	St James Beaver Island	1.27
Minnesota	Fairmont	62	19	2 Stations	-38	3+	Caledonia	2.56	2 Stations	.22
Mississippi	Greenville	89	27	Louisville	21	6	Leakesville	9.17	Minter City	3.42
Missouri	Marshfield	88	12	Tarkio	7	4	New Madrid Pwr Plant	5.65	Reynolds	.31
Montana	Roundup	79	18	3 Stations	-30	4+	Many Glacier	5.18	Wise River 3 WNW	.02
Nebraska	Red Cloud	92	11	4 Stations	- 2	4+	Emerson	1.76	2 Stations	.07
Nevada	Sunrise Manr Las Vegas	94	9	Knoll Creek Field Sta	0	27	Clover Valley	1.74	24 Stations	.00
New Hampshire	Blackwater Dam	69	2	3 Stations	-28	11+	Mount Washington	11.75	Gilmanton 2 E	2.81
New Jersey	Pemberton 3 E	79	1	High Point Park	3	4	Paterson	5.09	Belvidere	1.82
New Mexico	2 Stations	90	12	Wolf Canyon	- 5	29	Cimarron 4 SW	.67	50 Stations	.00
New York	NY Westerleigh Stat Is	76	2	Old Forge	-25	11	Forestport	7.68	Mount Morris 2 W	1.26
North Carolina	Wilmington	85	14	2 Stations	9	26+	Nantahala	7.84	Roxboro	1.45
North Dakota	2 Stations	69	18	Willow City	-40	2	Sykeston	1.84	Valley City	.08
Ohio	Gallipolis 5 W	81	13	Canfield 1 S	- 1	9	Carrollton 2 NW	4.69	Findlay FAA AP	1.36
Oklahoma	Buffalo	91	26	Boise City 2 E	8	29	Smithville 3 NNW	3.01	2 Stations	.00
Oregon	2 Stations	82	17+	Crater Lake NP HQ	2	27	Port Orford 5 E	27.00	Mc Dermitt 26 N	.11
Pennsylvania	Hanover	79	2	2 Stations	-13	4	Claysville 2 SW	6.70	Lawrenceville	1.59
Puerto Rico & Virgin Islands	Truman Fld FAA AP No 2,V.I.	93	30+	2 Stations	50	24+	Adjuntas 1 NW, P.R.	15.37	Vieques Is. Esperanza,P.R.	.99
Rhode Island	Providence WSO AP	66	1	2 Stations	7	10	North Scituate 4 W	8.51	Block Island WSO AP	4.95
South Carolina	4 Stations	83	16+	Caesars Head 1 NE	20	9+	Longcreek 1 N	6.38	Lake City	1.87
South Dakota	2 Stations	84	10	Columbia 8 N	-21	2	Deadwood	1.90	Elm Springs 3 ESE	.07
Tennessee	Savannah	83	28	Mountain City No 2	9	26	Monteagle	8.31	Kingsport	2.65
Texas	Zapata	103	28+	Perryton 5 NNE	12	2	Bronson	8.95	32 Stations	.00
Utah	Saint George	87	10+	2 Stations	- 8	28	Alta	6.26	39 Stations	.00
Vermont	Ball Mountain Dam	66	2	West Burke	-27	10	Mount Mansfield	8.04	Danville	2.52
Virginia	3 Stations	82	2	Mt. Lake Biological Sta	5	10	Pennington Gap	5.18	Mount Weather	.50
Washington	2 Stations	77	18+	Mazama	0	7	Quinault Ranger Sta	24.67	Priest Rapids Dam	.49
West Virginia	Logan	82	14	Wellsburg 3 NE	1	4	Albright	4.86	Ellenboro	.59
Wisconsin	Lake Geneva	65	20	Brule Island	-34	3	Oconto 4 W	5.16	Spooner Exp Farm	.78
Wyoming	Torrington Exp Farm	80	10	Lake Yellowstone	-22	1	Burgess Junction	D 2.50	Sand Draw	.00

+ And also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
	Ft	Mb.	Mb.	F.	F.	F.	F	F		F.				F	%	In.	In.	In.			In.	In	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	993.9	1016.5	67	41	53.7	- 0.8	82	28	25	6	0	6	38	59	4.79	- 1.21	1.37	13	7	T	0	1.3	27	34	W	29	9	11	11	5.8	68
HUNTSVILLE	624	992.9	1016.2	64	42	52.6	0.8	80	28	27	9	0	6	38	62	4.94	- 0.63	1.25	14	8	0.0	0	1.7	26	40	26	28	10	7	14	6.0	
MOBILE	211	1008.5	1016.3	74	50	61.8	1.5	84	23	35	6	0	0	51	71	5.87	- 1.36	1.50	11	8	0.0	0	1.0	16	29	17	1	10	10	11	5.1	
MONTGOMERY	183	1009.5	1016.8	69	46	57.5	1.5	81	28	32	6	0	1	44	65	5.25	- 0.91	3.06	11	8	0.0	0	1.5	26	44	W	16	11	9	11	5.2	62
ALASKA																																
ANCHORAGE	114	1004.1	1009.1	24	8	15.7	- 8.9	39	27+	-13	10+	0	31	6	66	0.68	0.17	0.33	7	0	12.0	13	1.0	2	25	15	25	13	7	11	4.7	70
ANNETTE	110	1005.4	1009.6	42	32	36.9	- 0.9	52	21	15	4	0	14	32	84	10.54	0.99	1.78	23	0	25.3	26	4.0	13	30	14	9	1	3	27	9.0	
BARROW	31	1021.7	1022.3	-14	-26	-19.7	- 5.1	0	13+	-34	18+	0	31			T	- 0.11	T	0	0	0.5	8	3.0	30	20	8	16+	14	10	7	4.4	
BARTER ISLAND	39	1019.3	1021.5	-14	-25	-19.4	- 4.5	6	3	-[illegible]6	24+	0	31			0.33	0.13	0.24	4	0	3.8	16	13.1	28	44	28	5+	9	8	14	6.1	
BETHEL	125	1010.9	1016.9	6	-11	- 2.2	-13.9	32	25	-23	28	0	31	- 8	76	0.56	- 0.47	0.26	5	0	5.6	7	7.6	36	37	23	24	23	2	6	2.5	
BETTLES	644			0	-26	-13.0		31	25	-43	7+	0	31			0.50		0.16	6	0	7.0	60			18	36	27	16	9	6	3.7	
BIG DELTA	1268			12	-16	- 1.7		40	26	-40	7	0	31			0.22		0.11	5	0	3.7	13			29	11	10	12	9	10	4.9	
COLD BAY	96	1010.2	1014.0	24	8	16.3	-12.5	45	25	- 4	15	0	30	12	81	0.41	- 1.34	0.13	12	0	4.2	1	5.6	33	45	16	23	7	9	15	6.5	
FAIRBANKS	436	998.3	1016.4	11	-16	- 2.8	-11.7	41	27	-38	7	0	31	-16	63	0.27	- 0.13	0.10	7	0	5.7	26	0.3	24	24	28	5	12	7	12	5.1	
GULKANA	1572			18	- 9	4.4		40	21	-48	10+	0	31			1.32		0.78	7	0	18.6	55	0.8	27	31	19	28+	11	7	13	5.4	
HOMER	67			25	7	16.0		30	26	- 9	8	0	31			0.79	- 0.59	0.23	9	0	12.5	19			28	22	16	14	2	15	5.1	
JUNEAU	12	1008.8	1009.5	33	20	26.5	- 3.9	43	22+	-15	7	0	28	19	73	4.19	0.92	0.76	20	0	27.1	45	4.2	10	30	12	12	2	3	26	9.7	37
KING SALMON	49	1010.8	1012.7	11	- 8	1.8	-17.7	35	26+	-26	10	0	31	- 7	67	0.17	- 0.79	0.09	5	0	1.9	5	4.5	35	28	18	25	21	4	6	3.2	
KOTZEBUE	10	1020.0	1020.6	- 4	-23	-13.3	-11.2	8	31	-30	20+	0	31			0.12	- 0.16	0.11	3	0	2.7	38	2.6	32	38	9	24	22	2	7	3.3	
MC GRATH	344	1002.4	1014.1	12	-20	- 4.1	-17.4	42	26	-39	23	0	31	-10	71	0.32	- 0.61	0.13	7	0	6.8	35	3.2	34	26	18	25	19	3	9	3.5	
NOME	13	1018.6	1019.6	3	-18	- 7.4	-15.3	19	24+	-32	22	0	31	-17	60	0.15	- 0.73	0.14	2	0	3.1	12	3.1	5	36	9	24	18	6	7	7.6	71
ST. PAUL ISLAND	22	1015.2	1016.2	18	4	10.9	-13.3	37	25	- 8	15+	0	31	0	87	1.22	0.16	0.48	10	0	10.8	10	7.3	5	40	10	28	12	8	11	5.1	
SHEMYA	122	1004.1	1007.6	35	30	32.5	0.1	41	6	17	17	0	23	27	81	2.31	- 0.26	0.59	19	0	9.8	2	2.6	10	62	18	21	0	6	25	8.9	
SUMMIT	2401			9	- 8	0.6		31	21	-28	0	0	31			0.52		0.16	8	0	22.1	34			35	7	13	12	4	15	5.1	
TALKEETNA	345			24	- 5	9.8	-10.5	40	22	-32	10	0	31			1.38	- 0.06	0.56	9	0	30.1	49			25	4	9					
UNALAKLEET	15	1018.3	1018.8	2	-17	- 7.3		18	24	-27	6	0	31	-17	61	0.27		0.14	5	0	3.4	22	1.7	4	49	7	24	22	6	3	2.3	
YAKUTAT	28	1005.8	1006.7	32	17	24.9	- 6.5	40	22+	-20	8	0	29	21	82	10.25	1.56	2.42	22	0	41.4	90	4.6	11	31	13	12	3	6	22	8.1	
ARIZONA																																
FLAGSTAFF	7006	787.7	1017.3	59	21	40.0	4.4	67	10+	7	30	0	30	14	40	T	- 1.45	T	0	0	T	T	2.7	25	22	22	27	20	4	7	3.2	
PHOENIX	1117	973.6	1012.1	87	54	70.6	11.6	95	10	39	20	17	0	27	21	T	- 0.66	T	0	0	0.0	0	1.4	20	31Y	W	29	19	9	3	2.6	96
TUCSON	2584	925.2	1012.4	81	49	65.0	7.0	91	10	35	31+	2	0	26	25	0.01	- 0.52	0.01	1	0	0.0	0	2.2	20	31	S	9	21	5	5	2.5	95
WINSLOW	4895	851.3	1015.6	72	32	51.7	6.1	83	19	20	31+	0	15	14	25	0.00	- 0.39	0.00	0	0	0.0	0	3.6	25	35	23	27+	19	7	5	3.0	
YUMA	194	1005.1	1012.3	88	55	71.1	8.1	95	17+	42	29	15	0	36	32	0.00	- 0.24	0.00	0	0	0.0	0	2.2	25	23	N	30+	22	6	3	2.2	96
ARKANSAS																																
FORT SMITH	447	998.6	1015.6	67	38	52.6	1.5	78	10	24	3	0	8	36	50	1.28	- 2.19	0.67	6	3	0.0	0	1.5	35	37	SW	13	10	10	11	5.5	67
LITTLE ROCK	257	1006.1	1015.7	66	41	53.3	1.5	84	27	28	3	0	5	41	65	3.32	- 1.49	1.27	11	6	0.0	0	1.1	26	35	NW	16	9	9	13	5.9	68
CALIFORNIA																																
BAKERSFIELD	475	1000.3	1018.1	75	51	63.4	6.5	91	16	39	29+	1	0	44	54	T	- 1.06	T	0	0	0.0	0	2.9	34	22	36	22	20	7	4	2.8	
BISHOP	4108	874.0		75	35	55.0	7.4	85	6	15	28	0	10			0.00	- 0.55	0.00	0		0.0	0						13	12	6	4.5	
BLUE CANYON	5280			54	37	45.4	5.9	70	16	19	26	0	9			4.31	- 4.14	1.42	8		7.8	31			23	18	9	11	6	14	5.5	
EUREKA U	43			57	46	51.2	2.5	68	12	33	26	0	0			5.08	- 0.17	2.45	15		0.0	0			29	S	9	3	6	22	7.9	47
FRESNO	328	1006.4	1018.2	76	45	60.7	5.7	90	17	31	27	1	1	45	63	0.00	- 1.96	0.00	0	0	0.0	0	3.3	32	25	NW	22	18	10	3	3.2	95
LONG BEACH	25	1015.6	1016.8	68	51	59.5	2.8	80	24	42	30+	0	0	49	74	T	- 1.37	T	0	0	0.0	0	2.5	21	20	18	26	10	13	8	5.5	
LOS ANGELES	97	1012.5	1016.1	66	54	59.8	2.8	86	4	46	29	0	0	51	79	T	- 1.79	T	0	0	0.0	0	3.9	25	44Y	NW	3	8	13	10	6.0	
LOS ANGELES U	270			73	54	63.7	4.3	94	4	48	29	1	0			T	- 2.26	T	0		0.0	0			17	W	28+	12	14	5	4.3	77
MT SHASTA R	3544	894.0	1019.3	57	34	45.5	4.3	76	16	24	27	0	13			2.41	- 2.05	1.12	9		0.4	T										
OAKLAND	6	1020.0	1020.2	63	50	56.6	3.0	82	15	42	27+	0	0	48	77	0.25	- 2.17	0.12	6	0	0.0	0	5.5	28	26	35	25	9	12	10	5.4	
RED BLUFF	342	1005.8	1018.5	69	45	57.0	2.9	85	16	32	28	0	1	43	65	0.58	- 2.12	0.21	5	0	0.0	0	1.7	32	29	NW	18+	10	6	15	6.0	79
SACRAMENTO	17	1018.0	1018.8	72	46	58.6	5.2	83	17+	33	30	0	0	44	65	0.29	- 2.07	0.20	5	1	0.0	0	2.4	24	29	W	22	13	10	8	4.6	89
SANDBERG R	4517	863.9		63	43	53.4	8.4	75	16+	28	27	0	6	30	47	0.00	- 1.44	0.00	0		0.0	0	10.6	34	54	36	18	16	10	5	3.3	
SAN DIEGO	13	1015.6	1016.5	66	55	60.2	1.2	74	2	48	28	0	0	50	71	T	- 1.57	T	0	0	0.0	0	4.0	29	18	NW	31+	4	11	16	6.7	62
SAN FRANCISCO	8	1019.6	1020.3	63	47	55.3	2.0	79	16	39	26	0	0	46	77	0.18	- 2.51	0.16	3	0	0.0	0	7.5	28	25	29	29+	7	16	8	5.5	
SAN FRANCISCO U	52			62	49	55.8	1.1	80	16+	43	26	0	0			0.23	- 2.70	0.17	6		0.0	0			25	W	13					82
SANTA MARIA	235			68	43	55.7	2.4	84	5	29	27	0	3			0.01	- 2.05	0.01	1		0.0	0						12	14	5	4.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MARCH 1972

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No of days: Max. 90 F. or above	No of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1018.6	1019.6	74	46	59.8	6.1	86	17+	35	28	0	0	45	65	0.07	- 1.98	0.04	2	0	0.0	0	5.7	31	23	31	18	13	8	10	4.7	
COLORADO																																
ALAMOSA	7536	770.1		56	18	37.3	5.2	68	11	4	29	0	30			0.12	- 0.14	0.08	3		4.4	1						8	15	8	5.1	
COLORADO SPRINGS	6145	808.7	1014.4	58	29	43.3	7.1	73	11+	7	29	0	21	16	41	0.55	- 0.06	0.53	3	2	7.0	6	2.9	3	31	24	26	6	12	13	6.2	
DENVER	5283	[illegible]	1012.0	61	28	44.8	8.4	77	9	11	29	0	23	21	46	0.50	- 0.71	0.42	4	0	7.1	6	1.2	26	39	W	3	4	12	15	7.0	62
GRAND JUNCTION	4843	851.3	1015.1	62	31	46.6	5.1	75	10	17	30	0	17	15	31	0.02	- 0.73	0.01	2	1	0.0	0	0.2	1	38	W	23	8	13	10	5.5	81
PUEBLO	4684	853.4	1013.2	65	27	45.9	5.8	81	11+	8	28	0	20	20	44	0.93	0.41	0.79	4	0	10.9	7	1.8	33	38	NW	3	8	12	11	5.8	85
CONNECTICUT																																
BRIDGEPORT	7	1014.2	1014.8	44	30	37.2	- 0.3	59	1	17	4	0	18	26	65	5.33	1.08	1.38	11	4	5.1	1	4.3	31	40	8	14	6	9	16	6.9	
HARTFORD	169	1007.5	1014.0	42	27	34.6	- 1.4	59	1	11	10	0	21	23	64	6.71	2.91	1.65	12	3	13.2	9	4.2	31	29	[illegible]	22	4	9	18	7.6	48
DELAWARE																																
WILMINGTON	74	1012.2	1015.3	50	32	41.3	0.0	77	2	19	4	0	17	28	61	2.40	- 1.62	0.81	7	4	0.3	T	3.1	31	32	24	22	5	8	18	7.3	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1003.1	1015.1	54	32	42.8		77	2+	15	11	0	17	30	64	2.37		1.09	7	3	0.2	T	2.8	28	32	19	3	3	9	19	7.4	
WASHINGTON NATIONAL	10	1012.9	1015.1	55	37	45.6	0.8	77	2	24	9	0	11	30	57	2.27	- 0.94	1.02	7	3	T	0	3.3	31	34	W	16	6	7	18	7.0	51
FLORIDA																																
APALACHICOLA	13			70	54	62.0	1.0	81	22	41	6	0	0			6.43	1.91	1.65	11	7	0.0	0			36	NW	18	14	7	10	4.5	89
DAYTONA BEACH	31	1015.6	1017.0	76	54	64.7	0.9	85	2	43	6	0	0	53	69	6.66	3.10	3.06	10	8	0.0	0	0.8	25	26	26	25	12	13	6	4.5	
FORT MYERS	15	1016.6	1016.8	83	59	70.8	2.6	88	29	51	27+	0	0	59	72	4.72	2.10	4.05	6	3	0.0	0	0.0	24	29	23	21	18	12	1	3.4	
JACKSONVILLE	26	1015.9	1016.9	74	48	61.3	- 0.9	85	2	33	10+	0	0	50	71	4.43	0.94	1.83	10	8	0.0	0	1.6	24	38	SW	28	14	11	6	3.9	75
KEY WEST	4	1015.6	1016.4	80	71	75.4	2.9	84	31+	65	24	0	0	64	68	0.59	- 1.18	0.32	3	3	0.0	0	4.5	10	25	NE	11	19	11	1	2.9	93
LAKELAND	214			78	57	67.4	0.9	85	29	46	6	0	0			2.40	- 1.85	0.82	10		0.0	0						18	9	4	3.6	79
MIAMI	7	1015.9	1016.4	80	64	72.1	1.6	87	31	57	24+	0	0	60	69	3.01	0.74	1.35	7	3	0.0	0	2.6	10	26	19	31+	9	19	3	4.6	
ORLANDO	108	1012.5	1016.9	80	57	68.7	2.8	87	8+	47	6	0	0	54	65	5.06	1.65	4.31	9	4	0.0	0	1.1	27	28	24	16	12	13	6	4.5	
PENSACOLA	112	1012.2	1016.5	71	51	61.3	0.3	82	28	37	6	0	0	50	70	5.55	- 0.49	1.58	10	7	0.0	0	0.8	18	32	32	28+	11	11	9	4.8	
TALLAHASSEE	55	1014.2	1016.7	75	45	59.8	- 0.8	85	23	30	10	0	3	48	71	5.80	0.62	2.68	10	6	0.0	0	0.8	26	32	27	28	15	7	9	4.5	
TAMPA	19	1016.6	1016.9	78	56	66.8	0.8	84	30	45	11+	0	0	55	69	3.01	- 0.74	1.08	8	7	0.0	0	0.8	22	23	18	31	17	10	4	3.6	82
WEST PALM BEACH	15	1015.6	1016.3	81	61	70.9	1.0	87	29+	52	24	0	0	59	68	3.99	0.55	2.13	8	4	0.0	0	2.3	11	29	3	11	7	17	7	5.2	
GEORGIA																																
ATHENS	802	986.5	1015.7	66	41	53.4	1.8	78	15+	27	6	0	5	39	63	3.89	- 1.21	1.05	14	7	T	0	3.3	26	29	25	2	15	3	13	4.9	
ATLANTA	1010	978.7	1015.6	64	41	52.4	1.0	77	29+	25	6	0	6	38	63	4.49	- 0.88	1.42	18	7	T	0	3.8	28	31	NW	23+	9	9	13	5.7	67
AUGUSTA	136	1010.5	1015.9	68	42	54.9	0.0	80	2+	27	6	0	4	41	65	3.06	- 1.11	0.89	12	5	0.0	0	2.7	25	52	23	2	13	9	9	5.1	
COLUMBUS	385	1002.4		70	45	57.4	2.1	93	28	29	6	0	1	43	64	5.01	- 1.00	2.46	12	5	0.0	0	2.0	29	24	35	5	13	6	12	5.1	
MACON	354	1004.1	1017.0	70	43	56.5	- 0.4	82	1	31	6+	0	3	43	65	2.72	- 2.22	0.80	12	4	0.0	0	2.3	27	45	SW	2	12	8	11	5.2	73
ROME	637			64	38	51.0	0.6	80	28	23	6	0	8			6.27	0.40	1.84	13		0.0	0										
SAVANNAH	46	1014.3	1016.5	72	47	59.3	1.0	80	15+	30	10+	0	2	45	66	3.84	- 0.13	2.33	9	3	0.0	0	3.0	24	34	W	2	12	10	9	5.0	71
HAWAII																																
HILO	27	1012.5	1013.8	84	64	73.8	3.2	93	23	57	10	1	0	64	75	0.88	-13.82	0.54	8	2	0.0	0	2.7	14	29	SE	2	5	14	12	6.2	54
HONOLULU	7	1013.2	1013.7	80	66	72.8	0.0	85	20	60	30+	0	0	64	74	2.45	- 0.44	2.01	8	0	0.0	0	2.3	20	26	E	19+	5	16	10	6.0	74
KAHULUI	48	1011.2	1013.4	81	63	72.0	- 0.2	86	18	56	31+	0	0	65	78	2.00	- 0.22	1.55	7	0	0.0	0	1.6	16	31	SW	3	11	12	8	5.2	65
LIHUE	103	1008.8	1014.[illegible]	79	66	72.4	1.4	86	14	56	31	0	0	64	77	1.99	- 2.57	1.34	11	0	0.0	0	1.9	19	29	SW	2	7	14	10	5.9	62
IDAHO																																
BOISE	2838	917.0	1018.2	56	35	45.5	3.8	76	9	22	27	0	10	31	60	1.50	0.18	0.76	8	1	0.6	T	1.2	10	37	W	22	2	11	18	7.6	70
LEWISTON	1413			57	37	47.0	4.4	73	16	25	26	0	7			2.70	1.52	0.74	11		T	T			48Y		6	1	7	23	8.5	
POCATELLO	4454	863.2	1017.5	53	30	41.0	5.2	70	22	16	27	0	20	26	59	0.61	- 0.41	0.24	5	1	1.0	T	10.3	23	43	W	3	5	10	16	7.0	69
ILLINOIS																																
CAIRO	314			58	40	48.9	0.7	76	20	25	3	0	5			4.06	- 0.73	1.73	15		0.2	T			41	SW	6	11	8	12	5.5	59
CHICAGO O HARE	658	989.5	1014.6	42	26	34.0	- 0.7	70	11	7	5	0	22	23	65	3.45	0.77	1.85	15	4	16.8	6	3.6	33	42	29	7	5	8	18	7.4	
CHICAGO MIDWAY	607	991.5	1014.9	43	26	34.8	- 1.5	73	11	10	5	0	23	24	65	3.51	0.77	1.90	13	5	15.6	5	2.7	34	34	N	13	5	7	19	7.3	57

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ⓞ	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
MOLINE	582	993.6	1015.8	46	27	36.0	0.6	77	11	6	5	0	23	25	67	3.73	1.34	1.45	14	2	19.8	10	1.9	33	30	NW	7+	7	8	16	6.9	49
PEORIA	652	990.5	1015.0	47	27	36.9	- 0.7	79	11	10	5	0	23	26	65	2.48	- 0.37	1.13	10	1	8.0	5	1.4	32	34	NW	12	6	5	20	7.3	57
ROCKFORD	724	987.1	1014.9	41	24	32.4	- 1.6	68	11	3	5	0	26	23	70	2.79	0.33	0.90	12	2	15.7	10	2.8	36	32	29	7	6	8	17	6.9	
SPRINGFIELD	588	992.2	1014.9	51	31	40.8	0.6	82	11	14	5	0	17	30	68	4.03	1.15	2.84	11	3	3.6	4	1.8	28	35	NW	21	8	5	18	6.6	55
INDIANA																																
EVANSVILLE	381	1001.4	1015.5	54	34	44.2	- 1.1	77	12	20	9	0	16	33	66	5.05	0.74	1.89	12	5	0.7	T	1.9	25	26	S	6	7	10	14	6.3	62
FORT WAYNE	791	994.8	1015.3	45	27	35.7	- 0.6	71	21+	12	9+	0	25	25	68	3.19	0.41	1.05	14	2	4.8	2	3.7	27	34	SW	7	3	10	18	7.7	41
INDIANAPOLI	792	985.1	1014.9	50	30	39.8	0.9	74	11	16	9+	0	20	28	67	2.48	- 0.93	1.56	12	2	0.3	T	2.5	25	31Y	SW	7+	3	9	19	7.6	57
SOUTH BEND	773	985.8	1014.3	42	25	33.4	- 1.5	70	11	10	6+	0	27	26	74	3.63	0.89	2.33	19	5	16.1	3	2.8	28	26	31	22+	0	9	22	8.3	
IOWA																																
BURLINGTON	692			47	27	37.4	0.1	79	11	9	5	0	22	27		2.82	0.11	1.48	12	2	11.9	3	2.5	33	29	31	21	7	9	15	6.5	
DES MOINES	938	980.4	1015.8	47	27	37.1	3.3	82	11	7	5	0	23	27	70	1.05	- 1.04	0.35	11	2	1.6	1	2.9	34	38	NW	7	7	6	18	7.0	46
DUBUQUE	1056	975.6		39	22	30.8	- 1.1	63	11	0	5	0	25			2.85	0.09	0.80	13		16.4	7						6	7	18	7.0	
SIOUX CITY	1095	974.9	1015.8	47	28	37.7	4.6	70	6	4	4+	0	17	25	63	1.31	- 0.15	0.42	10	0	1.6	1	3.7	1	40	NW	7+	10	6	15	6.4	64
WATERLOO	869	983.1	1015.9	40	22	30.8	- 1.2	66	20	- 3	5	0	28	21	71	1.78	- 0.27	0.44	10	1	5.8	3	3.1	35	36	32	7	4	11	16	6.9	
KANSAS																																
CONCORDIA	1470	960.7	1014.1	59	32	45.3	5.5	87	6	9	2	0	16	29	59	0.79	- 0.70	0.63	4	3	T	T	1.4	36	39	SW	26	11	7	13	5.3	83
DODGE CITY	2582	922.1	1013.4	66	33	49.2	7.4	87	19+	12	2	0	14	24	43	0.27	- 0.89	0.10	4	1	1.0	1	1.5	28	51	N	1	9	10	12	5.8	75
GOODLAND	3654	885.5	1013.3	63	27	44.9	9.4	82	11+	15	4	0	22	22	49	0.15	- 0.91	0.10	2	0	0.8	1	4.7	30	41	32	19	10	11	10	5.5	
TOPEKA	877	982.7	1014.9	59	34	46.7	5.0	85	11	14	2	0	11	31	60	1.37	- 0.64	0.85	8	4	3.0	2	1.4	34	34	S	26	10	5	16	6.1	62
WICHITA	1321	965.8	1014.0	62	34	47.9	3.4	81	11	14	2	0	12	32	59	0.56	- 1.08	0.24	4	3	0.8	1	0.9	27	37	N	1	9	10	12	5.6	71
KENTUCKY																																
COVINGTON	869	983.1	1015.1	50	31	40.6	0.0	73	12+	15	9	0	20	27	61	3.68	- 0.11	1.21	11	3	0.1	T	3.5	25	31	21	7	3	10	18	7.6	
LEXINGTON	966	979.7	1015.9	53	32	42.2	- 1.0	76	12	18	9+	0	16	30	67	4.04	- 0.71	0.92	13	1	2.4	2	3.3	24	29	22	7	4	9	18	7.4	
LOUISVILLE	477	997.6	1015.5	55	35	44.8	1.5	78	12	20	9	0	16	31	61	4.07	- 0.52	1.23	13	2	1.2	1	2.7	26	29	SW	7+	5	12	14	7.0	54
LOUISIANA																																
ALEXANDRIA	92	1011.9	1016.1	73	47	60.3	1.9	84	28	32	6	0	1			5.97	1.00	1.98	10	11	0.0	0	1.0	19	31	26	1	14	5	12	5.0	
BATON ROUGE	64	1013.5	1016.2	74	50	62.2	1.5	86	28	34	3	0	0	49	66	5.97	1.06	1.52	13	10	0.0	0	1.0	14	29	7	8	12	11	8	5.1	
LAKE CHARLES	9	1014.9	1015.9	74	52	63.1	2.0	84	28	37	3	0	0	54	78	2.23	- 2.01	1.18	8	8	0.0	0	2.4	13	30	6	8	10	11	10	5.4	
NEW ORLEANS	4	1015.6	1016.3	74	50	61.9	0.5	84	28	36	10	0	0	53	73	6.07	0.73	1.18	12	7	0.0	0	1.0	12	30	23	16	11	8	12	5.4	
SHREVEPORT	254	1006.1	1015.3	73	47	59.8	3.2	85	27+	30	3	0	1	48	70	2.45	- 1.70	1.38	6	8	0.0	0	1.6	17	28	32	16	11	5	15	5.4	59
MAINE																																
CARIBOU	624	990.2		29	8	18.3	- 4.5	45	16	-15	10	0	30			4.72	2.34	1.36	18		41.4	34						6	4	21	7.6	
PORTLAND	43	1011.9	1014.3	36	21	28.9	- 2.5	50	1	- 8	10	0	25	21	73	6.01	1.67	1.59	15	1	21.7	18	2.6	34	32	SE	22	2	8	21	8.1	41
MARYLAND																																
BALTIMORE	148	1009.8	1015.6	53	34	43.6	0.5	90	2+	22	11+	0	15	28	56	2.38	- 1.44	0.87	7	3	0.2	T	3.4	30	34	NW	8	4	8	19	7.1	55
MASSACHUSETTS																																
BLUE HILL OBS 2	629			40	25	32.4	- 2.4	62	1	10	10	0	26			7.37	2.83	2.36	11		21.8	11			58	S	22					41
BOSTON	15	1012.9	1014.0	43	30	36.3	- 1.4	62	1	18	10+	0	19	26	67	5.37	1.08	1.95	13	2	12.1	6	2.8	33	32	SE	22	4	6	21	7.5	44
WORCESTER	986	976.3	1014.1	39	22	30.4	- 2.4	63	1	6	10	0	29	21	69	7.96	3.85	2.51	11	2	20.1	24	3.9	30	30	31	5	5	6	20	7.4	
MICHIGAN																																
ALPENA	689	988.5	1014.8	32	12	21.9	- 3.8	48	7	-16	3	0	31	13	68	3.35	1.33	1.20	13	1	27.3	16	1.1	2	31	NE	13+	8	5	18	6.8	48
DETROIT	619			40	25	32.8	- 2.0	60	21	11	10+	0	21	20	62	2.18	- 0.24	1.00	14	0	1.3		2.4	29	40	23	7					
DETROIT METRO	633	989.2	1014.1	41	24	32.6	- 1.8	66	21	8	6	0	27	21	68	2.55	0.14	1.18	12	1	2.5	1	2.4	29	33	SW	7	6	5	20	7.3	45
FLINT	771	985.1	1013.9	38	24	30.9	- 1.8	60	21	8	6	0	25	20	68	2.69	0.55	0.99	14	2	5.5	1	2.2	30	29	21	7	6	6	19	7.6	
GRAND RAPIDS	784	984.4	1014.3	37	22	29.7	- 3.0	62	21	3	10+	0	27	21	71	2.11	- 0.17	0.79	13	1	14.2	4	1.7	31	35	S	1	4	5	22	7.9	44
HOUGHTON LAKE	1149	970.9	1014.6	33	12	22.3	- 4.2	50	21+	-18	6	0	30	15	73	2.36	0.67	0.74	14	1	26.8	14	1.7	35	28	6	1	6	10	15	6.8	
LANSING	841	981.7	1014.4	38	22	29.7	- 2.7	61	21	4	10	0	28	21	70	2.82	0.42	1.22	16	2	9.3	3	2.2	29	35	SW	4	7	5	19	7.3	36
MARQUETTE U	677			29	16	22.8	- 3.9	46	11	- 7	3	0	31			3.25	1.34	0.60	16		34.3	39			30	N	22	3	9	19	7.6	51

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ◯	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: .01 inch or more	Precipitation: No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	991.2	1014.8	38	23	30.3	- 2.6	64	21	7	3	0	27	19	67	2.30	0.25	0.79	13	0	22.5	6	3.3	34	32	19	7	5	5	21	7.6	
SAULT STE MARIE	721	987.1	1015.0	28	10	19.0	- 4.8	41	20	-22	3	0	29	12	72	2.41	0.60	0.67	13	0	22.8	50	1.6	2	33	W	7	6	10	15	6.8	58
MINNESOTA																																
DULUTH	1428	963.4	1017.0	26	10	17.9	- 3.4	46	16	-15	2	0	31	10	71	1.45	- 0.17	0.72	10	0	11.0	29	2.9	3	40	W	7	6	8	17	6.8	48
INTERNATIONAL FALLS	1179	973.2	1017.2	30	9	19.3	- 0.1	49	20	-27	2	0	30	8	61	0.57	- 0.46	0.19	11	0	8.0	30	1.3	2	25	27	7	8	5	18	6.6	
MINNEAPOLIS	834	985.1	1016.7	35	18	26.5	- 0.9	53	20	-11	2	0	27	17	66	1.25	- 0.28	0.43	9	0	10.4	19	3.0	35	34	W	7	5	12	14	6.8	70
ROCHESTER	1297	966.8	1016.0	37	19	27.9	0.0	56	20	- 8	5+	0	27	21	78	0.72	- 0.92	0.24	10	1	7.8	10	3.3	34	39	30	7	6	7	18	6.9	
ST CLOUD	1034	978.0		34	14	24.1	- 1.5	54	19	-16	2	0	29			1.56	0.28	0.65	8		8.6	18						5	10	16	6.7	
MISSISSIPPI																																
JACKSON	310	1004.4	1016.4	73	45	58.8	2.3	85	27	30	6	0	1	47	69	5.57	- 0.17	2.00	12	8	0.0	0	0.5	22	41	NW	27	12	6	13	5.1	71
MERIDIAN	290	1005.4	1016.6	72	44	57.9	1.4	85	28	30	6	0	1	43	61	4.95	- 1.37	2.09	9	8	0.0	0	0.9	30	32	32	16	11	7	13	5.7	
MISSOURI																																
COLUMBIA REGIONAL	887	982.7	1015.3	55	34	44.3	2.6	83	11	17	2	0	13	30	61	4.01	1.36	1.90	12	5	2.3	1	2.1	27	35	SW	6	9	4	18	6.4	57
KANSAS CITY	742	987.5	1014.7	59	36	47.1	3.8	84	11	15	2	0	10	30	55	2.13	- 0.36	0.65	11	3	3.4	3	1.3	34	31	SW	6	9	6	16	6.1	66
ST JOSEPH	811			57	32	44.5	4.3	86	11	13	2	0	14			1.98	- 0.35		7				1.9	33	31	15	26	13	5	14	5.8	
ST LOUIS	535	994.6	1015.3	57	33	45.0	2.4	85	11	18	3	0	15	33	67	2.93	- 0.15	0.95	11	6	0.3	0	2.3	25	32	SW	31+	8	6	17	6.5	66
SPRINGFIELD	1268	969.2	1015.1	60	34	47.1	3.1	79	20	19	5+	0	10	33	63	0.95	- 1.89	0.41	9	5	T	0	2.3	21	33	S	26+	8	9	14	6.2	62
MONTANA																																
BILLINGS	3567	888.3	1014.0	52	29	40.1	6.4	71	10	4	1	0	18	21	51	0.80	- 0.25	0.54	7	1	8.2	7	5.6	29	37	NW	26	2	16	13	6.3	60
GLASGOW	2284	931.6	1015.7	41	20	30.3	3.6	68	18	-19	4	0	20	21	70	0.50	- 0.06	0.18	9	0	3.3	10	3.0	7	37	31	6	6	10	15	6.4	
GREAT FALLS	3662	885.2	1014.7	50	26	38.3	7.6	70	22+	- 8	1	0	20	23	57	1.01	0.09	0.47	9	0	11.4	5	9.7	24	49	SW	5	2	12	17	7.2	63
HAVRE	2584	920.8	1014.7	46	22	33.6	6.7	69	18+	-18	4	0	20	21	65	1.04	0.44	0.86	6	0	10.6	8	3.3	26	41	SW	5	3	14	14	7.0	75
HELENA	3828	878.8	1015.7	51	27	39.1	7.7	68	9	14	3	0	23	22	54	0.63	- 0.07	0.21	10	0	4.5	3	7.4	27	49	SW	5	1	8	22	8.1	67
KALISPELL	2965	910.3	1014.5	49	28	38.4	6.6	68	17	16	3	0	24	28	70	1.14	0.18	0.26	13	0	10.3	3	4.2	19	24	22	5	1	4	26	8.8	
MILES CITY	2629	919.7	1014.4	47	25	36.0	5.1	70	18	- 8	4	0	17	25	69	0.60	- 0.05		5	0	2.9		3.8	32								
MISSOULA	3190	904.2	1017.6	51	30	40.6	6.9	71	17	20	4	0	23	30	72	1.62	0.89	0.63	17	0	9.9	2	3.6	29	50	SW	6	1	6	24	8.4	37
NEBRASKA																																
GRAND ISLAND	1841	947.5	1014.7	56	28	41.7	6.0	84	11+	7	2	0	17	24	55	0.23	- 1.04	0.20	3	0	1.0	1	3.3	33	38	34	17	10	7	14	6.3	
LINCOLN	1150			55	31	42.8	4.7	84	11	9	4+	0	14			0.50	- 1.23	0.18	8		1.0	T			36	NW	6	7	9	15	6.4	58
NORFOLK	1544			50	27	38.1	4.8	78	6	3	4	0	21			0.74	- 0.85	0.20	8		4.2	2						8	6	17	6.5	
NORTH PLATTE	2775	915.7	1014.8	58	24	40.7	5.7	80	11+	10	2	0	28	23	58	0.65	- 0.33	0.60	5	1	0.1	T	3.3	34	38	NW	17	7	12	12	5.9	72
OMAHA	977	979.0	1015.1	53	29	40.8	3.9	78	11	7	5+	0	19	27	63	1.14	- 0.31	0.41	10	1	3.1	2	2.9	35	44	NW	6	9	6	16	6.4	72
SCOTTSBLUFF	3957	876.7	1014.0	58	26	41.7	6.4	80	10	14	29	0	27	23	54	0.69	- 0.17	0.48	6	0	1.0	T	7.0	32	41	29	6	4	11	16	6.9	
VALENTINE	2587			53	23	38.0	6.7	83	10	0	4	0	26			0.34	- 0.67	0.23	6		0.4	T			60	NW	6	7	10	14	6.5	59
NEVADA																																
ELKO	5050	845.6	1018.0	58	27	42.0	6.4	75	9	7	27	0	25	24	54	0.56	- 0.27	0.24	5	0	3.6	3	2.8	25	24	30	18+	6	10	15	6.6	
ELY	6253	800.0	1016.7	59	23	41.2	7.7	70	9	6	28	0	26	18	45	0.07	- 0.78	0.06	2	0	T	T	3.5	24	36	SW	25	9	13	9	5.4	92
LAS VEGAS	2162	938.4	1014.6	79	49	63.7	8.9	89	10	32	29	0	1	18	18	0.00	- 0.35	0.00	0	0	0.0	0	2.8	28	36	N	27	17	10	4	3.3	97
RENO	4404	863.3	1018.0	65	29	47.1	5.6	79	8+	15	28	0	24	23	42	0.03	- 0.65	0.02	3	0	0.2	T	2.7	28	36	W	25	11	8	12	5.6	89
WINNEMUCCA	4301	869.3	1017.6	63	26	44.6	6.6	81	9	9	27	0	25	25	52	0.38	- 0.43	0.32	2	0	2.7	2	2.9	23	32	W	22	5	14	12	6.8	70
NEW HAMPSHIRE																																
CONCORD	342	1001.0	1014.1	36	20	27.9	- 3.8	65	1	-13	10	0	26	21	76	4.16	0.90	1.38	13	0	13.6	13	3.5	32	26	NW	26+	3	5	23	8.2	37
MT WASHINGTON OBS	6262			20	4	12.0	0.3	39	2	-20	0	0	31			11.75	6.01	1.63	24	0	63.1	18			132Y	W	1	2	4	25	8.8	22
NEW JERSEY																																
ATLANTIC CITY	64	1012.2	1014.6	47	30	38.4	- 2.7	72	1	19	11+	0	21	28	69	3.59	- 0.32	1.18	9	4	T	T	3.3	30	35	26	22	6	8	17	7.1	40
ATLANTIC CITY	11			46	35	40.4	- 0.7	56	2	24	9	0	14			3.87	- 0.14	1.72	9						39	S	22					
NEWARK	7	1013.5	1014.5	49	32	40.5	0.0	78	2	19	9	0	16	29	66	3.09	- 1.00	0.82	12	4	1.0	1	4.1	29	28	19	2	7	5	19	7.0	
TRENTON	56			48	32	40.0	- 0.7	75	2	18	4	0	16			3.50	- 0.34	1.25	12		0.8	T			39	SW	7	9	7	15	6.5	53

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NEW MEXICO	Ft.	Mb.	Mb.	F.	F.	F.	F.	F		F.				F	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h							%
ALBUQUERQUE	5311	836.4	1012.4	71	36	53.6	7.8	80	19	21	31+	0	6	14	24	0.08	- 0.40	0.08	1	0	0.0	0	3.5	32	61	E	18	20	7	4	2.9	89
CLAYTON	4969			65	32	48.4	7.5	82	10	13	29	0	15			0.44	- 0.19	0.32	3		6.3	4						12	12	7	4.7	
ROSWELL	3612			75	37	56.2	6.7	87	12+	21	31+	0	9			0.03	- 0.47	0.03	1		0.0	0			31	SW	26					87
NEW YORK																																
ALBANY	275	1004.1	1014.9	40	21	30.5	- 2.5	59	2+	- 1	4	0	28	21	68	4.05	1.33	1.12	14	1	15.9	11	4.0	29	33	NW	26	4	8	19	7.7	45
BINGHAMTON	1590	953.3	1013.8	36	20	28.2	- 3.1	60	2+	0	4	0	28	21	73	3.79	0.90	1.52	18	2	17.5	8	3.7	26	29	NW	26+	2	7	22	8.1	46
BUFFALO	705	987.5	1014.0	38	22	30.1	- 1.4	54	22+	8	4	0	28	23	77	3.99	0.75	1.20	20	0	14.1	5	4.6	26	34	SW	5	0	8	23	8.4	38
NEW YORK U	132	1010.8	1014.2	48	32	39.8	- 0.7	73	1	17	4	0	16	27	65	4.55	0.54	1.21	13	4	2.3	1	2.7	32	33	NE	14					51
NEW YORK KENNEDY	13	1013.9	1014.7	47	34	40.4	1.7	58	1	21	4	0	13	28	64	4.09	- 0.06	1.08	11	6	2.8	2	3.5	30	30	26	5	7	10	14	6.5	
NEW YORK LA GUARDIA	11	1013.2	1014.4	45	31	37.8	- 3.0	69	1	17	4	0	18	24	61	4.12	- 0.11	0.98	12	5	2.7	1	4.0	32	36	NE	15	5	12	16	7.0	
ROCHESTER	547	993.9	1014.7	38	22	30.3	- 2.0	57	22	8	4	0	26	22	72	2.19	- 0.82	0.77	17	0	19.0	7	4.2	27	34	SW	22+	2	9	20	7.9	52
SYRACUSE	410	999.0	1014.3	38	21	29.4	- 3.2	61	2	- 4	4	0	28	21	71	2.49	- 1.11	0.95	18	0	22.7	13	3.2	27	45	SW	8	3	6	22	8.1	47
NORTH CAROLINA																																
ASHEVILLE	2140	938.4	1015.3	59	34	46.5	1.9	75	13+	24	10	0	17	34	69	3.19	- 1.63	0.95	12	4	7.4	5	3.8	33	29	18	2	12	6	13	5.6	71
CAPE HATTERAS R	7	1015.6	1016.0	60	44	52.2	1.2	73	16+	26	10	0	4	43	72	2.96	- 1.20	1.34	9	5	T	T	2.2	30	30	25	17	9	12	10	5.4	59
CHARLOTTE	736	987.9	1015.4	61	38	49.6	- 0.4	77	13+	22	26	0	9	35	62	2.59	- 1.80	0.67	13	2	3.7	3	2.3	24	30	SW	2	11	7	13	5.8	66
GREENSBORO	897	983.4	1015.5	59	36	47.1	- 0.3	78	13+	12	26	0	13	32	60	2.65	- 1.04	0.64	14	3	3.1	3	2.9	24	30	W	22+	8	11	12	6.0	61
RALEIGH	434	999.3	1015.5	61	38	49.5	0.0	80	13	22	6	0	8	33	57	2.50	- 0.85	0.86	11	2	2.6	2	2.6	25	35	23	16	10	10	11	5.7	71
WILMINGTON	28	1014.9	1016.3	65	43	53.8	- 0.4	82	13	32	11+	0	3	42	69	3.36	- 0.67	1.04	10	3	0.0	0	2.6	25	34	S	16	13	9	9	5.0	63
NORTH DAKOTA																																
BISMARCK	1647	955.0	1016.8	37	18	27.5	1.3	65	18	-23	2	0	24	19	71	1.32	0.54	0.55	8	0	8.5	6	1.0	3	37	NW	7	2	9	20	7.9	61
FARGO	896	983.4	1017.6	32	16	23.9	- 0.4	52	16+	-18	2	0	30	17	75	0.74	- 0.01	0.48	8	0	7.1	9	2.3	36	44	S	10	3	9	19	7.4	61
WILLISTON	1899	945.5	1016.3	37	15	25.9	1.6	62	18	-25	2	0	29	20	81	0.91	0.20	0.31	10	0	6.4	12	1.4	35	44	NW	6	5	10	16	6.7	44
OHIO																																
AKRON	1208	968.8	1014.6	43	23	32.6	- 4.3	67	21	9	10+	0	25	24	75	4.09	0.77	1.35	17	4	10.5	3	4.0	25	35	28	22	2	6	23	8.1	
CINCINNATI ABBE OB	761			51	32	41.3	- 1.4	74	12+	18	10	0	19			3.61	- 0.28	1.03	12		T	T			24	SW	7					56
CLEVELAND	777	985.1	1015.0	43	26	34.8	- 0.3	70	21	15	9+	0	24	25	72	2.97	- 0.16	0.99	20	2	6.3	2	3.1	24	35	SW	7	3	4	24	8.3	34
COLUMBUS	812	984.4	1015.3	47	27	37.0	- 1.9	71	21	10	6	0	23	25	65	2.86	- 0.30	0.69	18	2	5.0	1	3.1	25	34	SW	20+	4	6	21	8.0	33
DAYTON	1002	978.0	1014.9	46	27	36.7	- 2.2	72	21	10	6	0	23	28	74	2.46	- 0.66	0.81	11	2	1.2	1	4.1	24	35	SW	7	3	9	19	7.7	40
MANSFIELD	1295			46	26	36.2	- 2.3	72	21	7	6	0	24	27	74	2.49	- 1.29	0.63	17	3	5.9	3	4.7	24	32	21	7	1	7	23	8.2	
TOLEDO	669	988.5	1014.2	44	25	34.1	- 1.1	71	21	6	10	0	24	22	66	2.33	0.07	0.75	14	4	3.3	1	2.8	27	35	SW	7	3	8	20	7.7	41
YOUNGSTOWN	1178	970.9	1014.7	41	22	31.6	- 3.7	67	21	4	9	0	25	24	76	3.22	- 0.13	0.74	18	3	9.3	3	3.1	27	28	24	7	3	6	22	8.0	
OKLAHOMA																																
OKLAHOMA CITY	1285	968.2	1014.9	67	40	53.4	4.9	85	26	20	2	0	9	35	54	1.13	- 0.84	0.69	2	2	0.0	0	1.1	18	46	NW	20	13	10	8	4.4	73
TULSA	650	990.2	1014.8	66	40	53.0	4.9	82	10	20	2	0	9	37	58	0.91	- 1.52	0.53	5	2	T	0	1.6	20	34	S	26+	9	15	7	5.0	70
OREGON																																
ASTORIA	8	1017.3	1018.0	54	42	47.8	3.3	66	8	29	7	0	2	43	84	10.04	1.12	1.70	23	0	T	T	3.9	20	35	16	9+	2	3	26	9.0	
BURNS U	4151	873.7	1018.3	54	29	41.6	4.2	72	17	17	27+	0	20	30	67	1.83	0.86	0.79	9		6.1	6	2.9	27				2	11	18	7.3	
EUGENE	359	1005.4	1019.1	58	39	48.6	2.6	73	17	29	29+	0	6	42	82	7.63	3.31	1.98	18	0	0.5	T	3.7	19	23	19	5	2	5	24	8.6	
MEACHAM	4052	876.7	1018.3	46	30	37.9	4.6	66	17	18	27	0	19			5.44	1.48	1.78	15		20.6	24			22	21	5	1	7	23	8.4	
MEDFORD	1298	971.2	1019.3	62	38	49.8	5.5	79	16	27	29+	0	7	38	69	3.62	1.84	1.61	12	0	2.6	2	1.0	32	29	15	9	2	8	21	7.8	
PENDLETON	1482	963.4	1017.6	58	38	47.8	2.7	74	5	30	27+	0	7	35	65	1.47	0.27	1.01	10	0	0.1	T	4.4	24	32	22	5	2	7	22	8.1	
PORTLAND	21	1017.3	1018.5	58	41	49.8	3.7	72	17+	29	7	0	2	40	74	5.41	1.58	0.98	20	1	T	0	2.3	18	30	SW	5	2	4	25	8.4	45
SALEM	196	1011.5	1018.8	58	38	47.9	2.6	73	17	27	29	0	8	41	79	4.96	0.28	1.08	20	0	0.3	0	4.3	20	29	19	5	3	4	24	8.3	
SEXTON SUMMIT R	3836	885.2	1019.0	50	36	43.0	4.4	69	16	22	26+	0	9	33	74	7.17	3.70	2.64	15		5.5	2			42	22	1					
PACIFIC AREA																																
GUAM TAGUAC R	361	998.3	1010.9	63	72	77.3	- 1.5	87	5+	69	22+	0	0	73	87	11.29	8.65	3.55	19	0	0.0	0	9.7	7	29	NE	30					46
JOHNSTON	7	1012.2	1012.9	81	74	77.8	0.6	83	14+	70	19	0	0	69	75	1.55	- 0.79	0.52	10	0	0.0	0	9.5	8	29	SE	19	10	14	7	4.7	85
KOROR R	94	1005.4	1009.1	87	75	80.9	0.2	90	18+	72	15	2	0	75	87	21.98	14.35	4.82	24	3	0.0	0	4.2	5	21	N	10+	0	4	27	9.2	53
KWAJALEIN	8	1008.5	1009.3	87	78	82.3	1.8	89	21	75	31+	0	0	75	79	3.88	- 2.58	0.93	17	0	0.0	0	12.7	7	25	15	29+	0	13	18	7.9	
MAJURO	10	1009.8	1009.9	85	77	80.8	0.2	86	31+	71	6	0	0	75	80	15.45	3.73	8.14	26	0	0.0	0	10.5	7	28	NE	3	2	6	23	8.2	47

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
PAGO PAGO	12	1009.5	1009.6	87	75	80.9		89	8+	70	4+	0	0	74	81	9.45		2.56	21	4	0.0	0	3.0	9	24	E	29	0	10	21	8.3	34
PONAPE R	123	1003.4	1008.4	87	75	80.8	0.2	90	10+	71	3	3	0	75	84	14.66	0.11	3.78	24	2	0.0	0	5.7	7	17	NE	27+	0	7	24	8.6	65
TRUK MOEN ISLAND	5	1008.8	1009.0	86	77	81.1	0.3	88	12+	73	22+	0	0	75	82	18.49	10.74	8.21	22	2	0.0	0	8.7	7	24	SE	14	0	2	29	9.4	71
WAKE	11	1013.2	1013.5	81	70	75.6	- 2.2	84	9+	67	26	0	0	66	76	1.77	0.30	0.51	12	0	0.0	0	9.6	5	36	NE	31	9	13	9	5.4	61
YAP R	44			86	75	80.4	- 0.6	88	20	72	25	0	0			14.21	8.83	4.11	19	1	0.0	0			19	NE	7	0	5	26	8.7	72
PENNSYLVANIA																																
ALLENTOWN	387	1000.7	1014.9	47	28	37.2	- 0.4	72	2	12	4	0	22	25	67	3.37	- 0.42	1.19	11	4	1.4	1	4.1	30	28	29	8+	6	9	16	6.9	
ERIE	731	987.1	1014.8	38	21	29.8	- 2.5	61	21	8	4	0	28	22	75	3.95	1.07	1.14	16	3	7.9	1	4.0	24	28	18	7	4	6	21	7.8	
HARRISBURG	338	1002.0	1015.0	48	32	40.0	- 0.3	74	2	18	4	0	18	25	59	2.68	- 0.75	0.85	12	3	0.5	1	2.6	32	40	W	8	7	8	16	6.9	54
PHILADELPHIA	5	1013.9	1014.9	49	32	40.7	- 0.3	77	2	19	4	0	18	26	59	2.69	- 1.11	1.00	10	4	0.3	T	3.2	31	30	SW	7+	5	8	18	7.4	49
PITTSBURGH	1137	969.9	1014.6	47	26	36.4	- 0.4	72	1	5	4	0	24	25	65	3.68	0.36	1.00	20	5	9.8	4	5.3	29	30	31	8	3	7	21	7.9	41
SCRANTON	930	979.3	1014.3	42	24	32.8	- 3.4	68	1	9	4	0	25	24	71	4.00	1.18	0.96	16	6	6.6	3	2.9	29	28	W	26	4	6	21	7.9	49
WILLIAMSPORT	524	995.3	1014.9	44	26	34.9	- 2.5	63	2	8	4	0	25	23	64	3.96	0.23	1.60	16	3	6.7	8	2.9	29	29	28	8	6	4	21	7.3	
	524	995.3	1014.9	44	26	34.9	- 2.5	63	2	9	4	0	25	23	64	3.96	0.23	1.60	16	3	6.7	8	2.9	29	29	28	8	6	4	21	7.3	
RHODE ISLAND																																
BLOCK ISLAND	110			42	30	36.0	- 0.7	53	2	15	10	0	19			4.95	0.88	1.37	11		0.2	0										
PROVIDENCE	51	1011.9	1014.3	44	28	36.4	- 0.6	66	1	11	10	0	21	26	67	6.70	2.56	1.73	11	2	8.7	4	2.7	34	30	21	3	6	5	20	7.3	43
SOUTH CAROLINA																																
CHARLESTON	40	1014.2	1016.3	69	45	56.9	0.2	80	13	28	6	0	2	44	68	2.52	- 1.41	0.91	10	3	0.0	0	2.5	24	46Y	NW	23	11	13	7	4.9	
CHARLESTON [illegible]	9			66	50	58.2	0.7	78	13	37	26+	0	0			3.06	- 0.56	1.23	7		0.0	0			33	W	23					
COLUMBIA	213	1007.8	1015.9	67	41	53.9	- 0.5	80	13+	25	6	0	8	42	69	3.79	- 0.47	1.60	14	5	0.0	0	2.5	26	25	30	5	11	10	10	5.4	76
GRNVLLE-SPRTNBRG	957	980.4	1015.2	63	39	50.7	- 0.7	77	13	24	6	0	8	34	59	4.59	- 0.16	1.30	13	7	1.8	1	2.6	26	34	SW	2	13	4	14	5.4	63
SOUTH DAKOTA																																
ABERDEEN	1296	968.5	1016.9	38	21	29.2	1.0	57	16	-16	2	0	24	21	74	1.02	- 0.07	0.45	8	0	6.0	11	2.8	36	37	31	6	2	11	18	7.8	
HURON	1291	968.2	1016.3	40	23	31.5	2.8	57	18+	- 7	2	0	25	23	74	1.21	0.10	0.48	9	0	0.9	4	1.6	34	42	NW	7	4	13	14	7.0	56
RAPID CITY	3162	901.8	1014.4	51	22	36.5	5.4	80	10	0	1	0	27	22	61	0.47	- 0.54	0.26	9	0	1.2	2	5.6	34	52	NW	6	6	13	12	6.2	69
SIOUX FALLS	1419	964.4	1017.3	41	22	31.5	1.4	63	19	-10	5	0	27	24	77	0.97	- 0.57	0.44	7	0	5.0	8	3.2	36	33	29	7	4	16	11	6.6	
TENNESSEE																																
BRISTOL	1507	960.7	1015.4	56	34	45.1	- 0.9	75	13	18	26	0	14	32	65	2.86	- 1.12	0.46	19	3	2.4	2	3.6	26	25	26	5	6	8	17	6.9	
CHATTANOOGA	665	990.9	1015.9	60	38	48.8	- 2.4	77	28	23	6	0	8	37	68	5.72	0.08	1.63	16	6	1.0	1	1.7	29	33	NW	16	6	10	15	6.8	52
KNOXVILLE	980	980.7	1016.2	58	39	48.2	- 1.4	75	12	23	26	0	6	34	61	4.98	0.25	1.07	18	3	6.7	4	3.7	29	35	SW	13	8	10	13	6.5	51
MEMPHIS	258	1005.8	1016.1	63	42	52.2	1.1	78	20	27	9	0	6	36	56	4.80	- 0.27	1.42	13	8	T	0	1.4	22	36	29	1	8	8	15	6.7	57
NASHVILLE	590	993.0	1015.7	60	39	50.2	1.1	80	12	23	9+	0	9	35	60	4.34	- 0.85	1.12	15	7	0.9	T	2.5	26	30	NW	16	10	5	16	6.5	55
OAK RIDGE R	905			57	36	46.5	- 1.0	76	12	21	26+	0	11			5.99	0.40	1.51	15		4.0	3			38Y		22+	8	7	16	6.7	
TEXAS																																
ABILENE	1784	951.6	1014.3	74	45	59.5	4.5	87	26+	26	2	0	3	39	50	0.23	- 0.81	0.23	1	0	T	0	3.9	19	38	SW	7	19	9	3	2.8	88
AMARILLO	3604	888.9	1012.5	69	35	51.7	4.1	85	14	17	2	0	11	23	38	0.11	- 0.71	0.06	4	1	0.6	T	2.4	23	36	NW	1	14	10	7	4.0	80
AUSTIN	597	992.6	1014.4	78	55	66.1	6.4	92	28	39	3+	1	0	49	60	T	- 2.13	T	0	0	0.0	0	1.7	15	30	N	1	14	6	11	4.8	67
BROWNSVILLE	19	1012.9	1013.6	80	65	72.4	4.5	95	28	48	3	2	0	65	80	1.14	0.10	0.87	8	2	0.0	0	6.9	14	31	S	7	5	11	15	6.6	68
CORPUS CHRISTI	41	1012.5	1014.1	79	61	70.2	5.0	93	27	47	3	2	0	62	80	1.44	0.00	0.95	6	3	0.0	0	6.8	11	34	N	2	6	10	15	6.3	62
DALLAS	481	997.3	1014.6	75	50	62.3	6.2	89	7	30	2	0	1	41	51	0.26	- 2.59	0.22	2	2	0.0	0	3.0	16	37	NW	1	15	6	10	4.3	75
DEL RIO	1026	977.3	1013.2	82	56	68.8	5.8	93	27+	40	31	7	0	46	52	0.52	- 0.30	0.43	3	3	0.0	0	4.8	11	31	36	1	11	12	8	4.9	
EL PASO	3918	880.9	1011.9	77	45	61.2	6.3	85	12	31	20	0	2	23	24	T	- 0.35	T	0	0	0.0	0	4.1	27	42	W	3	23	4	4	2.4	96
FORT WORTH	537	994.6	1014.9	76	48	62.1	6.2	89	23	32	2	0	1	44	55	0.10	- 2.41	0.09	2	4	0.0	0	2.3	19	31	19	26	17	7	7	4.0	
GALVESTON [illegible]	7			71	61	66.0	4.6	80	21+	43	3	0	0			1.11	- 1.75	0.83	9		0.0	0			37	NE	8					63
HOUSTON INTERCON	96	1011.5	1015.2	76	53	64.3	4.5	89	28	35	3	0	0	54	73	8.52	5.72	7.47	4	5	0.0	0	2.6	12	32	24	20	10	7	14	5.7	57
LUBBOCK	3254	901.8	1012.4	73	40	56.3	6.7	86	14+	21	2	0	6	31	42	T	- 0.73	T	0	0	T	T	1.7	22	35	32	23	15	13	3	3.5	
MIDLAND	2851	914.7	1012.4	76	44	60.0	4.8	89	7	25	31	0	3	33	43	T	- 0.36	T	0	0	T	T	3.0	18	30	30	28	20	9	2	2.4	
PORT ARTHUR	16	1015.2		74	52	63.0	1.9	82	18	36	3	0	0	54	78	3.93	0.49	2.06	6	7	0.0	0	3.2	14	34	NE	8	14	5	12	4.8	65
SAN ANGELO	1903	947.2	1013.4	78	46	62.4	5.4	92	7	27	31	3	2	32	47	T	- 0.93	T	0	0	T	0	3.7	20	29	26	24+	18	10	3	3.4	
SAN ANTONIO	788	986.5	1014.4	79	54	66.3	5.3	92	28	33	3	1	0	49	60	0.13	- 1.54	0.08	3	1	0.0	0	2.0	9	35	N	[illegible]	12	6	13	5.3	62
VICTORIA	104	1010.5	1014.7	78	57	67.5	4.3	88	28	40	3	0	0	56	72	1.55	- 0.77	0.97	5	4	0.0	0	3.5	13	41Y	N	7	10	6	15	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days				Precipitation			No. of days		Snow, Ice pellets		Wind		Fastest mile			No. of days (sunrise to sunset)				
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F or above	Min. 32 F or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb	Mb.	F	F	F	F.	F.		F.				F	%	In	In.	In			In.	In.	M.p.h.		M.p.h.							%
TEXAS																																
WACO	501	996.3	1014.5	77	51	63.6	5.7	93	27	35	3+	1	0	44	53	0.09	- 2.26	0.05	3	3	0.0	0	2.4	17	30	18	26	18	3	10	4.0	
WICHITA FALLS	994	977.0	1013.8	72	42	56.8	3.0	89	26	22	7	0	6	42	61	0.40	- 1.14	0.40	1	1	0.0	0	1.4	17	33	23	26+	13	14	4	3.9	
UTAH																																
MILFORD	5028	846.6		64	25	44.3	5.8	78	6	4	28	0	25			0.00	- 1.03	0.00	0		0.0	0						14	7	10	4.5	
SALT LAKE CITY	4220	872.7	1017.4	60	34	46.9	6.5	75	22+	22	28+	0	11	28	52	1.18	- 0.38	0.50	6	2	1.4	1	1.6	17	34	55	22+	7	13	11	6.3	77
WENDOVER	4237	871.7	1017.5	59	36	47.3	5.8	75	22	23	27	0	8	23	41	0.03	- 0.36	0.02	2		T	T						10	6	15	6.1	
VERMONT																																
BURLINGTON	332	1001.4	1014.3	33	16	24.8	- 1.9	53	2	- 8	4	0	29	16	69	3.58	1.47	1.04	16	0	21.8	11	1.4	31	34	5	7+	2	6	23	8.4	47
VIRGINIA																																
LYNCHBURG	916			57	36	46.4	0.9	76	1	22	11	0	10			1.76	- 1.85	0.54	9		T	T			29	SW	22+	8	9	14	6.4	62
NORFOLK	24	1014.6	1015.5	58	41	49.9	1.0	81	2	31	6	0	2	37	68	2.55	- 0.90	1.18	9	3	T	0	1.6	31	35	S	22+	9	6	16	6.2	62
RICHMOND	164	1008.8	1015.2	58	36	47.2	- 0.5	81	2	22	11	0	12	32	60	2.11	- 1.31	1.02	8	4	0.0	0	1.7	26	28	W	5	7	10	14	6.4	64
ROANOKE	1149	972.2	1014.6	57	34	45.6	0.1	78	12	20	9	0	14	27	52	1.76	- 1.77	0.82	7	1	T	0	4.2	28	35	27	2	8	10	13	6.1	
WALLOPS ISLAND	9			49	37	42.9		61	8	26	11	0	11			3.25		1.20	9		T	0			46Y	S	22					
WASHINGTON																																
OLYMPIA	195	1010.5	1017.7	54	37	45.3	1.1	70	16	24	7	0	12	42	89	10.01	4.61	3.92	19	1	3.6	1	4.4	20	26	26	5	1	4	26	8.8	
QUILLAYUTE	179	1009.1	1016.6	50	37	43.5	0.6	62	8	25	26	0	12	40	87	15.38	4.30	3.23	23	0	0.2	0	3.1	18	26	SW	5	3	4	24	8.7	19
SEATTLE-TACOMA	400	1000.3	1017.1	53	41	46.9	3.1	66	16	31	7	0	1	39	75	6.74	2.95	2.86	17	1	T	0	4.7	19	38	SW	24	1	9	21	8.4	38
SPOKANE	2356	931.3	1016.0	50	32	41.4	3.3	69	17	22	7	0	17	31	70	1.05	- 0.45	0.25	12	0	2.5	1	6.4	21	41	SW	5	3	6	22	8.2	45
STAMPEDE PASS R	3958	877.8		37	28	32.4	2.4	54	17	17	25	0	21			12.31	1.71	2.83	21		58.7	195						2	5	24	8.6	
WALLA WALLA U	949			58	41	49.3	3.3	73	17	32	26	0	1			2.63	1.04	1.01	12		T	T			23	W	18+	4	5	22	8.1	44
YAKIMA	1052	978.3	1017.2	58	31	44.2	2.2	72	17+	20	2	0	19	30	61	1.05	0.43	0.39	10	0	5.5	3	4.2	29	46	26	5	5	9	17	7.0	
WEST INDIE																																
SAN JUAN P.R.	13	1013.2	1015.8	84	73	78.7	3.4	91	26	70	16	2	0	66	67	3.40	1.20	1.44	14	3	0.0	0	6.0	8	27	W	26+	7	19	5	5.1	67
WEST VIRGINIA																																
BECKLEY	2504	925.2	1015.2	50	30	39.7	- 0.2	73	13	15	26+	0	19	28	66	1.86	- 2.61	0.55	15	2	3.4	1	5.3	25	32	30	8	4	9	18	7.5	
CHARLESTON	939	980.4	1015.0	55	33	43.8	- 0.6	77	21	19	26	0	14	28	57	2.17	- 2.17	0.77	16	2	3.5	1	3.9	25	29	29	13+	4	8	19	7.6	
ELKINS	1948	942.8		51	26	38.6	- 0.9	75	13+	11	4	0	23			3.16	- 0.98	0.88	16		7.2	3						1	7	23	8.4	
HUNTINGTON	827	984.8	1015.3	54	33	43.5	- 1.3	77	13	19	26+	0	16	28	59	2.76	- 1.44	1.49	14	2	4.5	3	3.4	24	35	15	21	2	9	20	7.8	
PARKERSBURG U	615			52	32	41.7	- 1.0	77	13	16	4	0	17			3.07	- 0.46	1.20	15		4.0	3			33	SW	13					45
WISCONSIN																																
GREEN BAY	682	989.5	1015.9	33	15	24.4	- 3.8	47	20	-12	10	0	29	17	72	2.19	0.85	0.72	13	1	22.2	15	3.7	34	38	NW	22+	5	10	16	6.7	55
LA CROSSE	651	991.5	1016.9	37	19	28.0	- 2.5	58	20	-12	2	0	28	18	67	1.68	- 0.39		10	0	11.9		2.5	35								
MADISON	858	982.7	1015.1	38	19	28.7	- 0.4	61	20	- 2	2	0	28	20	72	2.23	0.39	0.82	9	0	18.8	10	2.8	33	33	W	7	8	6	17	6.6	54
MILWAUKEE	672	989.5	1015.4	35	21	27.7	- 3.3	58	21	5	5+	0	28	18	66	2.57	0.26	1.10	12	2	14.9	7	4.3	33	36	N	13	6	8	17	7.0	50
WYOMING																																
CASPER	5338	834.4	1014.0	51	25	38.2	6.1	70	10	1	4	0	23	24	64	1.41	0.38	0.28	13	0	14.5	4	8.9	24	45	26	6	6	9	16	7.0	
CHEYENNE	6126	808.7	1013.5	52	26	39.3	6.9	70	10	2	29	0	22	17	45	0.79	- 0.42	0.32	7	1	10.6	5	12.2	30	75	NW	6	3	12	16	7.0	70
LANDER	5563	826.3	1013.5	54	28	40.9	8.7	71	9	12	29	0	19	19	47	0.38	- 0.77	0.23	6	1	4.6	2	2.8	26	80	SW	6	3	17	11	6.4	80
SHERIDAN	3964	875.7	1014.3	54	26	40.2	9.2	75	10	7	8	0	18	24	54	0.97	- 0.45	0.26	10	0	9.1	3	6.0	32	50	SW	6	3	12	16	7.2	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
ALABAMA	M	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
BIRMINGHAM	189	993.9	1016.5	19.4	5.0	12.1	-0.4	27.8	28	-3.9	6	0	6	3.3	59	122	-31	35	13	7	T	0	0.6	27	15.2	W	29	9	11	11	5.8	68
HUNTSVILLE	190	992.9	1016.2	17.8	5.6	11.4	0.4	26.7	28	-2.8	9	0	6	3.3	62	125	-16	32	14	8	0	0	0.8	26	17.9	26	28	10	7	14	6.0	
MOBILE	64	1008.5	1016.3	23.3	10.0	16.6	0.8	28.9	23	1.7	6	0	0	10.6	71	149	-35	38	11	8	0	0	0.4	16	13.0	17	1	10	10	11	5.1	
MONTGOMERY	56	1009.5	1016.8	20.6	7.8	14.2	0.8	27.2	28	0.0	6	0	1	6.7	65	133	-23	78	11	8	0	0	0.7	26	19.7	W	16	11	9	11	5.2	62
ALASKA												8																				
ANCHORAGE	35	1004.1	1009.1	-4.4	-13.3	-9.1	-4.9	3.9	27+	-25.0	10+	0	31	-14.4	66	17	4	8	7	0	305	330	0.4	2	11.2	15	25	13	7	11	4.7	70
ANNETTE	34	1005.4	1009.6	5.6	0.0	2.7	-0.5	11.1	21	-9.4	4	0	14	0.0	84	268	25	45	23	0	643	660	1.8	13	13.4	14	9	1	3	27	9.0	
BARROW	9	1021.7	1022.3	-25.6	-32.2	-28.7	-2.8	-17.8	13+	-36.7	18+	0	31			T	-3	T	0	0	13	203	1.3	30	8.9	8	16+	14	10	7	4.4	
BARTER ISLAND	12	1019.3	1021.5	-25.6	-31.7	-28.6	-2.5	-14.4	3	-37.8	24+	0	31			8	3	6	4	0	97	406	5.9	28	19.7	28	5+	9	8	14	6.1	
BETHEL	38	1010.8	1016.9	-14.4	-23.9	-19.0	-7.7	0.0	25	-30.6	28	0	31	-22.2	75	14	-12	7	5	0	142	178	3.4	36	16.5	23	24	23	2	6	2.5	
BETTLES	196			-17.8	-32.2	-25.0		-6.1	25	-41.7	7+	0	31			13		4	6	0	178	1524			8.0	36	27	16	9	6	3.7	
BIG DELTA	386			-11.1	-26.7	-18.7		4.4	26	-40.0	7	0	31			6		3	5	0	94	330			13.0	11	10	12	9	10	4.9	
COLD BAY	29	1010.2	1014.0	-4.4	-13.3	-8.7	-6.9	7.2	25	-20.0	15	0	30	-11.1	81	10	-34	3	12	0	107	25	2.5	33	20.1	16	23	7	9	15	6.5	
FAIRBANKS	133	998.3	1016.4	-11.7	-26.7	-19.3	-6.5	5.0	27	-38.9	7	0	31	-26.7	53	7	-3	3	7	0	145	660	0.1	24	10.7	28	5	12	7	12	5.1	
GULKANA	479			-7.8	-22.8	-15.3		4.4	21	-44.4	10+	0	31			34		20	7	0	472	1397	0.4	27	13.9	19	28+	11	7	13	5.4	
HOMER	20			-3.9	-13.9	-8.9		3.9	26	-22.8	8	0	31			20	-15	6	9	0	318	483			12.5	22	16	14	2	15	5.1	
JUNEAU	4	1008.8	1009.5	0.6	-6.7	-3.1	-2.2	6.1	22+	-26.1	7	0	28	-7.2	73	106	23	19	20	0	688	1143	1.9	10	13.4	12	12	2	3	26	8.7	37
KING SALMON	15	1010.8	1012.7	-11.7	-22.2	-16.8	-9.8	1.7	26+	-32.2	10	0	31	-21.7	67	4	-20	2	5	0	48	127	2.0	35	12.5	18	25	21	4	6	3.2	
KOTZEBUE	3	1020.0	1020.6	-20.0	-30.6	-25.2	-6.2	-13.3	31	-34.4	20+	0	31			3	-4	3	3	0	69	965	1.2	32	17.0	9	24	22	2	7	3.3	
MC GRATH	105	1002.4	1016.1	-11.1	-28.9	-20.1	-6.9	5.6	26	-39.4	23	0	31	-23.3	71	8	-15	3	7	0	173	889	1.4	34	11.6	18	25	19	3	9	3.5	
NOME	4	1018.6	1019.6	-16.1	-27.8	-21.9	-8.5	-7.2	24+	-35.6	22	0	31	-27.2	60	4	-19	4	2	0	79	305	1.4	5	16.1	9	24	18	6	7	2.6	71
ST. PAUL ISLAND	7	1015.2	1016.2	-7.8	-15.6	-11.7	-7.4	2.8	25	-22.2	15+	0	31	-12.8	87	31	4	12	10	0	274	254	3.3	5	17.9	10	28	12	8	11	5.1	
SHEMYA	37	1004.1	1007.6	1.7	-1.1	0.3	0.1	5.0	6	-8.3	17	0	23	-2.8	81	59	-7	15	19	0	249	51	1.2	10	27.7	18	21	0	6	25	8.9	
SUMMIT	732			-12.8	-22.2	-17.4		-0.6	21	-33.3	9	0	31			13		4	8	0	561	864			15.6	7	13	12	4	15	5.1	
TALKEETNA	105			-4.4	-20.6	-12.3	-5.8	4.4	22	-35.6	10	0	31			35	-2	14	9	0	765	1245			11.2	4	9					
UNALAKLEET	5	1018.3	1018.8	-16.7	-27.2	-21.8		-7.8	24	-32.8	6	0	31	-27.2	61	7		4	5	0	86	559	0.8	4	21.9	7	24	22	6	3	2.3	
YAKUTAT	9	1005.8	1006.7	0.0	-8.3	-3.9	-3.6	4.4	22+	-28.9	8	0	29	-6.1	82	260	40	61	22	0	1052	2286	2.1	11	13.9	13	12	3	6	22	8.1	
ARIZONA																																
FLAGSTAFF	2135	787.7	1017.3	15.0	-6.1	4.4	2.4	19.4	10+	-13.9	30	0	30	-10.0	40	T	-37	T	0	0	T	T	1.2	25	9.8	22	27	20	4	7	3.2	
PHOENIX	340	973.6	1012.1	30.6	12.2	21.4	6.4	35.0	10	3.9	29	17	0	-2.8	21	T	-17	T	0	0	0	0	0.6	20	13.9Y	W	29	19	9	3	2.6	96
TUCSON	788	925.2	1012.4	27.2	9.4	18.3	3.9	32.8	10	1.7	31+	2	0	-3.3	25	T	-13	T	1	0	0	0	1.0	20	13.9	S	9	21	5	5	2.5	95
WINSLOW	1492	851.3	1015.6	22.2	0.0	10.9	3.4	28.3	10	-6.7	31+	0	15	-10.0	25	0	-10	0	0	0	0	0	1.6	25	15.6	23	27+	19	7	5	3.0	
YUMA	59	1005.1	1012.3	31.1	12.8	21.7	4.5	35.0	17+	5.6	28	15	0	2.2	32	0	-6	0	0	0	0	0	1.0	25	10.3	N	30+	22	6	3	2.2	96
ARKANSAS																																
FORT SMITH	136	998.6	1015.6	19.4	3.3	11.4	0.8	25.6	10	-4.4	3	0	8	2.2	59	33	-56	17	6	3	0	0	0.7	35	16.5	SW	13	10	10	11	5.5	67
LITTLE ROCK	78	1006.1	1015.7	18.9	5.0	11.8	0.8	28.9	27	-2.2	3	0	5	5.0	65	84	-38	32	11	6	0	0	0.5	26	15.6	NW	16	9	9	13	5.9	68
CALIFORNIA																																
BAKERSFIELD	145	1000.3	1018.1	23.9	10.6	17.4	3.6	32.8	16	3.9	29+	1	0	6.7	54	T	-27	T	0	0	0	0	1.3	34	9.8	36	22	20	7	4	2.8	
BISHOP	1252	874.0		23.9	1.7	12.8	4.1	29.4	6	-9.4	28	0	10			0	-14	0	0		0	0						13	12	6	4.5	
BLUE CANYON	1609			12.2	2.8	7.4	3.3	21.1	16	-7.2	26	0	9			109	-105	36	8		198	787			10.3	18	9	11	6	14	5.5	
EUREKA U	13			13.9	7.8	10.7	1.4	20.0	12	0.6	26	0	0			129	-4	62	15		0	0			13.0	S	9	3	6	22	7.9	47
FRESNO	100	1006.4	1018.2	24.4	7.2	15.9	3.2	32.2	17	-0.6	27	1	1	7.2	63	0	-50	0	0	0	0	0	1.5	32	11.2	NW	22	18	10	3	3.2	95
LONG BEACH	8	1015.6	1016.8	20.0	10.6	15.3	1.6	26.7	24	5.6	30+	0	0	9.4	74	T	-35	T	0	0	0	0	1.1	21	8.9	18	26	10	13	8	5.5	
LOS ANGELES	30	1012.5	1016.1	18.9	12.2	15.4	1.6	30.0	4	7.8	29	0	0	10.6	78	T	-45	T	0	0	0	0	1.7	25	19.7Y	NW	3	8	13	10	6.0	
LOS ANGELES U	82			22.8	12.2	17.6	2.4	34.4	4	8.9	29	1	0			T	-57	T	0		0	0			7.6	W	28+	12	14	5	4.3	77
MT SHASTA R	1080	894.0	1019.3	13.9	1.1	7.5	2.4	24.4	16	-4.4	27	0	13			61	-52	28	9		10	T										
OAKLAND	2	1020.0	1020.2	17.2	10.0	13.7	1.7	27.8	15	5.6	27+	0	0	8.9	77	6	-55	3	6	0	0	0	2.5	28	11.6	35	25	9	12	10	5.4	
RED BLUFF	104	1005.8	1018.5	20.6	7.2	13.9	1.6	29.4	16	0.0	28	0	1	6.1	65	15	-54	5	5	0	0	0	0.8	32	13.0	NW	18+	10	6	15	6.0	79
SACRAMENTO	5	1018.0	1018.8	22.2	7.8	14.8	2.9	28.3	17+	0.6	30	0	0	6.7	65	7	-53	5	5	1	0	0	1.1	24	13.0	W	22	13	10	8	4.6	80
SANDBERG R	1377	863.9		17.2	6.1	11.9	4.7	23.9	16+	-2.2	27	0	6	-1.1	47	0	-37	0	0		0	0	4.7	34	24.1	36	18	16	10	5	3.3	
SAN DIEGO	4	1015.6	1016.5	18.9	12.8	15.7	0.7	23.3	2	8.9	28	0	0	10.0	71	T	-40	T	0	0	0	0	1.8	29	8.0	NW	31+	4	11	16	6.7	62
SAN FRANCISCO	2	1019.6	1020.3	17.2	8.3	12.9	1.1	26.1	16	3.9	26	0	0	7.8	77	5	-64	4	3	0	0	0	3.4	28	11.2	29	29+	7	16	8	5.5	
SAN FRANCISCO U	16			16.7	9.4	13.2	0.6	26.7	16+	6.1	26	0	0			6	-69	4	6		0	0			11.2	W	13					92
SANTA MARIA	72			20.0	6.1	13.2	1.3	28.9	5	-1.7	27	0	3			T	-52	T	1		0	0						12	14	5	4.4	
STOCKTON	7	1018.6	1019.6	23.3	7.8	15.4	3.4	30.0	17+	1.7	28	0	0	7.2	65	2	-50	1	2	0	0	0	2.5	31	10.3	31	18	13	9	10	4.7	
COLORADO																																
ALAMOSA	2297	770.1		13.3	-7.8	2.9	2.9	20.0	11	-15.6	29	0	30			3	-4	2	3		112	25						8	15	8	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	No. of days: Partly cloudy 4-7	No. of days: Cloudy 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
COLORADO	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s.		M.p.s.							
COLORADO SPRINGS	1873	808.7	1014.4	14.4	-1.7	6.3	3.9	22.8	11+	-13.9	29	0	21	-8.9	41	14	-2	13	3	2	178	152	1.3	3	13.9	24	26	6	12	13	6.2	
DENVER	1610	833.4	1012.0	16.1	-2.2	7.1	4.7	25.0	9	-11.7	29	0	23	-6.1	46	13	-18	11	4	0	180	152	0.5	26	17.4	W	3	4	12	15	7.0	62
GRAND JUNCTION	1476	851.3	1015.1	16.7	-0.6	8.1	2.8	23.9	10	-8.3	30	0	17	-9.4	31	1	-19	T	2	1	0	0	0.1	1	17.0	W	23	8	13	10	5.5	81
PUEBLO	1429	853.4	1013.2	18.3	-2.8	7.7	3.2	27.2	11+	-13.3	28	0	20	-6.7	44	24	10	20	4	0	277	178	0.8	33	17.0	NW	3	8	12	11	5.8	85
CONNECTICUT																																
BRIDGEPORT	2	1014.2	1014.8	6.7	-1.1	2.9	-0.2	15.0	1	-8.3	4	0	18	-3.3	65	135	27	35	11	4	130	25	1.9	31	17.9	8	14	6	9	16	6.9	
HARTFORD	52	1007.5	1014.0	5.6	-2.8	1.4	-0.8	15.0	1	-11.7	10	0	21	-5.0	64	170	74	42	12	3	335	229	1.9	31	13.0	S	22	4	9	18	7.6	48
DELAWARE																																
WILMINGTON	23	1012.2	1015.3	10.0	0.0	5.2	0.0	25.0	2	-7.2	4	0	17	-2.2	61	61	-41	21	7	4	8	T	1.4	31	14.3	24	22	5	8	18	7.3	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1003.1	1015.1	12.2	0.0	6.0		25.0	2+	-9.4	11	0	17	-1.1	64	60		28	7	3	5	T	1.3	28	14.3	19	3	3	9	19	7.4	
WASHINGTON NATIONAL	3	1012.9	1015.1	12.8	2.8	7.6	0.4	25.0	2	-4.4	9	0	11	-1.1	57	58	-24	26	7	3	T	0	1.5	31	15.2	W	16	6	7	18	7.0	51
FLORIDA																																
APALACHICOLA U	4			21.1	12.2	16.7	0.6	27.2	22	5.0	6	0	0			163	49	42	11	7	0	0			16.1	NW	18	14	7	10	4.5	89
DAYTONA BEACH	9	1015.6	1017.0	24.4	12.2	18.2	0.5	29.4	2	6.1	6	0	0	11.7	69	169	79	78	10	8	0	0	0.4	25	11.6	26	25	12	13	6	4.5	
FORT MYERS	5	1016.6	1016.8	28.3	15.0	21.6	1.4	31.1	29	10.6	27+	0	0	15.0	72	120	53	103	6	3	0	0	0.0	24	13.0	23	31	18	12	1	3.4	
JACKSONVILLE	8	1015.9	1016.9	23.3	8.9	16.2	-0.5	29.4	2	0.6	10+	0	0	10.0	71	113	24	46	10	8	0	0	0.7	24	17.0	SW	28	14	11	6	3.9	75
KEY WEST	1	1015.6	1016.4	26.7	21.7	24.1	1.6	28.9	31+	18.3	24	0	0	17.8	68	15	-30	8	3	3	0	0	2.0	10	11.2	NE	11	19	11	1	2.9	93
LAKELAND U	65			25.6	13.9	19.7	0.5	29.4	29	7.9	6	0	0			61	-47	21	10		0	0						18	9	4	3.6	79
MIAMI	2	1015.9	1016.4	26.7	17.8	22.3	0.9	30.6	31	13.9	24+	0	0	15.6	69	76	19	34	7	3	0	0	1.2	10	11.6	19	31+	9	19	3	4.6	
ORLANDO	33	1012.5	1016.9	26.7	13.9	20.4	1.6	30.6	8+	8.3	6	0	0	12.2	65	129	42	109	9	4	0	0	0.5	27	12.5	24	16	12	13	6	4.5	
PENSACOLA	34	1012.2	1016.5	21.7	10.6	16.3	0.2	27.8	28	2.8	6	0	0	10.0	70	141	-12	40	10	7	0	0	0.4	18	14.3	32	28+	11	11	9	4.8	
TALLAHASSEE	17	1014.2	1016.7	23.9	7.2	15.4	-0.4	29.4	23	-1.1	10	0	3	8.9	71	147	16	68	10	6	0	0	0.4	26	14.3	27	28	15	7	9	4.5	
TAMPA	6	1016.6	1016.9	25.6	13.3	19.3	0.4	28.9	30	7.2	11+	0	0	12.8	69	76	-19	27	8	7	0	0	0.4	22	10.3	18	31	17	10	4	3.6	82
WEST PALM BEACH	5	1015.6	1016.3	27.2	16.1	21.6	0.6	30.6	29+	11.1	24	0	0	15.0	68	101	14	54	8	4	0	0	1.0	11	13.0	3	11	7	17	7	5.2	
GEORGIA																																
ATHENS	244	986.5	1015.7	18.9	5.0	11.9	1.0	25.6	15+	-2.8	6	0	5	3.9	63	99	-31	27	14	7	T	0	1.5	26	13.0	25	2	15	3	13	4.9	
ATLANTA	308	978.7	1015.6	17.8	5.0	11.3	0.6	25.0	29+	-3.9	6	0	6	3.3	63	114	-22	36	18	7	T	0	1.7	28	13.9	NW	23+	9	9	13	5.7	67
AUGUSTA	41	1010.5	1015.9	20.0	5.6	12.7	0.0	26.7	2+	-2.8	6	0	4	5.0	65	78	-28	23	12	5	0	0	1.2	25	23.2	23	2	13	9	9	5.1	
COLUMBUS	117	1002.4		21.1	7.2	14.1	1.2	28.3	28	-1.7	6	0	1	6.1	64	127	-25	62	12	5	0	0	0.9	29	10.7	35	5	13	6	12	5.1	
MACON	108	1004.1	1017.0	21.1	6.1	13.6	-0.2	27.8	1	-0.6	6+	0	3	6.1	65	69	-56	20	12	4	0	0	1.0	27	20.1	SW	2	12	8	11	5.2	73
ROME	194			17.8	3.3	10.6	0.3	26.7	28	-5.0	6	0	8			159	10	47	13		0	0										
SAVANNAH	14	1014.9	1016.5	22.2	8.3	15.2	0.6	26.7	15+	-1.1	10+	0	2	7.2	66	98	-3	59	9	3	0	0	1.3	24	15.2	W	2	12	10	9	5.0	71
HAWAII																																
HILO	8	1012.5	1013.[illegible]	28.9	17.8	23.2	1.8	33.9	23	13.9	10	1	0	17.8	75	22	-351	14	8	2	0	0	1.2	14	13.0	SE	2	5	14	12	6.2	54
HONOLULU	2	1013.2	1013.7	26.7	18.9	22.7	0.0	29.4	20	15.6	30+	0	0	17.8	74	62	-11	51	8	0	0	0	1.0	20	11.6	E	19+	5	16	10	6.0	74
KAHULUI	15	1011.2	1013.4	27.2	17.2	22.2	-0.1	30.0	18	13.3	31+	0	0	18.3	78	51	-6	39	7	0	0	0	0.7	16	13.9	SW	3	11	12	8	5.2	65
LIHUE	31	100[illegible].8	1014.0	26.1	18.9	22.4	0.8	30.0	14	13.3	31	0	0	17.8	77	51	-65	34	11	0	0	0	0.8	19	13.0	SW	2	7	14	10	5.9	62
IDAHO																																
BOISE	865	917.0	1018.2	13.3	1.7	7.5	2.1	24.4	9	-5.6	27	0	10	-0.6	60	38	5	19	8	1	15	T	0.5	10	16.5	W	22	2	11	18	7.6	70
LEWISTON	431			13.9	2.8	8.3	2.4	22.8	16	-3.9	26	0	7			69	39	19	11		T	T			21.5Y		6	1	7	23	8.5	
POCATELLO	1358	863.2	1017.5	11.7	-1.1	5.0	2.9	21.1	22	-8.9	27	0	20	-3.3	59	15	-10	6	5	1	25	T	4.6	23	19.2	W	3	5	10	16	7.0	69
ILLINOIS																																
CAIRO U	96			14.4	4.4	9.4	0.4	24.4	20	-3.9	3	0	5			103	-19	44	15		5	T			18.3	SW	6	11	8	12	5.5	59
CHICAGO O HARE	201	989.5	1014.6	5.6	-3.3	1.1	-0.4	21.1	11	-13.9	5	0	22	-5.0	65	88	20	47	15	4	427	152	1.6	33	18.8	28	7	5	8	18	7.4	
CHICAGO MIDWAY	185	991.5	1014.9	6.1	-3.3	1.6	-0.8	22.8	11	-12.2	5	0	23	-4.4	65	89	20	48	13	5	396	127	1.2	34	15.2	N	13	5	7	19	7.3	57
MOLINE	177	993.6	1015.8	7.8	-2.8	2.2	0.3	25.0	11	-14.4	5	0	23	-3.9	67	95	34	37	14	2	503	254	0.8	33	13.4	NW	7+	7	8	16	6.9	49
PEORIA	199	990.5	1015.0	8.3	-2.8	2.7	-0.4	26.1	11	-12.2	5	0	23	-3.3	65	63	-9	29	10	1	203	127	0.6	32	15.2	NW	12	6	5	20	7.3	57
ROCKFORD	221	987.1	1014.9	5.0	-4.4	0.2	-0.9	20.0	11	-16.1	5	0	26	-5.0	70	71	8	23	12	2	399	254	1.3	36	14.3	29	7	6	8	17	6.9	
SPRINGFIELD	179	992.2	1014.9	10.6	-0.6	4.9	0.3	27.8	11	-10.0	5	0	17	-1.1	68	102	29	72	11	3	91	102	0.8	28	15.6	NW	21	8	5	18	6.6	55
INDIANA																																
EVANSVILLE	116	1001.4	1015.5	12.2	1.1	6.8	-0.6	25.0	12	-6.7	9	0	16	0.6	66	128	19	48	12	5	18	T	0.8	25	11.6	S	6	7	10	14	6.3	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1972

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32 2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1 6 kilometers): Speed	Wind: Fastest mile (1 6 kilometers): Direction	Wind: Fastest mile (1 6 kilometers): Date	No of days (sunrise to sunset): Clear, 0-3	No of days (sunrise to sunset): Partly cloudy 4-7	No of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb.	Mb	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M p s		M p s							%
INDIANA																																
FORT WAYNE	241	984.8	1015.3	7.2	- 2.8	2.1	- 0.3	21.7	21+	-11.1	9+	0	25	- 3.9	68	81	10	27	14	2	122	51	1.7	27	15.2	SW	7	3	10	18	7.7	41
INDIANAPOLIS	241	985.1	1014.9	10.0	- 1.1	4.3	0.5	23.3	11	- 8.9	9+	0	20	- 2.2	67	63	- 24	40	12	2	8	T	1.1	25	13.9Y	SW	7+	3	9	19	7.6	57
SOUTH BEND	236	985.8	1014.3	5.6	- 3.9	0.8	- 0.8	21.1	11	-12.2	6+	0	27	- 3.3	74	92	23	59	19	5	409	76	1.3	28	11.6	31	22+	0	9	22	8.3	
IOWA																																
BURLINGTON	211			8.3	- 2.8	3.0	0.1	26.1	11	-12.8	5	0	22	- 2.8		72	3	38	12	2	302	76	1.1	33	13.0	31	21	7	9	15	6.5	
DES MOINES	286	980.4	1015.8	8.3	- 2.8	2.8	1.8	27.8	11	-13.9	5	0	23	- 2.8	70	27	- 26	9	11	2	41	25	1.3	34	17.0	NW	7	7	6	18	7.0	46
DUBUQUE	322	975.6		3.9	- 5.6	- 0.7	- 0.6	17.2	11	-17.8	5	0	25			72	2	20	13		417	178						6	7	18	7.0	
SIOUX CITY	334	974.9	1015.8	8.3	- 2.2	3.2	2.6	21.1	6	-15.6	4+	0	17	- 3.9	63	33	- 4	11	10	0	41	25	1.7	1	17.9	NW	7+	10	6	15	6.4	64
WATERLOO	265	983.1	1015.9	4.4	- 5.6	- 0.7	- 0.7	18.9	20	-19.4	5	0	28	- 6.1	71	45	- 7	11	10	1	147	76	1.4	35	16.1	32	7	4	11	16	6.9	
KANSAS																																
CONCORDIA	448	960.7	1014.1	15.0	0.0	7.4	3.1	30.6	6	-12.8	2	0	16	- 1.7	59	20	- 18	16	4	3	T	T	0.6	36	17.4	SW	26	11	7	13	5.3	83
DODGE CITY	787	922.1	1013.4	18.9	0.6	9.6	4.1	30.6	19+	-11.1	2	0	14	- 4.4	43	7	- 23	3	4	1	25	25	0.7	28	22.8	N	1	9	10	12	5.8	75
GOODLAND	1114	885.5	1013.3	17.2	- 2.8	7.2	4.7	27.8	11+	- 9.4	4	0	22	- 5.6	49	4	- 23	3	2	0	20	25	2.1	30	18.3	32	19	10	11	10	5.5	
TOPEKA	267	982.7	1014.9	15.0	1.1	8.2	2.8	29.4	11	-10.0	2	0	11	- 0.6	60	35	- 16	22	8	4	76	51	0.6	34	15.2	S	26	10	5	16	6.1	62
WICHITA	403	965.8	1014.0	16.7	1.1	8.8	1.9	27.2	11	-10.0	2	0	12	0.0	59	14	- 27	6	4	3	20	25	0.4	27	16.5	N	1	9	10	12	5.6	71
KENTUCKY																																
COVINGTON	265	983.1	1015.1	10.0	- 0.6	4.8	0.0	22.8	12+	- 9.4	9	0	20	- 2.8	61	93	- 3	31	11	3	T	T	1.6	25	13.9	21	7	3	10	18	7.6	
LEXINGTON	294	979.7	1015.9	11.7	0.0	5.7	- 0.6	24.4	12	- 7.8	9+	0	16	- 1.1	67	103	- 18	23	13	1	61	51	1.5	24	13.0	22	7	4	9	18	7.4	
LOUISVILLE	145	997.6	1015.5	12.8	1.7	7.1	0.8	25.6	12	- 6.7	9	0	16	- 0.6	61	103	- 13	31	13	2	30	25	1.2	26	13.0	SW	7+	5	12	14	7.0	54
LOUISIANA																																
ALEXANDRIA	28	1011.9	1016.1	22.8	8.3	15.7	1.1	28.9	28	0.0	6	0	1			152	25	50	10	11	0	0	0.4	19	13.9	26	1	14	5	12	5.0	
BATON ROUGE	20	1013.5	1016.2	23.3	10.0	16.8	0.8	30.0	28	1.1	3	0	0	9.4	66	152	27	39	13	10	0	0	0.4	14	13.0	7	8	12	11	8	5.1	
LAKE CHARLES	3	1014.9	1015.9	23.3	11.1	17.3	1.1	28.9	28	2.8	3	0	0	12.2	78	57	- 51	30	8	8	0	0	1.1	13	13.4	6	8	10	11	10	5.4	
NEW ORLEANS	1	1015.6	1016.3	23.3	10.0	16.6	0.3	28.9	28	2.2	10	0	0	11.7	73	154	19	30	12	7	0	0	0.4	12	13.4	23	16	11	8	12	5.4	
SHREVEPORT	77	1006.1	1015.3	22.8	8.3	15.4	1.8	29.4	27+	- 1.1	3	0	1	8.9	70	62	- 43	35	6	8	0	0	0.7	17	12.5	32	16	11	5	15	5.4	59
MAINE																																
CARIBOU	190	990.2		- 1.7	-13.3	- 7.6	- 2.5	7.2	16	-26.1	10	0	30			120	59	35	18		1052	864						6	4	21	7.6	
PORTLAND	13	1011.9	1014.3	2.2	- 6.1	- 1.7	- 1.4	10.0	1	-22.2	10	0	25	- 6.1	73	153	42	40	15	1	551	457	1.2	34	14.3	SE	22	2	8	21	8.1	41
MARYLAND																																
BALTIMORE	45	1009.8	1015.6	11.7	1.1	6.4	0.3	26.7	2+	- 5.6	11+	0	15	- 2.2	56	60	- 37	22	7	3	5	T	1.5	30	15.2	NW	8	4	8	19	7.1	55
MASSACHUSETTS																																
BLUE HILL OBS R	192			4.4	- 3.9	0.2	- 1.3	16.7	1	-12.2	10	0	26			187	72	60	11		554	279			25.9	S	22					41
BOSTON	5	1012.9	1014.0	6.1	- 1.1	2.4	- 0.8	16.7	1	- 7.8	10+	0	19	- 3.3	67	136	27	50	13	2	307	152	1.3	33	14.3	SE	22	4	6	21	7.5	44
WORCESTER	301	976.3	1014.1	3.9	- 5.6	- 0.9	- 1.3	17.2	1	-14.4	10	0	29	- 6.1	69	202	98	64	11	2	511	610	1.7	30	13.4	31	5	5	6	20	7.4	
MICHIGAN																																
ALPENA	210	988.5	1014.8	0.0	-11.1	- 5.6	- 2.1	8.9	7	-26.7	3	0	31	-10.6	68	85	34	30	13	1	693	406	0.5	2	13.9	NE	13+	8	5	18	6.8	48
DETROIT	189			4.4	- 3.9	0.4	- 1.1	15.6	21	-11.7	10+	0	21	- 6.7	62	55	- 6	25	14	0	33		1.1	29	17.9	23	7					
DETROIT METRO	193	989.2	1014.1	5.0	- 4.4	0.3	- 1.0	18.9	21	-13.3	6	0	27	- 6.1	68	65	4	30	12	1	64	25	1.1	29	14.8	SW	7	6	5	20	7.3	45
FLINT	235	985.1	1013.9	3.3	- 4.4	- 0.6	- 1.0	15.6	21	-13.3	6	0	25	- 6.7	68	68	14	25	14	2	140	25	1.0	30	13.0	21	7	6	6	19	7.6	
GRAND RAPIDS	239	984.4	1014.3	2.8	- 5.6	- 1.3	- 1.7	16.7	21	-16.1	10+	0	27	- 6.1	71	54	- 4	20	13	1	361	102	0.8	31	15.6	E	1	4	5	22	7.9	44
HOUGHTON LAKE	350	970.9	1014.6	0.6	-11.1	- 5.4	- 2.3	10.0	21+	-27.8	6	0	30	- 9.4	73	60	17	19	14	1	681	356	0.8	35	12.5	6	1	6	10	15	6.8	
LANSING	256	981.7	1014.4	3.3	- 5.6	- 1.3	- 1.5	16.1	21	-15.6	10	0	28	- 6.1	70	72	11	31	16	2	236	76	1.0	29	15.6	SW	4	7	5	19	7.3	36
MARQUETTE U	206			- 1.7	- 8.9	- 5.1	- 2.2	7.8	11	-21.7	3	0	31			83	34	15	16		871	991			13.4	N	22	3	9	19	7.6	51
MUSKEGON	191	991.2	1014.8	3.3	- 5.0	- 0.9	- 1.4	17.8	21	-13.9	3	0	27	- 7.2	67	58	6	20	13	0	572	152	1.5	34	14.3	19	7	5	5	21	7.6	
SAULT STE MARIE	220	987.1	1015.0	- 2.2	-12.2	- 7.2	- 2.7	5.0	20	-20.0	3	0	29	-11.1	72	61	15	17	13	0	579	1270	0.7	2	14.8	W	7	6	10	15	6.8	58
MINNESOTA																																
DULUTH	435	963.4	1017.0	- 3.3	-12.2	- 7.8	- 1.9	7.8	16	-26.1	2	0	31	-12.2	71	37	- 4	18	10	0	279	737	1.3	3	17.9	W	7	6	8	17	6.8	49
INTERNATIONAL FALLS	359	972.2	1017.2	- 1.1	-12.8	- 7.1	- 0.1	9.4	20	-32.8	2	0	30	-13.3	61	14	- 12	5	11	0	203	762	0.6	2	11.2	27	7	8	5	18	6.6	
MINNEAPOLIS	254	985.1	1016.7	1.7	- 7.8	- 3.1	- 0.5	11.7	20	-23.9	2	0	27	- 8.3	66	32	- 7	11	9	0	264	483	1.3	35	15.2	W	7	5	12	14	6.8	70
ROCHESTER	395	966.8	1016.0	2.8	- 7.2	- 2.3	0.0	13.3	20	-22.2	5+	0	27	- 6.1	78	18	- 23	6	10	1	198	254	1.5	34	17.4	30	7	6	7	18	6.9	
ST CLOUD	315	978.0		1.1	-10.0	- 4.4	- 0.8	12.2	19	-26.7	2	0	29			40	7	17	8		219	457						5	10	16	6.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, ice pellets: Total	Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile 1.6 kilometers: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
MISSISSIPPI	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
JACKSON	94	1004.4	1016.4	22.8	7.2	14.9	1.3	29.4	27	- 1.1	6	0	1	8.3	69	141	- 4	51	12	8	0	0	0.2	22	18.3	NW	27	12	6	13	5.1	71
MERIDIAN	88	1005.4	1016.6	22.2	6.7	14.4	0.8	29.4	28	- 1.1	6	0	1	6.1	61	126	- 35	53	9	8	0	0	0.4	30	14.3	32	16	11	7	13	5.7	
MISSOURI																																
COLUMBIA REGIONAL	270	982.7	1015.3	12.8	1.1	6.8	1.4	28.3	11	- 8.3	2	0	13	- 1.1	61	102	35	48	12	5	58	25	0.9	27	15.6	SW	6	9	4	18	6.4	57
KANSAS CITY	226	987.5	1014.7	15.0	2.2	8.4	2.1	28.9	11	- 9.4	2	0	10	- 1.1	55	54	- 9	17	11	3	84	76	0.6	34	13.9	SW	6	9	6	16	6.1	66
ST JOSEPH	247			13.9	0.0	6.9	2.4	30.0	11	-10.6	2	0	14			50	- 9		7				0.8	33	13.9	15	26	12	5	14	5.8	
ST LOUIS	163	994.6	1015.3	13.9	0.6	7.2	1.3	29.4	11	- 7.8	3	0	15	0.6	67	74	- 4	24	11	6	8	0	1.0	25	14.3	SW	31+	8	6	17	6.5	66
SPRINGFIELD	386	969.2	1015.1	15.6	1.1	8.4	1.7	26.1	20	- 7.2	5+	0	10	0.6	63	24	- 48	10	9	5	T	0	1.0	21	14.8	S	26+	8	9	14	6.2	62
MONTANA																																
BILLINGS	1087	888.3	1014.0	11.1	- 1.7	4.5	3.6	21.7	10	-15.6	1	0	18	- 6.1	51	20	- 6	14	7	1	208	178	2.5	29	16.5	NW	26	2	16	13	6.9	60
GLASGOW	696	931.6	1015.7	5.0	- 6.7	- 0.9	2.0	20.0	18	-28.3	4	0	20	- 6.1	70	13	- 2	5	9	0	84	254	1.3	7	16.5	31	6	6	10	15	6.4	
GREAT FALLS	1116	885.2	1014.7	10.0	- 3.3	3.5	4.2	21.1	22+	-22.2	1	0	20	- 5.0	57	26	2	12	9	0	290	127	4.3	24	21.9	SW	5	2	12	17	7.2	63
HAVRE	788	920.8	1014.7	7.8	- 5.6	0.9	3.7	20.6	18+	-27.8	4	0	20	- 6.1	65	26	11	22	6	0	269	203	1.5	26	18.3	SW	5	3	14	14	7.0	75
HELENA	1167	878.8	1015.7	10.6	- 2.8	3.9	4.3	20.0	9	-10.0	3	0	23	- 5.6	54	16	- 2	5	10	0	114	76	3.3	27	21.9	SW	5	1	8	22	8.1	67
KALISPELL	904	910.3	1016.5	9.4	- 2.2	3.6	3.7	20.0	17	- 8.9	3	0	24	- 2.2	70	29	5	7	13	0	262	76	1.9	19	10.7	22	5	1	4	26	8.8	
MILES CITY	801	919.7	1014.3	8.3	- 3.9	2.2	2.8	21.1	18	-22.2	4	0	17	- 3.9	69	15	- 1		5	0	74		1.7	32								
MISSOULA	972	904.2	1017.6	10.6	- 1.1	4.8	3.8	21.7	17	- 6.7	4	0	23	- 1.1	72	41	23	16	17	0	251	51	1.6	29	22.4	SW	6	1	6	24	8.4	37
NEBRASKA																																
GRAND ISLAND	561	947.5	1014.7	13.3	- 2.2	5.4	3.3	28.9	11+	-13.9	2	0	17	- 4.4	55	6	- 26	5	3	0	25	25	1.5	33	17.0	34	17	10	7	14	6.3	
LINCOLN U	351			12.8	- 0.6	6.0	2.6	28.9	11	-12.8	4+	0	14			13	- 31	5	8		25	T			16.1	NW	6	7	9	15	6.4	58
NORFOLK	471			10.0	- 2.8	3.4	2.7	25.6	6	-16.1	4	0	21			19	- 22	5	8		107	51						8	6	17	6.5	
NORTH PLATTE	846	915.7	1014.8	14.4	- 4.4	4.8	3.2	26.7	11+	-12.2	2	0	2[illegible]	- 5.0	58	17	- 8	15	5	1	T	T	1.5	34	17.0	NW	17	7	12	12	5.9	72
OMAHA	298	979.0	1015.1	11.7	- 1.7	4.9	2.2	25.6	11	-13.9	5+	0	19	- 2.8	63	29	- 8	10	10	1	79	51	1.3	35	19.7	NW	6	9	6	16	6.4	72
SCOTTSBLUFF	1206	876.7	1014.0	14.4	- 3.3	5.4	3.6	26.7	10	-10.0	29	0	27	- 5.0	54	18	- 4	12	6	0	25	T	3.1	32	18.3	29	6	4	11	16	6.9	
VALENTINE	789			11.7	- 5.0	3.3	3.7	28.3	10	-17.8	4	0	26			9	- 17	6	6		10	T			26.8	NW	6	7	10	14	6.5	59
NEVADA																																
ELKO	1539	845.6	1018.0	14.4	- 2.8	5.6	3.6	23.9	9	-13.9	27	0	25	- 4.4	54	14	- 7	6	5	0	91	76	1.3	25	10.7	30	18+	6	10	15	6.6	
ELY	1906	809.0	1016.7	15.0	- 5.0	5.1	4.3	21.1	9	-14.4	28	0	26	- 7.8	45	2	- 20	2	2	0	T	T	1.6	24	16.1	SW	25	9	13	9	5.4	92
LAS VEGAS	659	938.4	1014.6	26.1	9.4	17.6	4.9	31.7	10	0.0	28	0	1	- 7.8	18	0	- 9	0	0	0	0	0	1.3	28	16.1	N	27	17	10	4	3.3	97
RENO	1342	867.3	1018.0	18.3	- 1.7	8.4	3.1	26.1	8+	- 9.4	28	0	24	- 5.0	42	1	- 17	1	3	0	5	T	1.2	28	16.1	W	25	11	8	12	5.6	89
WINNEMUCCA	1311	869.3	1017.6	17.2	- 3.3	7.0	3.7	27.2	9	-12.8	27	0	25	- 3.9	52	10	- 11	8	2	0	69	51	1.3	23	14.3	W	22	5	14	12	6.[illegible]	7[illegible]
NEW HAMPSHIRE																																
CONCORD	104	1001.0	1014.1	2.2	- 6.7	- 2.3	- 2.1	18.3	1	-25.0	10	0	26	- 6.1	76	106	23	35	13	0	345	330	1.6	32	11.6	NW	26+	3	5	23	8.2	37
MT WASHINGTON OBS	1909			- 6.7	-15.6	-11.1	0.2	3.9	2	-28.9	9	0	31			298	153	41	24	0	1603	457			59.0Y	W	1	2	4	25	8.8	23
NEW JERSEY																																
ATLANTIC CITY	20	1012.2	1014.6	8.3	- 1.1	3.6	- 1.5	22.2	1	- 7.2	11+	0	21	- 2.2	69	91	- 8	30	9	4	T	T	1.5	30	15.6	26	22	6	8	17	7.1	40
ATLANTIC CITY U	3			7.8	1.7	4.7	- 0.4	13.3	2	- 4.4	9	0	14			98	- 4	44	9						17.4	S	22					
NEWARK	2	1013.5	1014.5	9.4	0.0	4.7	0.0	25.6	2	- 7.2	9	0	16	- 1.7	66	78	- 25	21	12	4	25	25	1.8	29	12.5	19	2	7	5	19	7.0	
TRENTON U	17			8.9	0.0	4.4	- 0.4	23.9	2	- 7.8	4	0	16			89	- 9	32	12		20	T			17.4	SW	7	9	7	15	6.5	53
NEW MEXICO																																
ALBUQUERQUE	1619	[illegible]36.4	1012.4	21.7	2.2	12.0	4.2	26.7	19	- 6.1	31+	0	6	-10.0	24	2	- 10	2	1	0	0	0	1.6	32	27.3	E	18	20	7	4	2.9	89
CLAYTON	1515			18.3	0.0	9.1	4.2	27.8	10	-10.6	29	0	15			11	- 5	8	3		160	102						12	12	7	4.7	
ROSWELL	1101			23.9	2.8	13.4	3.7	30.6	12+	- 6.1	31+	0	9			1	- 12	1	1		0	0			13.9	SW	26					87
NEW YORK																																
ALBANY	84	1004.1	1014.9	4.4	- 6.1	- 0.8	- 1.4	15.0	2+	-18.3	4	0	28	- 6.1	68	103	34	28	14	1	404	279	1.8	29	14.8	NW	26	4	8	19	7.7	45
BINGHAMTON	485	953.3	1013.8	2.2	- 6.7	- 2.1	- 1.7	15.6	2+	-17.8	4	0	28	- 6.1	73	96	23	39	18	2	445	203	1.7	26	13.0	NW	26+	2	7	22	8.1	46
BUFFALO	215	987.5	1014.0	3.3	- 5.6	- 1.1	- 0.8	12.2	22+	-13.3	4	0	28	- 5.0	77	101	19	30	20	0	358	127	2.1	26	15.2	SW	5	0	8	23	8.4	38
NEW YORK U	40	1010.8	1014.2	8.9	0.0	4.3	- 0.4	22.8	1	- 8.3	4	0	16	- 2.8	65	116	14	31	13	4	58	25	1.2	32	14.8	NE	14					51
NEW YORK KENNEDY	4	1013.9	1014.7	8.3	1.1	4.7	0.9	14.4	1	- 6.1	4	0	13	- 2.2	64	104	- 2	27	11	6	71	51	1.6	30	13.4	26	5	7	10	14	6.5	
NEW YORK LA GUARDIA	3	1013.2	1014.4	7.2	- 0.6	3.2	- 1.7	20.0	1	- 8.3	4	0	18	- 4.4	61	105	- 3	25	12	5	69	25	1.8	32	16.1	NE	15	5	10	16	7.0	
ROCHESTER	167	993.9	1014.7	3.3	- 5.6	- 0.9	- 1.1	13.9	22	-13.3	4	0	26	- 5.6	72	56	- 21	20	17	0	483	178	1.9	27	15.2	SW	22+	2	9	20	7.9	52
SYRACUSE	125	999.[illegible]	1014.3	3.3	- 6.1	- 1.4	- 1.8	16.1	2	-20.0	4	0	28	- 6.1	71	63	- 28	24	18	0	577	330	1.4	27	20.1	SW	8	3	6	22	8.1	47

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths, sunrise to sunset	Possible sunshine
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
NORTH CAROLINA	M.	Mb.	Mb.	C.	C.	C	C.	C.		C.				C.	%	Mm.	Mm	Mm.			Mm	Mm	M.p.s.		M.p.s							%
ASHEVILLE	652	938.4	1015.3	15.0	1.1	8.1	1.1	23.9	13+	- 4.4	10	0	17	1.1	69	81	- 41	24	12	4	188	127	1.7	33	13.0	18	2	12	6	13	5.6	71
CAPE HATTERAS R	2	1015.6	1016.0	15.6	6.7	11.2	0.7	22.8	16+	- 3.3	10	0	4	6.1	72	75	- 30	34	9	5	T	T	1.0	30	13.4	25	17	9	12	10	5.4	58
CHARLOTTE	224	987.8	1015.4	16.1	3.3	9.8	- 0.2	25.0	13+	- 5.6	26	0	9	1.7	62	66	- 46	17	13	2	94	76	1.0	24	13.4	SW	2	11	7	13	5.8	66
GREENSBORO	273	983.4	1015.5	15.0	2.2	8.4	- 0.2	25.6	13+	-11.1	26	0	13	0.0	60	67	- 26	16	14	3	79	76	1.3	24	13.4	W	22+	8	11	12	6.0	61
RALEIGH	132	999.3	1015.5	16.1	3.3	9.7	0.0	26.7	13	- 5.6	6	0	8	0.6	57	64	- 22	22	11	2	66	51	1.2	25	15.6	23	16	10	10	11	5.7	71
WILMINGTON	9	1014.9	1016.3	18.3	6.1	12.1	- 0.2	27.8	13	0.0	11+	0	3	5.6	69	85	- 17	26	10	3	0	0	1.2	25	15.2	S	16	13	9	9	5.0	63
NORTH DAKOTA																																
BISMARCK	502	955.0	1016.8	2.8	- 7.8	- 2.5	0.7	18.3	18	-30.6	2	0	24	- 7.2	71	34	14	14	8	0	216	152	0.4	3	16.5	NW	7	2	9	20	7.9	61
FARGO	273	983.4	1017.6	0.0	- 8.9	- 4.5	- 0.2	11.1	16+	-27.8	2	0	30	- 8.3	75	19	T	12	8	0	180	229	1.0	36	19.7	S	10	3	9	19	7.4	61
WILLISTON	579	945.5	1016.3	2.8	- 9.4	- 3.4	0.9	16.7	18	-31.7	2	0	28	- 6.7	81	23	5	8	10	0	163	305	0.6	35	19.7	NW	6	5	10	16	6.7	44
OHIO																																
AKRON	368	968.8	1014.6	6.1	- 5.0	0.3	- 2.4	19.4	21	-12.8	10+	0	25	- 4.4	75	104	20	34	17	4	267	76	1.8	25	15.6	28	22	2	6	23	8.1	
CINCINNATI ABBE OB	232			10.6	0.0	5.2	- 0.8	23.3	12+	- 7.8	10	0	19			92	- 7	26	12		T	T			10.7	SW	7					56
CLEVELAND	237	985.1	1015.0	6.1	- 3.3	1.6	- 0.2	21.1	21	- 9.4	9+	0	24	- 3.9	72	75	- 4	25	20	2	160	51	1.4	24	15.6	SW	7	3	4	24	8.3	34
COLUMBUS	247	984.4	1015.3	8.3	- 2.8	2.8	- 1.1	21.7	21	-12.2	6	0	23	- 3.9	65	73	- 8	18	18	2	127	25	1.4	25	15.2	SW	29+	4	6	21	8.0	33
DAYTON	305	978.0	1014.9	7.8	- 2.8	2.6	- 1.2	22.2	21	-12.2	6	0	23	- 2.2	74	62	- 17	21	11	2	30	25	1.8	24	15.6	SW	7	3	9	19	7.7	49
MANSFIELD	395			7.8	- 3.3	2.3	- 1.3	22.2	21	-13.9	6	0	24	- 2.8	74	63	- 33	16	17	3	150	76	2.1	24	14.3	21	7	1	7	23	8.2	
TOLEDO	204	988.5	1014.2	6.7	- 3.9	1.2	- 0.6	21.7	21	-14.4	10	0	24	- 5.6	66	59	2	19	14	4	84	25	1.3	27	15.6	SW	7	3	8	20	7.7	41
YOUNGSTOWN	359	970.9	1014.7	5.0	- 5.6	- 0.2	- 2.1	19.4	21	-15.6	9	0	25	- 4.4	76	82	- 3	19	18	3	236	76	1.4	27	12.5	24	7	3	6	22	8.0	
OKLAHOMA																																
OKLAHOMA CITY	392	968.2	1014.9	19.4	4.4	11.9	2.7	29.4	26	- 6.7	2	0	9	1.7	54	29	- 21	18	2	2	0	0	0.5	18	20.6	NW	20	13	10	8	4.4	73
TULSA	198	990.2	1014.8	18.9	4.4	11.7	2.7	27.8	10	- 6.7	2	0	9	2.8	58	23	- 39	13	5	2	T	0	0.7	20	15.2	S	26+	9	15	7	5.0	70
OREGON																																
ASTORIA	2	1017.3	1018.0	12.2	5.6	8.8	1.8	18.9	8	- 1.7	7	0	2	6.1	84	255	28	43	23	0	T	T	1.7	20	15.6	16	9+	2	3	26	9.0	
BURNS U	1265	873.7	1018.3	12.2	- 1.7	5.3	2.3	22.2	17	- 8.3	27+	0	20	- 1.1	67	46	22	20	9		155	152	1.3	27				2	11	18	7.3	
EUGENE	109	1005.4	1019.1	14.4	3.9	9.2	1.4	22.8	17	- 1.7	29+	0	6	5.6	82	194	84	50	18	0	13	T	1.7	19	10.3	19	5	2	5	24	8.6	
MEACHAM	1234	876.7	1018.3	7.8	- 1.1	3.3	2.6	18.9	17	- 7.8	27	0	19			138	38	45	15		523	610			9.8	21	5	1	7	23	8.4	
MEDFORD	396	971.2	1019.3	16.7	3.3	9.9	3.1	26.1	16	- 2.8	29+	0	7	3.3	69	92	47	41	12	0	66	51	0.4	32	13.0	15	9	2	8	21	7.8	
PENDLETON	452	963.4	1017.6	14.4	3.3	8.8	1.5	23.3	5	- 1.1	27+	0	7	1.7	65	37	7	26	10	0	T	T	2.0	24	14.3	22	5	2	7	22	8.1	
PORTLAND	6	1017.3	1018.5	14.4	5.0	9.9	2.1	22.2	17+	- 1.7	7	0	2	4.4	74	137	40	25	20	1	T	0	1.0	18	13.4	SW	5	2	4	25	8.4	45
SALEM	60	1011.5	1018.8	14.4	3.3	8.8	1.4	22.8	17	- 2.8	29	0	8	5.0	79	126	7	27	20	0	8	0	1.9	20	13.0	19	5	3	4	24	8.3	
SEXTON SUMMIT R	1169	885.2	1019.0	10.0	2.2	6.1	2.4	20.6	16	- 5.6	26+	0	9	0.6	74	182	94	67	15		140	51			18.8	22	1					
PACIFIC AREA																																
GUAM TAGUAC R	110	998.3	1010.9	28.3	22.2	25.2	- 0.8	30.6	5+	20.6	22+	0	0	22.8	87	287	220	90	19	0	0	0	4.3	7	13.0	NE	30					46
JOHNSTON	2	1012.2	1012.9	27.2	23.3	25.4	0.3	28.3	14+	21.1	19	0	0	20.6	75	39	- 20	13	10	0	0	0	4.2	8	13.0	SE	19	10	14	7	4.7	85
KOROR R	29	1005.4	1009.1	30.6	23.9	27.2	0.1	32.2	18+	22.2	15	2	0	23.9	87	558	364	122	24	3	0	0	1.9	5	9.4	N	10+	0	4	27	9.2	53
KWAJALEIN	2	1008.5	1009.3	30.6	25.6	27.9	1.0	31.7	21	23.9	31+	0	0	23.9	79	99	- 66	24	17	0	0	0	5.7	7	11.2	15	29+	0	13	18	7.9	
MAJURO	3	1009.8	1009.9	29.4	25.0	27.1	0.1	30.0	31+	21.7	6	0	0	23.9	80	392	95	207	26	0	0	0	4.7	7	12.5	NE	3	2	6	23	8.2	47
PAGO PAGO	4	1009.5	1009.6	30.6	23.9	27.2		31.7	8+	21.1	4+	0	0	23.3	81	240		65	21	4	0	0	1.3	9	10.7	E	29	0	10	21	8.3	34
PONAPE R	37	1003.4	1008.4	30.6	23.9	27.1	0.1	32.2	10+	21.7	3	3	0	23.9	84	372	3	96	24	2	0	0	2.5	7	7.6	NE	27+	0	7	24	8.6	65
TRUK MOEN ISLAND	2	1008.8	1009.0	30.0	25.0	27.3	0.2	31.1	12+	22.8	22+	0	0	23.9	82	470	273	209	22	2	0	0	3.9	7	10.7	SE	14	0	2	29	9.4	71
WAKE	3	1013.2	1013.5	27.2	21.1	24.2	- 1.2	28.9	9+	19.4	26	0	0	18.9	76	45	8	13	12	0	0	0	4.3	5	16.1	NE	31	9	13	9	5.4	61
YAP R	13			30.0	23.9	26.9	- 0.3	31.1	20	22.2	25	0	0			361	224	104	19	1	0	0			8.5	NE	7	0	5	26	8.7	72
PENNSYLVANIA																																
ALLENTOWN	118	1000.7	1014.9	8.3	- 2.2	2.9	- 0.2	22.2	2	-11.1	4	0	22	- 3.9	67	86	- 11	30	11	4	36	25	1.8	30	12.5	29	8+	6	9	16	6.9	
ERIE	223	987.1	1014.8	3.3	- 6.1	- 1.2	- 1.4	16.1	21	-13.3	4	0	28	- 5.6	75	100	27	29	16	3	201	25	1.8	24	12.5	18	7	4	6	21	7.8	
HARRISBURG	103	1002.0	1015.0	8.9	0.0	4.4	- 0.2	23.3	2	- 7.8	4	0	18	- 3.9	59	68	- 19	22	12	3	13	25	1.2	32	17.9	W	8	7	8	16	6.9	54
PHILADELPHIA	2	1013.9	1014.9	9.4	0.0	4.8	- 0.2	25.0	2	- 7.2	4	0	18	- 3.3	59	68	- 28	25	10	4	8	T	1.4	31	13.4	SW	7+	5	8	18	7.4	49
PITTSBURGH	347	969.9	1014.6	8.3	- 3.3	2.4	- 0.2	22.2	1	-15.0	4	0	24	- 3.9	65	93	9	25	20	5	249	102	2.4	29	13.4	31	8	3	7	21	7.9	41
SCRANTON	283	979.3	1014.3	5.6	- 4.4	0.4	- 1.9	20.0	1	-12.8	4	0	25	- 4.4	71	102	30	24	16	6	168	76	1.3	29	12.5	W	26	4	6	21	7.9	48
WILLIAMSPORT	160	995.3	1014.9	6.7	- 3.3	1.6	- 1.4	17.2	2	-13.3	4	0	25	- 5.0	64	101	6	41	16	3	170	203	1.3	29	13.0	28	8	6	4	21	7.3	
	160	995.3	1014.9	6.7	- 3.3	1.6	- 1.4	17.2	2	-13.3	4	0	25	- 5.0	64	101	6	41	16	3	170	203	1.3	29	13.0	28	8	6	4	21	7.3	
RHODE ISLAND																																
BLOCK ISLAND	34			5.6	- 1.1	2.2	- 0.4	11.7	2	- 9.4	10	0	19			126	22	35	11		5	0										

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation, ground,	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days sunrise to sunset			Sky cover, tenths, sunrise to sunset	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile 1.6 kilometers							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
RHODE ISLAND	M	Mb.	Mb	C	C	C.	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
PROVIDENCE	16	1011.9	1014.3	6.7	- 2.2	2.4	- 0.3	18.9	1	-11.7	10	0	21	- 3.3	67	170	65	44	11	2	221	102	1.2	34	13.4	21	3	6	5	20	7.3	43
SOUTH CAROLINA																																
CHARLESTON	12	1014.2	1016.3	20.6	7.2	13.8	0.1	26.7	13	- 2.2	6	0	2	6.7	68	64	- 36	23	10	3	0	0	1.1	24	20.6Y	NW	23	11	13	7	4.9	[illegible]
CHARLESTON U	3			18.9	10.0	14.6	0.4	25.6	13	2.8	26+	0	0			78	- 14	31	7		0	0			14.8	W	23					
COLUMBIA	65	1007.8	1015.9	19.4	5.0	12.2	- 0.3	26.7	13+	- 3.9	6	0	8	5.6	69	96	- 12	41	14	5	0	0	1.1	26	11.2	30	5	11	10	10	5.4	76
GRNVLLE-SPRTNBRG	292	980.4	1015.2	17.2	3.9	10.4	- 0.4	25.0	13	- 4.4	6	0	8	1.1	59	117	- 4	33	13	7	46	25	1.2	26	15.2	SW	2	13	4	14	5.4	63
SOUTH DAKOTA																																
ABERDEEN	395	968.5	1016.9	3.3	- 6.1	- 1.6	0.6	13.9	16	-26.7	2	0	24	- 6.1	74	26	- 2	11	8	0	152	279	1.3	36	16.5	31	6	2	11	18	7.8	
HURON	390	968.2	1016.3	4.4	- 5.0	- 0.3	1.6	13.9	18+	-21.7	2	0	25	- 5.0	74	31	3	12	9	0	23	102	0.7	34	18.8	NW	7	4	13	14	7.0	56
RAPID CITY	964	901.8	1014.4	10.6	- 5.6	2.5	3.0	26.7	10	-17.8	1	0	27	- 5.6	61	12	- 14	7	9	0	30	51	2.5	34	23.2	NW	6	6	13	12	6.2	69
SIOUX FALLS	432	964.4	1017.3	5.0	- 5.6	- 0.3	0.8	17.2	19	-23.3	5	0	27	- 4.4	77	25	- 14	11	7	0	127	203	1.4	36	14.8	29	7	4	16	11	6.6	
TENNESSEE																																
BRISTOL	459	960.7	1015.4	13.3	1.1	7.3	- 0.5	23.9	13	- 7.8	26	0	14	0.0	65	73	- 28	12	19	3	61	51	1.6	26	11.2	26	5	6	8	17	6.9	
CHATTANOOGA	203	990.9	1015.9	15.6	3.3	9.3	- 1.3	25.0	28	- 5.0	6	0	8	2.8	68	145	2	41	16	6	25	25	0.8	29	14.8	NW	16	6	10	15	6.2	52
KNOXVILLE	299	980.7	1016.2	14.4	3.9	9.0	- 0.8	23.9	12	- 5.0	26	0	6	1.1	61	126	6	27	18	3	170	102	1.7	29	15.6	SW	13	8	10	13	6.5	51
MEMPHIS	79	1005.8	1016.1	17.2	5.6	11.2	0.6	25.6	20	- 2.8	9	0	6	2.2	56	122	- 7	36	13	8	T	0	0.6	22	16.1	29	1	8	8	15	6.3	57
NASHVILLE	180	993.9	1015.7	16.7	3.9	10.1	0.6	26.7	12	- 5.0	9+	0	9	1.7	60	110	- 22	28	15	7	23	T	1.1	26	13.4	NW	16	10	5	16	6.5	55
OAK RIDGE R	276			13.9	2.2	8.1	- 0.6	24.4	12	- 6.1	26+	0	11			152	10	38	15		102	76			17.0Y		22+	8	7	16	6.7	
TEXAS																																
ABILENE	544	951.6	1014.3	23.3	7.2	15.3	2.5	30.6	26+	- 3.3	2	0	3	3.9	50	6	- 21	6	1	0	T	0	1.7	19	17.0	SW	7	19	9	3	2.8	88
AMARILLO	1098	888.9	1012.5	20.6	1.7	10.9	2.3	29.4	14	- 8.3	2	0	11	- 5.0	38	3	- 18	2	4	1	15	T	1.1	23	16.1	NW	1	14	10	7	4.0	80
AUSTIN	182	992.6	1014.4	25.6	12.8	18.9	3.6	33.3	28	3.9	3+	1	0	9.4	60	T	- 54	T	0	0	0	0	0.8	15	13.4	N	1	14	6	11	4.8	67
BROWNSVILLE	6	1012.9	1013.6	26.7	18.3	22.4	2.5	35.0	28	8.9	3	2	0	18.3	80	29	3	22	8	2	0	0	3.1	14	13.9	S	7	5	11	15	6.6	68
CORPUS CHRISTI	12	1012.5	1014.1	26.1	16.1	21.2	2.8	33.9	27	8.3	3	2	0	16.7	80	37	0	24	6	3	0	0	3.0	11	15.2	N	2	6	10	15	6.3	62
DALLAS	147	997.3	1014.6	23.9	10.0	16.8	3.4	31.7	7	- 1.1	2	0	1	5.0	51	7	- 66	6	2	2	0	0	1.3	16	16.5	NW	1	15	6	10	4.3	75
DEL RIO	313	977.3	1013.2	27.8	13.3	20.4	3.2	33.9	27+	4.4	31	7	0	7.8	52	13	- 8	11	3	3	0	0	2.1	11	13.9	36	1	11	12	8	4.9	
EL PASO	1194	880.8	1011.9	25.0	7.2	16.2	3.5	29.4	12	- 0.6	29	0	2	- 5.0	24	T	- 9	T	0	0	0	0	1.8	27	18.8	W	3	23	4	4	2.4	96
FORT WORTH	164	994.6	1014.9	24.4	8.9	16.7	3.4	31.7	23	0.0	2	0	1	6.7	55	3	- 61	2	2	4	0	0	1.0	19	13.9	19	26	17	7	7	4.0	
GALVESTON U	2			21.7	16.1	18.9	2.6	26.7	21+	6.1	2	0	0			28	- 44	21	9		0	0			16.5	NE	8					63
HOUSTON INTERCON	29	1011.5	1015.2	24.4	11.7	17.9	2.5	31.7	28	1.7	3	0	0	12.2	73	216	145	190	4	5	0	0	1.2	12	14.3	24	20	10	7	14	5.7	57
LUBBOCK	992	901.8	1012.4	22.8	4.4	13.5	3.7	30.0	14+	- 6.1	2	0	6	- 0.6	42	T	- 19	T	0	0	T	T	0.8	22	15.6	32	23	15	13	3	3.5	
MIDLAND	869	914.7	1012.4	24.4	6.7	15.6	2.7	31.7	7	- 3.9	31	0	3	0.6	43	T	- 9	T	0	0	T	T	1.3	18	13.4	30	28	20	9	2	2.4	
PORT ARTHUR	5	1015.2		23.3	11.1	17.2	1.1	27.8	18	2.2	3	0	0	12.2	79	100	12	52	6	7	0	0	1.4	14	15.2	NE	8	14	5	12	4.8	65
SAN ANGELO	580	947.2	1013.4	25.6	7.8	16.9	3.0	33.3	7	- 2.8	31	3	2	3.9	47	T	- 24	T	0	0	T	0	1.7	20	13.0	26	26+	18	10	3	3.4	
SAN ANTONIO	240	986.5	1014.4	26.1	12.2	19.1	2.9	33.3	28	0.6	3	1	0	9.4	60	3	- 39	2	3	1	0	0	0.9	9	15.6	N	1	12	6	13	5.3	62
VICTORIA	32	1010.5	1014.7	25.6	13.9	19.7	2.4	31.1	28	4.4	3	0	0	13.3	72	39	- 20	25	5	4	0	0	1.6	13	18.3Y	N	2	10	6	15	6.1	
WACO	153	996.3	1014.5	25.0	10.6	17.6	3.2	33.9	27	1.7	3+	1	0	6.7	53	2	- 57	1	3	3	0	0	1.1	17	13.4	18	26	18	3	10	4.0	
WICHITA FALLS	303	977.0	1013.8	22.2	5.6	13.8	1.7	31.7	26	- 5.6	2	0	6	5.6	61	10	- 29	10	1	1	0	0	0.6	17	14.8	23	26+	13	14	4	3.9	
UTAH																																
MILFORD	1533	846.6		17.8	- 3.9	6.8	3.2	25.6	6	-15.6	28	0	25			0	- 26	0	0		0	0						14	7	10	4.5	
SALT LAKE CITY	1286	872.7	1017.4	15.6	1.1	8.3	3.6	23.9	22+	- 5.6	28+	0	11	- 2.2	52	30	- 10	13	6	2	36	25	0.7	17	15.2	SE	22+	7	13	11	6.3	77
WENDOVER	1291	871.7	1017.5	15.0	2.2	8.5	3.2	23.9	22	- 5.0	27	0	8	- 5.0	41	1	- 9	1	2		T	T						10	6	15	6.1	
VERMONT																																
BURLINGTON	101	1001.4	1014.3	0.6	- 8.9	- 4.0	- 1.1	11.7	2	-22.2	4	0	29	- 8.9	69	91	37	26	16	0	554	279	0.6	31	15.2	S	7+	2	6	23	8.4	47
VIRGINIA																																
LYNCHBURG	279			13.9	2.2	8.0	0.5	24.4	1	- 5.6	11	0	10			45	- 47	14	9		T	T			13.0	SW	22+	8	9	14	6.4	62
NORFOLK	7	1014.6	1015.5	14.4	5.0	9.4	0.6	27.2	2	- 0.6	6	0	2	2.8	68	65	- 23	30	9	3	T	0	0.7	31	15.6	S	22+	9	6	16	6.2	62
RICHMOND	50	1008.8	1015.2	14.4	2.2	8.4	- 0.3	27.2	2	- 5.6	11	0	12	0.0	60	54	- 33	26	8	4	0	0	0.8	26	12.5	W	5	7	10	14	6.4	64
ROANOKE	350	972.2	1014.6	13.9	1.1	7.6	0.1	25.6	12	- 6.7	9	0	14	- 2.8	52	45	- 45	21	7	1	T	0	1.9	28	15.6	27	2	8	10	13	6.1	
WALLOPS ISLAND	3			9.4	2.8	6.1		16.1	8	- 3.3	11	0	11			83		30	9		T	0			20.6Y	S	22					
WASHINGTON																																
OLYMPIA	59	1010.5	1017.7	12.2	2.8	7.4	0.6	21.1	16	- 4.4	7	0	12	5.6	89	254	117	100	19	1	91	25	2.0	20	11.6	26	5	1	4	26	8.8	
QUILLAYUTE	55	1009.1	1016.6	10.0	2.8	6.4	0.3	16.7	8	- 3.9	26	0	12	4.4	87	391	109	82	23	0	5	0	1.4	18	11.6	SW	5	3	4	24	8.7	19

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1972

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers) Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm.	Mm.	Mm			Mm	Mm	M p.s.		M p.s							%
WASHINGTON																																
SEATTLE-TACOMA	122	1000.3	1017.1	11.7	5.0	8.3	1.7	18.9	16	- 0.6	7	0	1	3.9	75	171	75	73	17	1	T	0	2.1	19	17.0	SW	24	1	9	21	8.4	38
SPOKANE	718	931.3	1016.0	10.0	0.0	5.2	1.8	20.6	17	- 5.6	7	0	17	- 0.6	70	27	- 11	6	12	0	64	25	2.9	21	18.3	SW	5	3	6	22	8.2	45
STAMPEDE PASS R	1206	877.8		2.8	- 2.2	0.2	1.3	12.2	17	- 8.3	25	0	21			313	43	72	21		1491	4953						2	5	24	8.6	
WALLA WALLA U	289			14.4	5.0	9.6	1.8	22.8	17	0.0	26	0	1			67	26	26	12		T	T			10.3	W	18+	4	5	22	8.1	44
YAKIMA	321	978.3	1017.2	14.4	- 0.6	6.8	1.2	22.2	17+	- 6.7	2	0	19	- 1.1	61	27	11	10	10	0	140	76	1.9	29	20.6	26	5	5	9	17	7.0	
WEST INDIES																																
SAN JUAN P.R.	4	1013.2	1015.8	28.9	22.8	25.9	1.9	32.8	26	21.1	16	2	0	18.9	67	86	30	37	14	3	0	0	2.7	8	12.1	W	26+	7	19	5	5.1	67
WEST VIRGINIA																																
BECKLEY	763	925.2	1015.2	10.0	- 1.1	4.3	- 0.1	22.8	13	- 9.4	26+	0	19	- 2.2	66	47	- 66	14	15	2	86	25	2.4	25	14.3	30	8	4	9	18	7.5	
CHARLESTON	286	980.4	1015.0	12.8	0.6	6.6	- 0.3	25.0	21	- 7.2	26	0	14	- 2.2	57	55	- 55	20	16	2	89	25	1.7	25	13.0	29	13+	4	8	19	7.6	
ELKINS	594	942.8		10.6	- 3.3	3.7	- 0.5	23.9	13+	-11.7	4	0	23			80	- 25	22	16		183	76						1	7	23	8.4	
HUNTINGTON	252	984.8	1015.3	12.2	0.6	6.4	- 0.7	25.0	13	- 7.2	26+	0	16	- 2.2	59	70	- 37	38	14	2	114	76	1.5	24	15.6	15	21	2	9	20	7.8	
PARKERSBURG U	187			11.1	0.0	5.4	- 0.6	25.0	13	- 8.9	4	0	17			78	- 12	30	15		102	76			14.8	SW	13					45
WISCONSIN																																
GREEN BAY	208	989.5	1015.9	0.6	- 9.4	- 4.2	- 2.1	8.3	20	-24.4	10	0	29	- 8.3	72	56	22	18	13	1	564	381	1.7	34	17.0	NW	22+	5	10	16	6.7	55
LA CROSSE	198	991.5	1016.9	2.8	- 7.2	- 2.2	- 1.4	14.4	20	-24.4	2	0	28	- 7.8	67	43	- 10		10	0	302		1.1	35								
MADISON	262	982.7	1015.1	3.3	- 7.2	- 1.8	- 0.2	16.1	20	-18.9	2	0	28	- 6.7	72	57	10	21	9	0	478	254	1.3	33	14.8	W	7	8	6	17	6.6	54
MILWAUKEE	205	989.5	1015.4	1.7	- 6.1	- 2.4	- 1.8	14.4	21	-15.0	5+	0	28	- 7.8	66	65	7	28	12	2	378	178	1.9	33	16.1	N	13	6	8	17	7.0	50
WYOMING																																
CASPER	1627	834.4	1014.0	10.6	- 3.9	3.4	3.4	21.1	10	-17.2	4	0	23	- 4.4	64	36	10	7	13	0	368	102	4.0	24	20.1	26	6	6	9	16	7.0	
CHEYENNE	1867	808.7	1013.5	11.1	- 3.3	4.1	3.8	21.1	10	-16.7	29	0	22	- 8.3	45	20	- 11	8	7	1	269	127	5.5	30	33.5	NW	6	3	12	16	7.0	70
LANDER	1696	826.3	1013.5	12.2	- 2.2	4.9	4.8	21.7	9	-11.1	29	0	19	- 7.2	47	10	- 20	6	6	1	117	51	1.3	26	35.8	SW	6	3	17	11	6.4	80
SHERIDAN	1208	875.7	1014.3	12.2	- 3.3	4.6	5.1	23.9	10	-13.9	8	0	18	- 4.4	54	25	- 11	7	10	0	231	76	2.7	32	22.4	SW	6	3	12	16	7.2	62

Data from airport unless otherwise specified U indicates Urban, R indicates Rural, sites

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated

B Number of days maximum 21.1 C or above for Alaskan Stations
Y Peak Gust
+ And also on an earlier date or dates
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication

Data in this table are obtained by conversion from data in the English Units table

HEATING DEGREE DAYS

(Base 65°F.)

MARCH 1972

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	348	2207	2434
HUNTSVILLE	382	2531	[illegible]
MOBILE	231	1018	1518
MONTGOMERY	241	1678	2201
ALASKA			
ANCHORAGE	[illegible]	9889	8977
ANNETTE	862	6239	5610
BARROW	2630	16221	15828
BARTER ISLAND	2621	16206	15642
BETHEL	2088	11472	10815
BETTLES	2422	14983	
BIG DELTA	2069	13284	
COLD BAY	1503	8353	7547
FAIRBANKS	2102	13079	12434
GULKANA	1881	13315	
HOMER	1509	9037	
JUNEAU	1186	8213	7283
KING SALMON	1963	10323	9296
KOTZEBUE	2434	13310	12858
MC GRATH	2144	12940	12255
NOME	2250	11944	11354
ST. PAUL ISLAND	1670	9237	8439
SHEMYA	998	7310	7269
SUMMIT	1998	12952	
TALKEETNA	1706	11017	9697
UNALAKLEET	2249	11971	
YAKUTAT	1236	8562	7185
ARIZONA			
FLAGSTAFF	768	6323	5884
PHOENIX	22	1329	1690
TUCSON	73	1693	1719
WINSLOW	403	4117	4395
YUMA	11	1158	1188
ARKANSAS			
FORT SMITH	378	2859	3126
LITTLE ROCK	360	2462	3084
CALIFORNIA			
BAKERSFIELD	37	2205	1998
BISHOP	305	3835	3742
BLUE CANYON	601	4777	4333
EUREKA U	422	3712	3548
FRESNO	142	2579	2286
LONG BEACH	164	1339	1435
LOS ANGELES	161	1375	1447
LOS ANGELES U	61	1097	1140
MT SHASTA R	590	5045	4691
OAKLAND	257	2452	2345
RED BLUFF	251	2647	2300
SACRAMENTO	197	2578	2449
SANDBERG R	355	3677	3462
SAN DIEGO	139	1216	1196
SAN FRANCISCO	294	2637	2396
SAN FRANCISCO U	279	2521	2303
SANTA MARIA	284	2660	2287
STOCKTON	163	2558	2456
COLORADO			
ALAMOSA	855	7195	7225
COLORADO SPRINGS	665	5254	5438
DENVER	621	5082	5371
GRAND JUNCTION	563	4971	5087
PUEBLO	585	4667	4844
CONNECTICUT			
BRIDGEPORT	853	4482	4872
HARTFORD	935	5230	5476
DELAWARE			
WILMINGTON	732	3961	4425
DIST.OF COLUMBIA			
WASHINGTON DULLES	687	4010	
WASHINGTON NATIONAL	539	3419	3862
FLORIDA			
APALACHICOLA U	115	853	1275
DAYTONA BEACH	69	426	864
FORT MYERS	0	85	442
JACKSONVILLE	131	821	1218
KEY WEST	0	8	108
LAKELAND U	31	293	661
MIAMI	0	41	214
ORLANDO	24	234	760
PENSACOLA	143	990	1427
TALLAHASSEE	167	1091	1449
TAMPA	26	281	683
WEST PALM BEACH	0	52	253
GEORGIA			
ATHENS	352	2322	2766
ATLANTA	387	2451	2792
AUGUSTA	306	1909	2307
COLUMBUS	250	1665	2287
MACON	270	1784	2073
ROME	426	2676	3115
SAVANNAH	183	1272	1774
IDAHO			
BOISE	598	5003	5045
LEWISTON	551	4774	4787
POCATELLO	735	6437	6018
ILLINOIS			
CAIRO U	491	3168	3579
CHICAGO O HARE	954	5425	5773
CHICAGO MIDWAY	929	5142	5416
MOLINE	893	5682	5730
PEORIA	866	5401	5383
ROCKFORD	1006	5901	6018
SPRINGFIELD	745	4696	4921
INDIANA			
EVANSVILLE	639	3906	4130
FORT WAYNE	900	5217	5506
INDIANAPOLIS	774	4657	5051
SOUTH BEND	972	5245	5615
IOWA			
BURLINGTON	849	5437	5478
DES MOINES	857	5835	6069
DUBUQUE	1051	6438	6492
SIOUX CITY	838	6199	6215
WATERLOO	1053	7003	6506
KANSAS			
CONCORDIA	606	4780	4940
DODGE CITY	485	4326	4499
GOODLAND	615	4961	5356
TOPEKA	567	4464	4716
WICHITA	524	4337	4257
KENTUCKY			
COVINGTON	751	4387	4702
LEXINGTON	700	3730	4253
LOUISVILLE	623	3628	4231
LOUISIANA			
ALEXANDRIA	172	1529	1852
BATON ROUGE	123	1090	1527
LAKE CHARLES	102	1019	1420
NEW ORLEANS	126	1004	1346
SHREVEPORT	185	1663	2103
MAINE			
CARIBOU	1440	8694	8258
PORTLAND	1112	6292	6353
MARYLAND			
BALTIMORE	663	3731	4237
MASSACHUSETTS			
BLUE HILL OBS R	1004	5391	5453
BOSTON	883	4630	4877
WORCESTER	1065	5756	5975
MICHIGAN			
ALPENA	1329	6951	7127
DETROIT	993	5155	5448
DETROIT METRO	997	5503	5641
FLINT	1052	5806	5933
GRAND RAPIDS	1089	5876	6025
HOUGHTON LAKE	1320	7007	7076
LANSING	1088	5927	5988
MARQUETTE U	1304	7197	6977
MUSKEGON	1068	5883	5714
SAULT STE MARIE	1420	7920	7560
MINNESOTA			
DULUTH	1458	8868	8472
INTERNATIONAL FALLS	1413	9546	9161
MINNEAPOLIS	1188	7623	7392
ROCHESTER	1142	7368	7271
ST CLOUD	1265	8186	7792
MISSISSIPPI			
JACKSON	216	1639	2125
MERIDIAN	231	1673	2208
MISSOURI			
COLUMBIA REGIONAL	634	4211	4589
KANSAS CITY	557	4189	4308
ST JOSEPH	629	4823	4988
ST LOUIS	619	4053	4452
SPRINGFIELD	549	3729	4159
MONTANA			
BILLINGS	764	6745	6092
CUT BANK	1005	8372	
DILLON	789	6925	
GLASGOW	1067	8107	7863
GREAT FALLS	820	6964	6538
HAVRE	969	8154	7543
HELENA	796	7260	6902
KALISPELL	817	7288	6948
LEWISTOWN	883	7376	
MILES CITY	890	7416	6769
MISSOULA	749	6641	6894
NEBRASKA			
GRAND ISLAND	714	5385	5812
LINCOLN U	681	5084	5261
NORFOLK	824	6127	6200
NORTH PLATTE	745	5806	5860
OMAHA	741	5425	5619
SCOTTSBLUFF	714	5555	5761
VALENTINE	827	6351	6474
NEVADA			
ELKO	704	6304	6211
ELY	732	6481	6380
LAS VEGAS	99	2521	2592
RENO	548	5350	5276
WINNEMUCCA	626	5642	5672
NEW HAMPSHIRE			
CONCORD	1142	6527	6374
MT WASHINGTON OBS	1639	10889	11024
NEW JERSEY			
ATLANTIC CITY	816	4275	4244
ATLANTIC CITY U	755	3747	4060
NEWARK	757	4036	4520
TRENTON U	771	4078	4448
NEW MEXICO			
ALBUQUERQUE	346	3934	3979
CLAYTON	511	4319	4525
ROSWELL	273	3077	3561
NEW YORK			
ALBANY	1060	6030	6027
BINGHAMTON	1133	6148	6229
BUFFALO	1070	5596	6010
NEW YORK U	775	4119	4336
NEW YORK KENNEDY	755	3851	4560
NEW YORK LA GUARDIA	837	4275	4267
ROCHESTER	1071	5628	5824
SYRACUSE	1098	5739	5893
NORTH CAROLINA			
ASHEVILLE	569	3304	4034
CAPE HATTERAS R	393	1862	2410
CHARLOTTE	472	2817	3013
GREENSBORO	550	3163	3524
RALEIGH	478	2835	3179
WILMINGTON	340	1865	2251
NORTH DAKOTA			
BISMARCK	1157	8309	7760
FARGO	1269	8514	8105
WILLISTON	1209	8546	8064
OHIO			
AKRON	999	5368	5307
CINCINNATI ABBE OB	730	4168	4343
CLEVELAND	930	5008	5346
COLUMBUS	860	4859	5036
DAYTON	870	4697	4996
MANSFIELD	886	4915	5097
TOLEDO	952	5488	5649
YOUNGSTOWN	1028	5437	5569
OKLAHOMA			
OKLAHOMA CITY	365	3272	3502
TULSA	373	3187	3600
OREGON			
ASTORIA	526	4065	4112
BURNS U	716	6286	5844
EUGENE	503	4129	3886
MEACHAM	833	6640	6282
MEDFORD	465	4127	4256
PENDLETON	528	4407	4463
PORTLAND	466	3749	3889
SALEM	523	4048	3920
SEXTON SUMMIT R	679	5365	4901
PENNSYLVANIA			
ALLENTOWN	853	4866	5148
ERIE	1082	5555	5884
HARRISBURG	766	4298	4719
PHILADELPHIA	748	4000	4584
PITTSBURGH	881	4854	5273
PITTSBURGH WBO	819	4435	4752
SCRANTON	992	5433	5528
WILLIAMSPORT	923	5165	5265
RHODE ISLAND			
BLOCK ISLAND	895	4468	4749
PROVIDENCE	879	4885	5133
SOUTH CAROLINA			
CHARLESTON	249	1523	1979
CHARLESTON U	208	1354	1752
COLUMBIA	341	1984	2403
GRNVLLE-SPRTNBRG	434	2770	2876
SOUTH DAKOTA			
ABERDEEN	1100	7893	7492
HURON	1032	7417	7248
RAPID CITY	877	6615	6278
SIOUX FALLS	1031	7361	6918
TENNESSEE			
BRISTOL	610	3381	3814
CHATTANOOGA	496	2897	3079
KNOXVILLE	516	2942	3253
MEMPHIS	391	2560	3063
NASHVILLE	454	2818	3349
OAK RIDGE R	568	3258	3533
TEXAS			
ABILENE	207	2214	2510
AMARILLO	409	3785	3677
AUSTIN	66	1256	1660
BROWNSVILLE	11	299	600
CORPUS CHRISTI	22	539	914
DALLAS	142	1793	2267
DEL RIO	34	1025	1486
EL PASO	126	2245	2595
FORT WORTH	143	1834	2306
GALVESTON U	53	696	1205
HOUSTON INTERCON	85	1092	1631
LUBBOCK	275	2836	3346
MIDLAND	176	2261	2501
PORT ARTHUR	109	1130	1408
SAN ANGELO	138	1854	2189
SAN ANTONIO	61	1102	1507
VICTORIA	50	799	1152
WACO	109	1621	1964
WICHITA FALLS	273	2638	2706
UTAH			
MILFORD	631	5549	5612
SALT LAKE CITY	556	5153	5276
WENDOVER	542	5271	5142
VERMONT			
BURLINGTON	1239	6710	7112
VIRGINIA			
LYNCHBURG	571	3475	3821
NORFOLK	494	2505	3168
RICHMOND	554	3208	3593
ROANOKE	594	3538	3824
WALLOPS ISLAND	678	3201	
WASHINGTON			
OLYMPIA	602	4786	4302
QUILLAYUTE	660	4897	4532
SEATTLE-TACOMA	557	4253	4217
SPOKANE	726	6136	5701
STAMPEDE PASS R	1002	7423	7291
WALLA WALLA U	480	4233	4241
YAKIMA	633	5510	5217
WEST VIRGINIA			
BECKLEY	775	4358	4769
CHARLESTON	649	3527	4071
ELKINS	815	4615	4985
HUNTINGTON	661	3737	4041
PARKERSBURG U	720	3988	4294
WISCONSIN			
GREEN BAY	1253	7166	6941
LA CROSSE	1140	6794	6735
MADISON	1119	6673	6833
MILWAUKEE	1149	6377	6486
WYOMING			
CASPER	824	6700	6243
CHEYENNE	791	5963	6123
LANDER	739	6818	6682
SHERIDAN	761	6959	6525

Data from airport unless otherwise specified
U indicates Urban, R indicates Rural, sities.

COOLING DEGREE DAYS

(Base 65°F.)

MARCH 1972

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	7	17	
HUNTSVILLE	5	5	
MOBILE	40	102	
MONTGOMERY	13	28	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	200	211	
TUCSON	82	83	
WINSLOW	0	0	
YUMA	206	227	
ARKANSAS			
FORT SMITH	0	0	
LITTLE ROCK	3	5	
CALIFORNIA			
BAKERSFIELD	52	52	
BISHOP	1	1	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	17	17	
LONG BEACH	0	0	
LOS ANGELES	8	8	
LOS ANGELES U	27	31	
MT SHASTA R	0	0	
OAKLAND	3	3	
RED BLUFF	9	9	
SACRAMENTO	6	6	
SANDBERG R	2	2	
SAN DIEGO	0	0	
SAN FRANCISCO	1	1	
SAN FRANCISCO U	3	3	
SANTA MARIA	2	2	
STOCKTON	6	6	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	0	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	0	0	
CONNECTICUT			
BRIDGEPORT	0	0	
HARTFORD	0	0	
DELAWARE			
WILMINGTON	2	2	
DIST.OF COLUMBIA			
WASHINGTON DULLES	6	6	
WASHINGTON NATIONAL	3	3	
FLORIDA			
APALACHICOLA U	28	53	
DAYTONA BEACH	67	190	
FORT MYERS	190	497	
JACKSONVILLE	24	86	
KEY WEST	331	861	
LAKELAND U	112	298	
MIAMI	227	633	
ORLANDO	146	371	
PENSACOLA	35	94	
TALLAHASSEE	16	62	
TAMPA	90	241	
WEST PALM BEACH	192	527	
GEORGIA			
ATHENS	0	0	
ATLANTA	3	3	
AUGUSTA	2	7	
COLUMBUS	21	31	
MACON	13	18	
ROME	1	1	
SAVANNAH	14	50	
HAWAII			
HILO	281	615	
HONOLULU	249	597	
KAHULUI	222	533	
LIHUE	237	589	
IDAHO			
BOISE	0	0	
LEWISTON	0	0	
POCATELLO	0	0	
ILLINOIS			
CAIRO U	1	1	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	0	0	
MOLINE	0	0	
PEORIA	0	0	
ROCKFORD	0	0	
SPRINGFIELD	0	0	
INDIANA			
EVANSVILLE	2	2	
FORT WAYNE	0	0	
INDIANAPOLIS	0	0	
SOUTH BEND	0	0	
IOWA			
BURLINGTON	0	0	
DES MOINES	0	0	
DUBUQUE	0	0	
SIOUX CITY	0	0	
WATERLOO	0	0	
KANSAS			
CONCORDIA	2	2	
DODGE CITY	4	4	
GOODLAND	0	0	
TOPEKA	5	5	
WICHITA	2	2	
KENTUCKY			
COVINGTON	0	0	
LEXINGTON	0	0	
LOUISVILLE	3	3	
LOUISIANA			
ALEXANDRIA	32	67	
BATON ROUGE	44	90	
LAKE CHARLES	53	95	
NEW ORLEANS	38	114	
SHREVEPORT	31	63	
MAINE			
CARIBOU	0	0	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	5	5	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	0	0	
DETROIT METRO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	0	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	0	0	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	30	67	
MERIDIAN	21	35	
MISSOURI			
COLUMBIA REGIONAL	0	0	
KANSAS CITY	7	10	
ST JOSEPH	0	0	
ST LOUIS	5	5	
SPRINGFIELD	0	0	
MONTANA			
BILLINGS	0	0	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	0	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	0	0	
NEBRASKA			
GRAND ISLAND	0	0	
LINCOLN U	0	0	
NORFOLK	0	0	
NORTH PLATTE	0	0	
OMAHA	0	0	
SCOTTSBLUFF	0	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	66	68	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	0	0	
NEWARK	3	3	
TRENTON U	3	3	
NEW MEXICO			
ALBUQUERQUE	0	0	
CLAYTON	0	0	
ROSWELL	7	7	
NEW YORK			
ALBANY	0	0	
BINGHAMTON	0	0	
BUFFALO	0	0	
NEW YORK U	0	0	
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	0	0	
SYRACUSE	0	0	
NORTH CAROLINA			
ASHEVILLE	0	0	
CAPE HATTERAS R	2	9	
CHARLOTTE	0	0	
GREENSBORO	3	3	
RALEIGH	5	5	
WILMINGTON	2	7	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI ABBE OB	1	1	
CLEVELAND	0	0	
COLUMBUS	0	0	
DAYTON	0	0	
MANSFIELD	0	0	
TOLEDO	0	0	
YOUNGSTOWN	0	0	
OKLAHOMA			
OKLAHOMA CITY	11	13	
TULSA	11	17	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	0	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	387	1100	
JOHNSTON	403	1103	
KOROR R	502	1457	
KWAJALEIN	545	1519	
MAJURO	498	1444	
PAGO PAGO	503	1382	
PONAPE R	499	1456	
TRUK MOEN ISLAND	506	1462	
WAKE	335	916	
YAP R	483	1410	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	3	3	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	0	0	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	0	0	
SOUTH CAROLINA			
CHARLESTON	5	15	
CHARLESTON U	6	13	
COLUMBIA	5	6	
GRNVLLE-SPRTNBRG	0	0	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	0	0	
KNOXVILLE	0	0	
MEMPHIS	3	3	
NASHVILLE	1	1	
OAK RIDGE R	0	0	
TEXAS			
ABILENE	41	53	
AMARILLO	4	4	
AUSTIN	111	151	
BROWNSVILLE	246	485	
CORPUS CHRISTI	187	341	
DALLAS	62	83	
DEL RIO	161	201	
EL PASO	15	19	
FORT WORTH	57	73	
GALVESTON U	91	141	
HOUSTON INTERCON	71	149	
LUBBOCK	14	14	
MIDLAND	31	31	
PORT ARTHUR	52	91	
SAN ANGELO	65	85	
SAN ANTONIO	105	147	
VICTORIA	134	220	
WACO	72	99	
WICHITA FALLS	26	30	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	8	8	
RICHMOND	7	7	
ROANOKE	0	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE-TACOMA	0	0	
SPOKANE	0	0	
STAMPEDE PASS R	0	0	
WALLA WALLA U	0	0	
YAKIMA	0	0	
WEST INDIES			
SAN JUAN P.R.	431	1207	
WEST VIRGINIA			
BECKLEY	0	0	
CHARLESTON	0	0	
ELKINS	0	0	
HUNTINGTON	1	1	
PARKERSBURG U	2	2	
WISCONSIN			
GREEN BAY	0	0	
LA CROSSE	0	0	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

MARCH 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS
Alabama	3	2			5			5	5	1	7	6	5																
Alaska*																													
Arizona*																													
Arkansas	6	3		3	6		3	6	6		2	4																	
California*																													
Colorado												4																	
Connecticut																												4	
Delaware*																													
Florida	26	7		15	6			4	3	2	29	6	4		1	4													
Georgia	5	2		12	5			6			2	5				4													
Hawaii*																													
Idaho											2	4																	6
Illinois								3			33	5																	
Indiana																5								?	?				
Iowa																								5					
Kansas								3				4				4													
Kentucky											2	5											?	?	?			6	?
Louisiana	4	4		2	5			5		1	10	5			1	5											[illegible]	4	
Maine												4				3				4				5					
Maryland	1	1			5			3		1		5				3													
Massachusetts																3				5				3				5	
Michigan																						1		6					
Minnesota																4													
Mississippi	3	2		1	5			3		1		5	5			5												?	
Missouri	1	1			4			3		1	1	5		1	1	5													
Montana												4																?	?
Nebraska*																													
Nevada*																													
New Hampshire																3				4				4					
New Jersey								2																					
New Mexico*																													
New York																				4				4				5	
North Carolina									2			4			3	4				4	4			4	4				4
North Dakota																												6	
Ohio											?	4			?	4													
Oklahoma								5				4				5													
Oregon																										1	8	6	6
Pacific Area*																													
Pennsylvania																												4	
Puerto Rico*																													
Rhode Island												3				3												4	
South Carolina	1	1			4						1	4																	
South Dakota																								4					
Tennessee								5			7	5				3													
Texas	19	7		17	6		1	6	5	1	4	5				4												7	5
Utah												4																	
Vermont																3				4				4					
U.S. Virgin Is.*																													
Virginia									3			3																	
Washington												4	3															6	5
West Virginia*																													
Wisconsin*																													
Wyoming												6	C																

Includes crop damage.
Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5 Million
7	$5 Million to $50 Million
8	$50 Million to $500 Million
9	$500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
MARCH 1972

Elmer R. Nelson, Office of Hydrology

The most damaging floods during March occurred along small streams in southwestern Oregon. The South Fork Coquille River at Myrtle Point, Oreg., exceeded flood stage by over 6 feet. The damage was estimated at $4.3 million.

Record or near-record flows occurred in the Columbia River above Pasco, Wash. Crests in the lower Columbia River at Vancouver, Wash., and in the Portland Willamette Harbor were the highest for March since 1910 and the third highest of record.

HUDSON BAY DRAINAGE

Red River of the North Basin--Fall precipitation was above normal in the Red River of the North Basin in both Canada and the United States. It was the heaviest in many years.

The accumulation of snow was near to slightly above normal. Above normal temperatures after the first week in March caused an early runoff with flooding in some areas. Temperature and precipitation patterns were favorable during the melt period. Flooding over the Souris Basin was minor during the spring snowmelt.

Damage to property was minor.

ST. LAWRENCE DRAINAGE

Lake Michigan--Snowmelt runoff caused the lower Grand River in Michigan to rise to near bankfull level on the 19th-24th. Some minor overflow occurred at and below Ionia, Mich. Bankfull conditions were reached in the Comstock Park area, just north of Grand Rapids, Mich., on the 23d-25th.

Snow cover ranged from 3 to 5 inches in depth, with a water content of 1 to 1.5 inches. Last spring the water equivalent of the snow cover was 3 to 4 inches.

Lake Erie--Minor flooding occurred on the St. Joseph River at Montpelier, Ohio, on the 15th-19th. The crest on the 18th was 1 foot above flood stage. No damage was reported.

The St. Marys River at Decatur, Ind., approached within 1 foot of flood stage on the 3d.

Locally heavy rains and ice jams on the 1st and 2d, with temperatures in the fifties, caused local flooding in parts of West Seneca, N. Y., along Cazenovia Creek, and in the Sunset Bay area on Cattaraugus Creek. Residents in the flood areas were evacuated and some water and mud damage resulted to homes.

Lake Ontario--The most significant overflow in the Lake Ontario Drainage during March occurred at Groveland, N. Y., on Canaseraga Creek on the 2d-3d. The crest on the 2d was 3.3 feet above flood stage. State Route 258, between Groveland and Mt. Morris, N. Y., and Route 63 between Geneseo and Dansville, N. Y., were closed due to the high water. No physical damage resulted from the high water. Flooding elsewhere in the basin was minor.

ATLANTIC SLOPE DRAINAGE

Minor small stream flash flooding and minor flooding on the Charles, Blackstone, Connecticut, Concord, and Farmington Rivers occurred during March. The flooding early in the month was confined mainly to southern New England. Flooding was again reported in eastern Massachusetts and through parts of New Hampshire and Maine from the 18th through the 29th. On the Concord River, at Billerica, Mass., 24 families were evacuated on the 24th. Lowland flooding and cellar and road flooding were common through much of New England during the month. Much of this was due to poor drainage and culverts of insufficient capacity. Private homes and private industries suffered some damage from basement flooding. In general, most of the flooding was minor.

Melting snow and heavy rain on the 2d and 3d brought amounts ranging from 1 inch in western and central Connecticut and Massachusetts and Rhode Island. During the period from the 14th through the 17th, northern New England received 1 to 2 inches of rain and snow and southern New England around 2 inches. On the 22d, a little over 1 inch of mostly rain fell over southern New England, and 1-1/2 to 2-1/2 inches of rain and snow over northern New England.

Precipitation during March averaged 4.2 inches or 120 percent of normal in the Delaware Basin above Trenton, N. J. Below Trenton, it averaged 3 inches or 78 percent of normal. In northern New Jersey, the monthly precipitation averaged 3.7 inches or 90 percent of normal, while in central and southern New Jersey, it averaged 3.4 inches or 82 percent of normal. The heaviest snowfall during March totalled 10 to 20 inches in the higher elevations of the Poconos in the upper portions of the Delaware Basin. The snow cover at the end of the month was generally less than 1 inch across the upper Delaware River Basin, except 5 inches at Delhi, N. Y., and 9 inches at Pleasant Mount, Pa.

All water-supply reservoirs in New Jersey were spilling at the end of March, except Spruce Run which was 98 percent of capacity and the pumped storage reservoir at Round Valley, N. J., at 94 percent of capacity. New York City's three reservoirs on the upper Delaware increased storage by 47.6 billion gallons in March and were at 96 percent of capacity by the end of the month. The reservoir at Cannonsville spilled during the first week in March.

Mild temperatures and snowmelt on the 2d, combined with heavy precipitation on the 2d-3d, caused minor flooding on the Ramapo River in New Jersey. Other streams in central and northern New Jersey approached near bankfull levels.

Rapid snowmelt and moderate to heavy rain caused slight to moderate overflows in the upper Susquehanna Basin in New York and Pennsylvania early in March. There was an average of 18 inches of snow cover over the drainage area in New York, with an average water content of 2.99 inches on February 28. Showers began on the 2d and by midnight averaged 1.14 inches over the New York portion. In Pennsylvania the rain on the 3d ranged from 0.5 to 1.5 inches. Slight to moderate overflows occurred along the Chemung and Tioga Rivers in New York. Most of the rivers and streams in Pennsylvania rose rapidly to near bankfull levels. Slight overflows occurred along the Susquehanna from Bainbridge, N. Y., to Wilkes Barre, Pa. Damage from the flooding was negligible.

The Roanoke River continued in flood at Williamston, N. C., from February 19 through March 7.

Flooding continued on the Lumber River at Lumberton, N. C., from January 13 to March 6. The highest crest of 12.3 feet (flood stage, 9 feet) occurred on January 18-19. Additional minor flooding occurred at Lumberton on the 23d-27th. Losses, if any, were minor and confined to the lowest sections.

The Savannah River at Clyo, Ga., continued above flood stage from January 15 through March 6. The Ogeechee River at Eden, Ga., continued in flood from January 17 to March 3. Damage on both streams was estimated to be light.

EAST GULF OF MEXICO DRAINAGE

Heavy rains on March 1-2 caused light to moderate flooding along the Apalachicola River in Florida and on the lower Alabama River in Alabama. The rainfall was heavy over the south and central portions of Alabama, with 2-day totals ranging from 3 to 5 inches with locally heavier amounts. Beatrice, Ala., reported 11.5 inches and Troy, Ala., 7.8 inches during this period. Flooding continued along the Apalachicola River and along the lower Alabama from the 3d to the 11th. Damage along the Alabama River was estimated at $90,300.

Rivers and streams in Mississippi rose rapidly after the heavy rains around the first of the month. The Pearl River at and below Jackson, Miss., rose to near or above flood stage on the 3d. At Jackson, the river remained within the levees. Minor lowland flooding occurred along the river at Bogalusa, La., until the 21st and the river remained within its banks until the 31st. The Corps of Engineers estimated the total flood damage at $167,600, of which $128,000 occurred to agriculture.

MISSISSIPPI SYSTEM

Upper Mississippi Basin--March precipitation over the Upper Mississippi Basin was below normal in Minnesota and western Wisconsin and above normal over eastern Wisconsin. Temperatures were near normal, except much below normal over the northern and eastern sections.

By mid-March, maximum temperatures in the forties and fifties were recorded over southern Minnesota and southern Wisconsin. These temperatures continued through most of the remainder of the month and started the snowmelt rise on the streams. The most significant rises were due to ice jams. The overflow of the Root River in southeastern Minnesota, the Crow River in central Minnesota, and the Sauk River near St. Cloud, Minn., was due to ice jams.

Extensive snowmelt and ice action during the last two days of February and early March caused flooding along small streams in Wisconsin, Illinois, and Iowa. Rainfall during the first three days of March averaged 0.25 inch and augmented runoff and subsequent stream rises.

Minor flooding occurred on the Cuivre River at Troy, Mo., on the 13th. No damage resulted from the minor overflow.

Missouri Basin--Snowmelt runoff caused flooding in the Marias Basin in northwestern Montana during the middle of March. Snow depths were quite substantial in the beginning of the month with Browning, Mont., reporting 13 inches of snow on the ground. Similar amounts were reported in the immediate area, with numerous drifts as high as the roof tops. Several days of warm weather caused heavy runoff and overflowing of creeks in the area. Major overflows occurred along Willow Creek and Cut Bank Creek as the creeks were filled with snow and ice. About four square blocks in Browning, Mont., were inundated. Some ranchers were isolated for a time due to washed out roadbeds and bridge abutments.

Flooding along the Yellowstone River in Montana was due to ice jams. Local lowland flooding caused some damage to a few ranches and to a few homes along the river at Miles City, Glendive, and Sidney. There were still several large ice jams in the lower stretches around the middle of the month. Considerable water damage resulted to homes and businesses in Lodge Grass, Mont., when the Big Horn River overflowed in the beginning of the month.

The snowmelt floods of 1972 in the Missouri Basin in North Dakota began much earlier than usual. The ice breakup was one of the earliest in history. At Bismarck, N. Dak., the Missouri River ice had broken up earlier than March 17 only four times between 1881 and 1950. The floods this spring began with mild weather during the latter part of February following a long, colder than normal, winter. Most streams were nearly solid with ice on March 1 and very little melting had taken place before the snowmelt began to swell the streams. As a result, the floods were much more severe due to the extremely dense, heavy, and large ice floes that were broken loose by the early runoff. The absence of any significant rain from the 1st to the 19th lessened the flooding. Higher stages were prevented by a longer runoff period. Flooding began on the Little Missouri River at Medora, N. Dak., on the 7th and continued to the 14th. The crest on the 11th was 4.2 feet over flood stage and 1.3 feet below the record stage of 20.5 feet. Past records of the Park Service indicate that floods of this type occur on the average of about once in 25 years and seldom as early as this year. The overflow extended downstream to Watford City, N. Dak., on the 15th and was slightly over 1 foot over flood stage. Spring Creek at Zap, N. Dak., crested nearly 7 feet above flood stage on the 16th and was out of its banks from the 12th to the 19th. The Knife River rose above flood stage at Golden Valley and Hazen, N. Dak., on the 11th and crested over 6.5 feet above flood stage at Golden Valley on the 14th. The crest at Hazen was 5.5 feet above flood stage on the 16th. Several families were evacuated during the height of the flooding. A serious power outage occurred for several hours in the Hazen area. The Heart River channel was full of heavy ice and overflowing at several places on the 12th. The crest at Mandan, N. Dak., on the 14th was over 7 feet above flood stage. Considerable flooding occurred on the flats west and south of Mandan. The crests on the Cannonball River ranged from 5.5 feet above flood stage at Regent, N. Dak., on the 12th to nearly 6.5 feet above flood stage at Breien, N. Dak., on the 15th. At Mott, N. Dak., the flood was characterized as the worst since 1950. Five North Dakota counties suffered severe flood damage and were designated by the Governor as disaster areas. A number of homes in Beulah and Hazen received damage ranging from minor to complete destruction. An estimated $200,000 in emergency federal assistance will be required to repair and restore public facilities damaged by the flooding. Private property damage was estimated at $315,000.

The Grand River at Little Eagle, S. Dak., crested about 6 feet above flood stage on the 12th. The high water necessitated the evacuation of 18 families. Several homes were isolated by the high water. Bazile Creek at Niobrara, Nebr., fell within its banks on March 1, and remained less than a foot below bankfull stage for the first 8 days of March. Snowmelt, complicated by ice action, caused local flooding along Snake Creek at Ashton, S. Dak., on the 27th-28th. Minor flooding occurred on Turtle Creek at Redfield, S. Dak., on the 17th to the 21st.

The James River rose above flood stage at Columbia, S. Dak., on the 19th and continued out of its banks into April. The crest on the 23d was nearly 3 feet above flood stage. At Stratford, S. Dak., the river was 0.4 foot above bankfull stage and still rising. About 7,500 acres were flooded in this reach with little damage.

Minor flooding occurred at Huron, S. Dak., on the 22d-24th. Snowmelt flooding occurred at several points along the Big Sioux River which was augmented by ice action above Sioux Falls, S. Dak. The biggest overflow occurred at Brookings, S. Dak., where the crest was nearly 3.5 feet above flood stage on the 16th. The Floyd River rose to nearly 3.5 feet above flood stage at Alton, Iowa, on the 12th. The most damaging flood occurred on Oak Creek on the 17th when an ice jam moved out and flooded the town of Wakpala, S. Dak. All 38 families were evacuated by the Red Cross. Major damage resulted to many homes.

The Platte River ran near bankfull stage most of the month, with a high stage of 3.49 feet observed at Grand Island, Nebr., on the 21st. No flooding was reported since the ice had moved out by the time the high stages moved downstream.

Heavy rain (2 to 3 inches) during the evening of the 12th and the morning of the 13th over central and north-central Missouri caused several streams to rise to near bankfull stage. The Blackwater River at Blue Lick and Valley City, Mo., rose to about 1 to 2 feet above bankfull stage.

Ohio Basin--The lower Green River at Calhoun, Ky., continued in flood from February 26 to March 13. The crest on the 3d was over 4.5 feet above flood stage.

Rainfall averaging about 1.5 inches over southern Indiana on the 1st and 2d caused moderate rises with some flooding on the White River below Indianapolis, Ind. No damage was reported.

The main stem of the Ohio River rose above flood stage in the reach from Tell City, Ind., to Fords Ferry, Ky., during the latter part of February. In the reach below, it went above flood stage on March 4-7. The crests on March 3-8 ranged from 5 feet to 10.5 feet above flood stage in the reach above Golconda, Ill. The flooding continued until March 17 at Fords Ferry, Ky. The Corps of Engineers estimated the damage in the reach above Golconda, Ill., during the latter part of February and early March at $2.5 million and in the reach below at $28,500.

White Basin--Minor flooding occurred on the Cache River at Patterson, Ark., on the 8th-15th. The crest on the 10th was 0.8 foot above flood stage. This light overflow was due to 1 to 1.5 inches of rain on the 1st and 2d. Rains, averaging 0.25 to 0.5 inch daily during the period from the 24th to the 28th, caused the Cache River to rise above flood stage again on the 31st. The crest on April 2 was slightly lower than the first crest. The only damage resulting from the slight flooding was the delay in farming operations in the lowlands.

Lower Mississippi Basin--The St. Francis River began rising during the latter part of February and continued rising into early March. It rose slightly above flood stage at St. Francis, Ark., on the 3d. The overflow was minor. Lowland flooding occurred on the Big Black River from West, Miss., to south of Bovina, Miss., between the 3d and 18th. Farming and timber-cutting operations were at a standstill most of the month as the water covered low-lying farm and timberlands adjacent to the river.

The Mississippi River at Caruthersville, Mo., rose to within 1 foot of flood stage on the 9th-10th. Then it began falling for the remainder of the month.

WEST GULF OF MEXICO DRAINAGE

Heavy rain during the first 2 days of the month caused a sharp rise on the Calcasieu River, with minor flooding reported at Hineston, La., on the 4th-9th. The crest on the 5th was about 3 feet over flood stage. Heavy rain caused another rise at Hineston to slightly above flood stage on the 23d-26th.

Flash flooding occurred in the metropolitan Houston, Tex., area on the 20th and 21st due to heavy rains on the 20th. Rainfall of 7.47 inches occurred at Houston Intercontinental Airport and the Substation observer at Houston Independent Heights measured 7.65 inches.

PACIFIC SLOPE DRAINAGE

Central Coastal Basins--Heavy rain on March 1-2 caused moderate flooding on the Smith River in northwestern California on the 2d-3d. The crests on the 2d ranged from 4.2 feet above flood stage at Fort Dick River to 7.3 feet above flood stage near Crescent City, Calif. The Smith River area had not fully recovered from the flood and storm damage which occurred in January. The river was two-thirds bankfull prior to the heavy rain in the beginning of the month.

Heavy precipitation (2 to 4 inches) during the first 3 days of March and a high freezing level caused most streams in southwestern Oregon to rise out of their banks. These heavy rains were preceded by precipitation averaging 0.5 inch or more daily during the last few days of February. There was also an unusually heavy snowpack at low elevations. Crests were generally lower than in the January flood. The highest crest occurred on the South Fork Coquille River at Myrtle Point, Oreg., where flood stage was exceeded by over 6 feet. The least serious flooding occurred on the South Umpqua River where crests exceeded flood stage by 0.2 foot. Smaller rivers, streams, and tributaries caused the major damage. The Corps of Engineers estimated the damages at $4.3 million.

Columbia Basin--The storm pattern that became established over western Oregon and Washington in late February continued with unabated intensity during the first 3 days of March. Precipitation during this period ranged from near 6 inches on the central Oregon coast and the upper Willamette southern Cascades to 2 inches along Oregon's north coast and in the Willamette Valley. In the northern Oregon Cascades, the precipitation totalled 4 inches.

Coastal streams in Coast Range Willamette tributaries, already high from the rains at the end of February, rose to near or slightly above flood stage. The heavier rains in the Cascades produced flood flows on the McKenzie and Santiam Rivers. The upper Willamette River reached a crest 1 foot above flood stage at Harrisburg, Oreg., on the 3d. Mid-Willamette locations, while above bankfull stage, did not reach flood stage. The lower Columbia River at Vancouver, Wash., rose slightly over 1 foot above flood stage on the 3d.

Recordbreaking warm weather from the 4th to the 22d, plus above average precipitation, produced significant streamflow rises in the upper Columbia, Snake, and local tributaries east of the Cascades.

The flow on the lower Snake River at Clarkston, Wash., rose to a peak of 160,000 c.f.s. on the 14th and to a second higher peak of 183,000 c.f.s. on the 19th. The average March flow at Clarkston was the highest since 1910. Comparable record or near-record flows occurred in the Columbia River above Pasco, Wash. Crests in the lower Columbia River at Vancouver, Wash., and in the Portland Willamette Harbor were the highest for March since 1910 and the third highest of record.

Flood damage from the early March rises was estimated by the Corps of Engineers at $503,000 in the Willamette Basin, $188,000 in the lower Columbia, and $225,000 in the Yakima Basin.

North Coastal Basins--Slight to moderate flooding occurred in the Snohomish, Snoqualmie, Cedar, Chehalis, and Skockumchuck Rivers in Washington early in March. The flooding was primarily due to heavy rain augmented by snowmelt.

The rainfall on the 4th-5th ranged from about 3 inches at lowland stations to 7 to 8 inches in the upper basins. This rainfall and ground saturation from earlier above-normal rainfall caused not only high water in the rivers, but also many mud slides. Extensive standing water in lowlands and a rise in ground water tables adversely affected drainage systems in many localities.

Damage from the river flooding was minor. However, the damage resulting from the excessive rainfall was heavy, being estimated by Civil Defense at $10.3 million.

ALASKA

Snowpack in the Koyokuk, Kobuk, lower Yukon, Susitna, Copper, and Matanuska Valleys was generally above normal during March. The Kenai Peninsula and southeastern Alaska also had above normal snow cover. In the upper Yukon, Tanana, and Chena Basins, the snow cover appeared to be near normal.

Ice thickness was near normal as most areas were protected by the development of an early snow cover. Ice thickness on the Chandalar River was reported 10 to 15 feet deep upstream from Venetie, Alaska.

Much of the interior of Alaska was unusually cold throughout March. Fairbanks, Alaska, reported a mean temperature of 12° below normal. A warming trend near the end of the month finally brought the temperatures above freezing for the first time since mid-October.

FLOOD STAGE DATA

(All dates in March unless otherwise specified)

River and station		Flood stage	Above flood stages -dates		Crest*	
			From–	To–	Stage	Date
		Ft.			Ft	
HUDSON BAY DRAINAGE						
Mustinka:	Wheaton, Minn.	11	17	21	16.5	18
Wild Rice:	Abercrombie, N. Dak.	10	17	22	14.7	18
Maple:	Enderlin, N. Dak.	6	15	22	7.5	18
	Mapleton 3 SW, N. Dak.	12	17	18	12.3	17
Sheyenne:	West Fargo, N. Dak.	16.5	19	22	18.3	20
South Branch Buffalo:						
	Sabin, Minn.	12	15	21	14.1	17
Buffalo:	Hawley 2 SW, Minn.	7	12	28	8.9	21
	Dilworth 7 NE, Minn.	12	17	29	19.4	19
Wild Rice:	Hendrum, Minn.	17	19	28	24.6	22
Park:	Grafton, N. Dak.	12	19	23	16.2	21
Souris:	Sherwood 15 SW, N.Dak.	18	21	30	21.7	27
	Foxholm 3 E, N. Dak.	10	22	Apr. 21	13.4	Apr. 5
	Minot (Broadway Bridge), N. Dak.	1549	14	18	1549.2	15
	Verendrye, N. Dak.	15	20	20	15.2	20
	Bantry 8 E, N. Dak.	11	28	May 6	12.4	Apr. 24
	Westhope 7 NNE, N. Dak.	10	26	May 20	13.3	Apr. 21
Red:	Wahpeton, N. Dak.	10	18	20	11.7	19
	Fargo, N. Dak.	17	17	28	25.4	24
	Halstad, N. Dak.	24	21	27	28.9	24
	Grand Forks, N. Dak.	28	22	Apr. 3	37.5	28
	Oslo, Minn.	28	23	Apr. 4	#33.65	29
	Drayton, N. Dak.	32	30	Apr. 5	33.25	Apr. 3
ST. LAWRENCE DRAINAGE						
Lake Erie						
St. Joseph:	Montpelier, Ohio	10	15	19	11.0	18
Lake Ontario						
Canaseraga Creek:						
	Groveland, N. Y.	11	2 8	3 8	14.3 12.7	2 8
Oatka Creek:	Garbut, N. Y.	5	23	24	5.3	23
Black Creek:						
	Churchville, N. Y.	5	10 19 22	10 19 24	5.0 5.2 5.5	10 19 23
Genesee:	Scio, N. Y.	8	2	3	9.45	2
ATLANTIC SLOPE DRAINAGE						
Blackstone:						
	Woonsocket	9	4	4	9.8	4
Charles:	Charles River Village, Mass.	4	7 17	13 29	4.7 5.2	8 21
Ramapo:	Mahwah, N. J.	8	3	3	8.0	3
	Pompton Lakes, N. J.	1.7	3	3	1.8	3
Tioga:	Lindley, N. Y.	17	2	2	18.0	2
Chemung:	Elmira, N. Y.	10	3	3	13.0	3
	Chemung, N. Y.	12	2 23	4 23	17.5 12.7	3 23
West Branch:						
	Lewisburg, Pa.	18	3	4	18.9	3
Susquehanna:						
	Bainbridge, N. Y.	13	3	3	13.75	3
	Conklin, N. Y.	11	3 23	3 23	12.7 11.1	3 23
	Vestal, N. Y.	18	3	3	18.2	3
	Towanda, Pa.	16	3	4	17.8	3
	Wilkes Barre, Pa.	22	3	4	22.8	3
Roanoke:	Williamston, N. C.	10	Feb. 19	7	10.9	Feb. 25

River and station		Flood stage	Above flood stages -dates		Crest*	
			From–	To–	Stage	Date
		Ft			Ft	
ATLANTIC SLOPE DRAINAGE-Cont.						
Lumber:	Lumberton, N. C.	9	Jan. 13 23	6 27	12.3 12.0 10.5 9.2	Jan. 18-19 Feb. [illegible] Feb. 20-22 25-26
Savannah:	Clyo, Ga.	11	Jan. 15	6#	16.3 # 15.6	Jan. 26-27 Feb. 7-8
Ogeechee:	Eden, Ga.	9	Jan. 17	3#	12.1 # 11.1	Jan. 23 Feb. 9-10
EAST GULF OF MEXICO DRAINAGE						
Apalachicola:						
	Blountstown, Fla.	15	3	11	17.7	6
Alabama:	Millers Ferry L&D, Ala.	66	3	[illegible]	73.6	5
	Claiborne, Ala.	40	4	10	44.5	7
Pearl:	Jackson, Miss.	18	3	15	25.2	7
	Monticello, Miss.	19	3	6	19.2	4
	Bogalusa, La.	15	3 31	21 Apr. 6	18.7 15.85	9 Apr. [illegible]
	Pearl River, La.	12	7	19	14.0	11
MISSISSIPPI SYSTEM						
Upper Mississippi Basin						
Crow:	Delano, Minn.	8	21	Apr. 2	12.0	22
	Rockford, Minn.	10	22	29	11.1	25
Redwood:	Redwood Falls (nr), Minn.	6	17	19	7.55	18
Minnesota:						
	Jordan (nr), Minn.	20	22	25	20.5	22
	Savage, Minn.	698	22	31	699.95	27
Whitewater:						
	Beaver, Minn.	5	M	M	6.25	16
Trempealeau:						
	Dodge, Wisc.	7	17	25	9.3	20
Root:	Houston, (nr), Minn.	15	14	17	J16.0	15-16
	Hokah, Minn.	47	15	18	J52.0	16
Upper Iowa:						
	Dorchester (nr), Iowa	14	14	17	14.15	14
Kickapoo:	Soldiers Grove, Wisc.	723	19	23	723.3	20
	Gays Mills, Wisc.	698	18	23	698.3	21
	Steuben, Wisc.	8	16	26	9.2	22
Grant:	Burton, Wisc.	17	M	M	18.35	12
Plum:	Savanna, Ill.	22	Feb. 29	1	23.0	1
Wapsipinicon:						
	DeWitt, Iowa	10	Feb. 29 7	1 7	E11.6 10.25	Feb. 29 7
Edwards:	New Boston, Ill.	17	Feb. 29	1	19.9	1
Pecatonica:						
	Martintown, Wisc.	11	14	23	14.2	20
	Shirland, Ill.	12	16	17	12.1	17
Pope Creek:						
	Keithsburg, Ill.	17	1	3	19.4	1
Blackhawk Creek:						
	Hudson, Iowa	12	8	9	13.3	8
Iowa:	Marshalltown, Iowa	13	1 7	2 8	14.9 14.0	1 7
Cuivre:	Troy, Mo.	21	13	13	22.6	13
Missouri Basin						
Yellowstone:						
	Miles City, Mont.	13	10	12	18.6 16.8 16.3	10 11 12
	Sidney, Mont.	19	13	13	E25	13

FLOOD STAGE DATA

River	Station	Flood stage	Above flood stages -dates From—	To—	Crest* Stage	Date
		Ft			Ft	
MISSISSIPPI SYSTEM-Cont.						
Missouri Basin-Cont.						
Little Missouri:						
	Medora, N. Dak.	15	7	14	19.2	11
	Watford City, N. Dak.	15	15	15	16.1	15
Spring Creek:						
	Zap, N. Dak.	14	12	19	20.9	16
Knife:	Golden Valley, N. Dak.	20	11	18	26.6	14
	Hazen, N. Dak.	21	11	20	26.5	16
Heart:	Mandan, N. Dak.	17	12	14	24.05	14
Cannonball:	Regent, N. Dak.	14	11	14	19.5	12
	Breien, N. Dak.	8	12	19	14.4	15
Grand:	Little Eagle, S. Dak.	15	12	14	21.0	12
Moreau:	Green Grass, S. Dak.	U	U	U	25.95	14
	Whitehorse, S. Dak.	21	U	U	26.2	14
Bazile Creek:						
	Niobrara, Nebr.	B15	Feb. 27	1	15.9	Feb. 28
South Fork Snake Creek:						
	Athol, S. Dak.	10	U	U	14.7	17
Snake Creek:						
	Ashton, S. Dak.	10	U	U	14.0	19
Turtle Creek:						
	Redfield, S. Dak.	7	17	21	8.8	18
Elm:	Westport, S. Dak.	U	U	U	15.9	19
James:	Columbia, S. Dak.	11	19	Apr. 26	13.8 12.8	23 Apr. 3-4
	Stratford, S. Dak.	14	30	May 20	15.4	Apr. 13
	Huron, S. Dak.	11	22	24	11.3	23
Rock:	Rock Valley, Iowa	11	12 14 16	13 14 16	11.2 11.0 11.0	13 14 16
Big Sioux:	Watertown, S. Dak.	8	15 21	17 22	8.9 8.5	16 21
	Brookings, S. Dak.	6	14	21	9.4	16
	Brandon, S. Dak.	10	13 14	14 15	10.4 10.7	13 15
	Hawarden, Iowa	15	14	17	16.1	16
	Akron, Iowa	16	15	18	17.35	17
Floyd:	Alton, Iowa	12	11	13	15.6	12
Maple:	North Dakota-South Dakota State line	U	U	U	11.4	18
Platte:	Grand Island, Nebr.	3.5	19 25	22 25	3.5 3.5	21 25
Blackwater:	Valley City, Mo.	22	13	13	24.0	13
	Blue Lick, Mo.	25	13	13	26.0	13
Ohio Basin						
Green:	Lock 2, Calhoun, Ky.	23	Feb. 26	13	27.6	3
Muscatatuck:						
	Austin, Ind.	16	2	4	#20.4	3
Tennessee:	Paducah (nr), Tenn.	320	1	17	327.25	7
White:	Nora, Ind.	6	3	5	# 8.5	4
	Elliston, Ind.	18	4	4	#18.3	4
	Edwardsport, Ind.	15	5	6	#15.2	6
Ohio:	Tell City, Ind.	38	Feb. 28	10	43.0	3
	Dam 46, Owensboro, Ky.	41	1	5	42.3	3
	Dam 47, Newburgh, Ind.	38	Feb. 27	13	44.1	4
	Dam 48, Cypress, Ind.	38	Feb. 28	13	43.7	4
	Mt. Vernon, Ind.	35	Feb. 29	14	41.0	5
	Dam 49, Uniontown, Ky.	37	1	15	42.8	6
	Shawneetown, Ill.	33	Feb. 29	16	41.9	7
	Dam 50, Fords Ferry, Ky.	34	Feb. 29	17	44.5	8

River	Station	Flood stage	Above flood stages -dates From—	To—	Crest* Stage	Date
		Ft			Ft.	
MISSISSIPPI SYSTEM-Cont.						
Ohio Basin - Cont.						
Ohio:	Dam 51, Golconda, Ill.	40	5	14	42.0	8
	Dam 52, Brookport, Ill.	37	4	16	41.1	7
	Dam 53, Grand Chain, Ill.	42	4	16	45.8	7
	Paducah, Ky.	39	7	9	39.4	7
	Cairo, Ill.	40	4	16	42.7	8
White Basin						
Cache:	Patterson, Ark.	7	8 31	15 Apr. 11	7.8 7.8	10 Apr. 7
Lower Mississippi Basin						
St. Francis:						
	St. Francis, Ark.	18	3	3	18.1	3
Big Black:						
	West, Miss.	12	3	16	19.0	5
	Bovina, Miss.	28	8	18	29.7	10
WEST GULF OF MEXICO DRAINAGE						
Calcasieu:						
	Hineston, La.	12	4 23	9 26	15.1 12.4	5 23
PACIFIC SLOPE DRAINAGE						
Central Coastal Basins						
Smith:	Crescent City 7 ENE, Calif.	35	2	3	42.3	2
	Fort Dick River, Calif.	33	2	3	37.2	2
Rogue:	Eagle Point 4 NW, Oreg.	10	2	3	11.8	2
	Raygold, Oreg.	12	2	3	16.3	2
	Grants Pass, Oreg.	19	2	3	23.4	3
South Fork Coquille:						
	Myrtle Point, Oreg.	35	2	3	41.2	3
Coquille:	Coquille, Oreg.	21	3	4	23.5	3
South Umpqua:						
	Winston, Oreg.	26	3	3	26.2	3
	Roseburg, Oreg.	22	2	2	22.2	2
Umpqua:	Tiller, Oreg.	15	2	3	19.9	2
	Elkton 4 S, Oreg.	33	22	22	34.3	22
Columbia Basin						
Spokane:	Spokane, Wash.	27	21	22	27.0	21-22
Yakima:	Parker, Wash.	10	6 12	7 27	M 11.6	M 14
John Day:	Service Creek, Oreg.	10	12	20	14.1	14
Nehalem:	Foss, Oreg.	13	2	2	13.9	2
McKenzie:	Coburg, Oreg.	11	2	3	12.3	3
Santiam:	Jefferson, Oreg.	15	2	3	15.6	2
Luckiamute:	Suver, Oreg.	27	2	3	27.3	2
Pudding:	Aurora, Oreg.	20	Feb. 29	9	24.1	3
Tualatin:	Farmington, Oreg.	29	2	7	29.9	4
Johnson Creek:						
	Sycamore, Oreg.	8	2	2	8.25	2
Willamette:						
	Harrisburg, Oreg.	12	3	3	13.0	3
Columbia:	Vancouver, Wash.	16	2 6 13	4 6 27	17.1 M 17.8	3 M 15
North Coastal Basins						
Chehalis:	Centralia, Wash.	63	Feb. 29 6	1 7	#64.2 66.2	Feb. 29 6-7
Cedar:	Renton, Wash.	8	6	8	E10.7	6
Snoqualmie:	Carnation (nr) Wash.	54	6	7	55.8	6
Snohomish:	Snohomish, Wash.	25	6	7	29.5	6
Stillaguamish:	Arlington, Wash.	16	5	5	16.2	5

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* Provisional
# Highest stage observed

1/ Continued at the end of the month
B Bankfull

E Estimated
J Backwater from ice jams

M Missing
U Unknown

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1005 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	86	-3.2	-6.4	28	1.4
1000						
950	31	529	-4.0	-7.2	26	2.6
900	31	955	-5.2	-8.4	27	5.0
850	31	1,403	-6.0	-10.0	28	7.0
800	31	1,878	-6.6	-11.9	28	9.3
750	31	2,381	-8.4	-13.2	27	10.6
700	31	2,914	-10.6	-17.2	27	11.2
650	31	3,482	-13.3	-21.4	27	12.3
600	31	4,088	-16.3	-26.2	27	12.9
550	31	4,738	-20.2	-31.9	27	14.7
500	31	5,438	-25.0	-35.6	27	15.9
450	31	6,196	-29.9	-38.8	27	18.7
400	31	7,026	-35.6	-44.6	27	20.6
350	31	7,945	-42.1	-46.8	27	21.4
300	31	8,970	-48.5		27	24.4
250	31	10,157	-52.9		28	26.8
200	31	11,591	-53.8		27	23.8
175	31	12,450	-53.4		27	22.4
150	31	13,442	-53.6		27	18.9
125	30	14,609	-55.0		27	17.4
100	30	16,030	-56.3		27	15.6
80	30	17,446	-56.8		27	11.3
70	30	18,292	-57.1		27	10.6
60	29	19,265	-57.3		28	8.6
50	28	20,418	-57.1		27	6.6
40	28	21,832	-56.7		26	7.0
30	26	23,655	-56.3		26	5.2
25	26	24,816	-55.4		25	5.6
20	26	26,243	-54.4		25	5.4
15	24	28,087	-53.1		26	4.7
10	16	30,703	-50.9			
7						

ALBUQUERQUE, N. MEX.
837 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	1,619	5.0	-10.7	05	.7
1000						
950						
900						
850						
800	31	1,990	7.9	-13.1	30	2.7
750	31	2,519	5.0	-15.1	30	6.4
700	31	3,078	.8	-17.6	30	8.8
650	31	3,668	-3.4	-20.0	29	10.2
600	31	4,296	-7.8	-23.9	29	11.5
550	31	4,966	-12.6	-27.8	28	12.1
500	31	5,687	-17.4	-34.6	28	13.3
450	31	6,467	-23.4	-39.2	28	14.7
400	31	7,317	-30.2	-44.4	28	13.9
350	31	8,256	-37.6	-50.6	28	14.4
300	31	9,298	-45.8		28	15.6
250	31	10,490	-54.0		29	16.6
200	29	11,909	-61.0		28	19.1
175	28	12,738	-61.4		28	20.4
150	28	13,696	-60.9		28	19.5
125	28	14,825	-62.9		28	18.8
100	28	16,192	-64.8		28	15.0
80	28	17,552	-64.8		28	10.1
70	28	18,368	-64.2		28	6.0
60	28	19,313	-63.4		27	3.6
50	28	20,440	-60.9		29	1.6
40	27	21,834	-59.1		30	.8
30	25	23,640	-57.9		04	1.6
25	25	24,791	-57.2		03	1.6
20	25	26,210	-55.0		34	1.3
15	23	28,061	-53.0		27	3.4
10	12	30,690	-48.5			
7						

AMARILLO, TEXAS
889 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	1,095	5.1	-4.1	25	1.2
1000						
950						
900						
850	31	1,468	8.4	-4.7	27	3.5
800	31	1,968	8.0	-8.2	27	5.3
750	31	2,498	5.5	-11.0	28	7.6
700	31	3,058	1.8	-14.2	28	9.5
650	31	3,651	-2.5	-17.3	28	10.4
600	31	4,280	-7.5	-20.9	28	11.5
550	31	4,950	-12.7	-25.9	28	12.4
500	30	5,672	-17.7	-32.2	28	14.5
450	30	6,452	-23.5	-38.1	28	16.2
400	30	7,301	-30.3	-43.9	28	17.7
350	30	8,239	-37.7	-49.1	28	18.5
300	30	9,281	-46.0		29	19.5
250	30	10,470	-54.8		28	21.6
200	30	11,876	-60.4		28	24.7
175	30	12,707	-60.8		28	25.6
150	30	13,669	-60.2		27	23.6
125	30	14,802	-61.8		27	21.0
100	30	16,176	-64.1		27	17.1
80	29	17,540	-64.2		27	9.7
70	29	18,357	-64.2		27	6.8
60	29	19,303	-63.2		27	4.9
50	29	20,429	-61.8		28	2.3
40	29	21,819	-59.5		30	1.0
30	27	23,624	-58.6		33	1.2
25	26	24,772	-57.6		34	1.4
20	26	26,186	-56.0		30	1.8
15	26	28,027	-53.3		27	5.0
10	17	30,667	-47.6		27	12.7
7	7	33,045	-43.2			

*** ANCHORAGE, ALASKA**
1004 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	45	-10.0	-15.5	01	1.1
1000						
950	31	471	-10.4	-18.3	02	2.2
900	31	886	-11.8	-19.1	03	2.1
850	31	1,323	-13.3	-21.8	04	.7
800	31	1,783	-15.5	-23.5	12	.6
750	31	2,267	-18.2	-26.9	20	.8
700	31	2,780	-21.0	-30.7	24	1.0
650	31	3,324	-23.8	-34.2	24	2.1
600	31	3,905	-26.8	-36.9	25	3.7
550	31	4,528	-30.4	-40.4	26	5.1
500	31	5,201	-34.4	-44.8	25	7.0
450	31	5,931	-38.8	-45.6	25	8.3
400	31	6,731	-43.6	-49.7	25	10.3
350	31	7,623	-47.6		24	12.5
300	31	8,633	-50.1		26	12.8
250	31	9,829	-48.0		26	12.3
200	31	11,308	-46.5		26	12.1
175	31	12,194	-46.8		26	12.2
150	31	13,214	-47.4		27	12.7
125	30	14,418	-48.6		27	11.9
100	30	15,882	-49.9		27	11.6
80	30	17,339	-50.3		27	10.9
70	30	18,211	-50.5		28	9.7
60	29	19,223	-50.9		28	8.7
50	29	20,410	-51.0		28	7.5
40	29	21,859	-51.8		28	7.6
30	26	23,727	-52.7		29	6.9
25	25	24,907	-53.2		30	6.1
20	21	26,364	-52.9		31	3.9
15	20	28,234	-53.4		35	3.7
10	11	30,882	-50.5		32	7.3
7	7	33,170	-51.9			

*** ANNETTE, ALASKA**
1005 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	37	1.8	-.1	12	1.6
1000						
950	31	490	.0	-2.5	15	4.8
900	31	921	-2.5	-4.9	17	6.8
850	31	1,373	-4.9	-7.4	19	7.5
800	31	1,848	-7.5	-10.4	20	8.4
750	31	2,348	-10.1	-14.6	21	8.7
700	31	2,877	-13.5	-19.7	22	9.0
650	31	3,438	-16.6	-22.1	22	10.3
600	31	4,035	-20.3	-26.1	23	10.9
550	31	4,674	-24.6	-30.4	23	11.7
500	31	5,362	-29.5	-35.1	24	12.7
450	31	6,106	-34.5	-38.2	23	13.7
400	31	6,919	-40.4	-41.2	24	15.6
350	31	7,821	-46.4		24	15.5
300	31	8,829	-51.5		25	17.6
250	30	10,007	-53.3		25	19.1
200	30	11,453	-50.7		25	17.7
175	30	12,324	-50.3		25	17.5
150	30	13,330	-50.9		26	13.3
125	30	14,512	-52.6		26	11.1
100	29	15,952	-53.2		27	9.4
80	29	17,388	-53.9		27	8.0
70	28	18,244	-53.8		28	7.0
60	28	19,234	-54.1		29	6.8
50	27	20,403	-54.3		30	5.6
40	26	21,835	-54.6		30	4.1
30	23	23,664	-55.2		33	4.1
25	18	24,836	-55.2		33	5.1
20	15	26,272	-55.1		04	6.6
15	6	28,122	-54.9			
10	5	30,717	-54.6			
7						

ATHENS, GEORGIA
987 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	30	246	6.8	2.1	27	1.3
1000						
950	30	561	8.7	.9	26	3.6
900	30	1,008	7.5	-2.1	27	5.5
850	30	1,477	5.9	-5.9	27	8.1
800	30	1,972	3.8	-8.9	27	9.7
750	30	2,494	1.4	-12.0	27	11.7
700	30	3,046	-1.6	-14.8	27	12.8
650	30	3,633	-5.1	-18.0	27	14.2
600	30	4,257	-8.9	-22.0	27	16.8
550	30	4,926	-13.2	-26.7	27	19.5
500	30	5,645	-18.2	-30.0	27	21.7
450	30	6,424	-23.4	-35.5	27	23.1
400	30	7,275	-29.7	-42.7	27	25.2
350	30	8,216	-37.0	-47.6	28	28.9
300	30	9,261	-45.2		27	29.4
250	30	10,455	-53.8		28	34.4
200	30	11,868	-58.7		27	36.5
175	29	12,707	-58.0		27	34.4
150	29	13,677	-59.0		27	32.9
125	29	14,814	-61.8		27	27.5
100	29	16,185	-64.8		27	20.7
80	28	17,546	-64.4		27	15.4
70	28	18,364	-63.6		27	11.0
60	28	19,313	-62.6		28	5.9
50	28	20,443	-60.3		29	3.8
40	26	21,840	-58.5		30	1.7
30	26	23,657	-56.5		02	.8
25	24	24,815	-55.7		30	1.3
20	23	26,241	-54.4		26	1.1
15	22	28,093	-51.9		26	3.7
10	13	30,717	-47.9			
7						
5						

*** BARROW, ALASKA**
1022 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	30	8	-29.5	-40.5	30	1.3
1000	30	161	-26.7	-29.1	33	2.1
950	30	534	-24.2	-25.9	34	2.7
900	29	930	-22.4	-24.7	35	2.4
850	29	1,350	-22.3	-25.4	36	2.8
800	29	1,795	-23.4	-26.9	36	3.3
750	29	2,266	-24.6	-29.5	35	3.4
700	29	2,766	-26.7	-31.7	36	3.5
650	29	3,299	-29.4	-34.8	35	4.1
600	29	3,866	-32.6	-39.1	35	4.0
550	29	4,475	-35.9	-42.2	34	4.4
500	29	5,132	-39.8	-44.6	33	4.0
450	29	5,846	-43.8		33	3.9
400	29	6,630	-48.2		33	4.8
350	29	7,504	-52.3		33	5.3
300	29	8,491	-54.9		32	6.6
250	29	9,659	-53.5		30	8.4
200	29	11,103	-51.2		29	10.4
175	29	11,972	-50.9		29	11.8
150	29	12,976	-50.8		28	14.3
125	29	14,163	-50.9		28	16.2
100	28	15,615	-51.4		28	19.3
80	28	17,063	-51.6		28	21.5
70	29	17,930	-51.8		28	22.5
60	28	18,929	-52.0		28	23.6
50	27	20,121	-52.2		28	23.0
40	22	21,571	-52.2		28	26.1
30	19	23,474	-52.8		29	23.8
25	15	24,680	-53.8		28	16.3
20	8	26,196	-53.0			
15						
10						
7						
5						

BARTER IS., ALASKA
1020 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	15	-29.1	-35.0	27	5.6
1000	31	153	-27.3	-33.0	27	7.5
950	31	524	-25.0	-27.0	27	7.0
900	31	920	-22.6	-24.9	28	4.7
850	31	1,340	-22.1	-25.0	29	3.9
800	31	1,786	-22.1	-25.2	29	3.5
750	31	2,260	-23.3	-26.6	28	3.5
700	31	2,762	-25.3	-28.8	28	3.3
650	31	3,298	-27.7	-32.1	27	3.5
600	31	3,870	-30.8	-35.1	27	3.8
550	31	4,483	-34.5	-38.4	26	4.7
500	31	5,143	-38.8	-42.5	25	5.5
450	31	5,859	-43.5		25	5.9
400	31	6,643	-48.3		25	6.3
350	31	7,516	-52.5		25	7.5
300	31	8,504	-54.6		26	8.4
250	31	9,675	-52.6		27	9.0
200	31	11,124	-50.7		27	11.3
175	31	11,995	-50.3		28	12.1
150	31	13,001	-50.6		28	13.8
125	31	14,189	-50.9		28	15.8
100	31	15,641	-50.9		29	18.2
80	31	17,091	-51.4		29	19.9
70	31	17,958	-51.7		29	21.0
60	31	18,958	-51.9		29	21.1
50	30	20,156	-51.8		29	21.5
40	30	21,602	-52.0		29	21.3
30	29	23,454	-52.6		29	21.8
25	29	24,632	-52.8		29	20.1
20	28	26,101	-52.5		29	16.2
15	25	27,957	-52.5		30	13.2
10	14	30,715	-52.2			
7						
5						

BETHEL, ALASKA
1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	29	39	-20.7	-23.9	36	3.7
1000						
950	29	511	-14.9	-21.8	03	4.5
900	29	921	-14.4	-23.5	01	3.6
850	29	1,353	-15.3	-25.1	35	3.9
800	29	1,810	-16.7	-26.2	34	4.8
750	29	2,294	-18.4	-28.7	33	5.9
700	29	2,806	-21.2	-30.5	32	6.8
650	29	3,350	-23.8	-33.2	32	7.6
600	29	3,931	-26.9	-36.1	31	8.1
550	29	4,554	-30.6	-38.3	30	9.5
500	29	5,226	-34.2	-42.4	30	11.4
450	29	5,957	-38.5	-44.8	30	12.4
400	29	6,758	-43.1		29	13.5
350	29	7,652	-47.7		29	13.9
300	29	8,658	-50.7		28	14.8
250	29	9,848	-49.3		27	12.9
200	29	11,322	-46.7		27	10.9
175	29	12,208	-47.1		26	10.7
150	29	13,228	-47.6		26	10.0
125	29	14,430	-48.6		26	9.2
100	28	15,894	-50.1		26	8.3
80	27	17,347	-50.6		26	8.3
70	26	18,211	-50.8		26	7.6
60	26	19,216	-50.9		27	6.2
50	26	20,401	-51.4		27	6.1
40	26	21,848	-52.0		27	5.3
30	26	23,708	-52.9		27	3.7
25	25	24,890	-53.4		28	3.7
20	23	26,329	-53.9		29	3.9
15	20	28,164	-53.9		31	4.1
10	6	30,825	-54.1			
7						
5						

*** BISMARCK, N. DAK.**
955 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	503	-5.5	-8.7	13	.2
1000						
950	22	568	-7.2	-11.7	19	.2
900	31	964	-4.5	-7.9	30	2.6
850	31	1,416	-3.6	-10.3	30	5.7
800	31	1,894	-5.0	-11.5	30	8.5
750	31	2,399	-7.5	-14.3	30	10.6
700	31	2,933	-10.6	-18.2	31	12.9
650	31	3,500	-13.9	-22.0	30	14.8
600	31	4,104	-17.6	-25.5	30	15.8
550	31	4,750	-21.4	-28.7	30	17.9
500	31	5,447	-25.9	-33.8	30	18.9
450	31	6,202	-31.1	-38.3	30	19.9
400	31	7,027	-37.1	-41.4	30	22.1
350	31	7,941	-43.0		30	23.6
300	31	8,963	-49.1		30	22.7
250	31	10,144	-54.5		30	23.7
200	31	11,567	-55.2		29	23.1
175	31	12,423	-53.6		29	19.0
150	31	13,415	-53.7		29	17.3
125	31	14,585	-54.6		29	16.7
100	30	16,010	-56.2		29	12.9
80	29	17,423	-57.1		29	11.8
70	29	18,267	-57.4		30	9.5
60	29	19,241	-57.5		30	7.7
50	26	20,392	-56.4		31	6.3
40	25	21,809	-56.6		34	4.5
30	23	23,634	-56.6		02	4.2
25	22	24,792	-57.2		04	5.1
20	17	26,223	-56.0		05	6.8
15	15	28,066	-54.4		07	6.6
10	12	30,674	-51.5		05	3.4
7	11	33,003	-47.8		31	3.3
5	5	35,241	-43.4			

BOISE, IDAHO
917 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	871	3.7	-1.3	12	1.7
1000						
950						
900	31	1,020	6.0	-1.9	10	.8
850	31	1,487	4.5	-5.7	30	2.0
800	31	1,979	1.5	-6.8	29	5.5
750	31	2,495	-1.9	-9.8	28	8.3
700	31	3,040	-5.5	-13.7	28	10.6
650	31	3,618	-8.9	-18.9	28	12.3
600	31	4,234	-12.6	-23.2	28	14.4
550	31	4,893	-17.0	-26.4	28	16.5
500	31	5,601	-22.0	-32.2	28	17.9
450	31	6,368	-27.5	-36.0	29	19.2
400	31	7,205	-33.3	-40.1	29	22.0
350	31	8,133	-39.8	-44.3	29	22.9
300	30	9,167	-47.4		29	26.3
250	30	10,352	-54.7		29	28.2
200	30	11,760	-59.5		29	25.4
175	30	12,596	-58.8		29	21.5
150	30	13,567	-57.8		29	17.4
125	29	14,708	-58.3		29	14.9
100	27	16,107	-60.1		29	11.2
80	27	17,499	-60.2		29	7.9
70	27	18,333	-59.7		30	5.5
60	27	19,297	-60.0		31	3.6
50	27	20,438	-58.5		34	2.2
40	27	21,840	-58.4		02	2.1
30	27	23,654	-57.5		06	3.6
25	27	24,808	-56.9		06	3.4
20	26	26,221	-56.6		06	4.1
15	25	28,030	-55.9		05	3.6
10	13	30,640	-53.3			

BOOTHVILLE, LA.
1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	1	15.4	13.5	07	.7
1000	31	133	16.6	13.1	14	.6
950	31	569	14.5	8.1	22	2.5
900	31	1,025	13.6	1.7	24	3.7
850	31	1,506	11.9	-.7	26	5.8
800	31	2,011	9.3	-4.4	27	8.0
750	31	2,543	6.3	-7.7	27	9.5
700	31	3,105	3.0	-11.5	27	10.9
650	31	3,701	-.9	-16.0	27	11.8
600	31	4,335	-5.4	-20.3	27	12.9
550	31	5,012	-9.8	-25.5	27	14.7
500	31	5,740	-14.8	-30.7	27	16.3
450	31	6,529	-20.6	-35.2	27	16.8
400	31	7,389	-27.0	-39.9	27	19.2
350	31	8,341	-34.4	-45.9	27	21.2
300	31	9,398	-42.5		27	24.6
250	31	10,607	-50.9		27	28.8
200	30	12,034	-57.2		27	36.4
175	30	12,877	-58.5		27	35.2
150	30	13,841	-61.3		27	33.3
125	29	14,967	-65.3		27	30.7
100	27	16,309	-69.6		27	24.0
80	28	17,633	-70.2		27	16.7
70	28	18,428	-69.7		27	11.2
60	26	19,356	-65.8		28	5.4
50	26	20,474	-61.9		30	1.8
40	24	21,862	-59.4		06	1.8
30	24	23,679	-56.2		07	1.5
25	24	24,841	-54.9		05	.5
20	24	26,273	-53.3		27	1.3
15	24	28,139	-50.0		27	5.0
10	12	30,803	-45.9			

*** BROWNSVILLE, TEXAS**
1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	7	19.7	17.9	14	1.7
1000	31	110	20.3	18.4	15	2.9
950	31	553	18.7	13.0	16	5.3
900	31	1,017	17.6	6.5	17	4.5
850	31	1,504	16.0	-3.1	19	3.6
800	31	2,017	13.1	-6.1	23	3.1
750	31	2,555	9.6	-9.8	25	3.7
700	31	3,123	5.8	-12.7	26	5.2
650	31	3,725	1.4	-16.0	26	7.2
600	31	4,364	-3.4	-19.4	27	9.0
550	31	5,045	-8.6	-23.5	27	10.0
500	31	5,777	-13.8	-30.1	27	10.5
450	31	6,569	-19.2	-35.5	27	12.6
400	31	7,434	-25.6	-40.4	27	14.9
350	31	8,391	-32.6	-47.8	26	18.7
300	31	9,455	-41.2	-53.5	26	23.3
250	31	10,670	-50.0		26	28.5
200	31	12,100	-57.9		26	31.9
175	31	12,941	-59.0		26	32.7
150	31	13,901	-62.3		26	30.4
125	31	15,013	-67.4		26	25.8
100	31	16,341	-72.3		26	18.5
80	29	17,649	-73.1		26	13.0
70	29	18,434	-71.7		26	9.5
60	29	19,350	-68.8		26	5.3
50	28	20,456	-62.8		31	1.1
40	28	21,842	-59.4		06	1.4
30	26	23,662	-56.3		07	1.7
25	25	24,820	-54.9		36	.2
20	24	26,254	-52.3		27	2.9
15	19	28,126	-47.9		26	7.7
10	13	30,843	-41.1			

BUFFALO, N. Y.
987 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	218	-2.6	-5.2	25	2.1
1000						
950	31	522	-3.7	-7.8	25	4.0
900	31	949	-4.9	-9.6	25	6.9
850	31	1,397	-6.3	-11.6	26	8.6
800	31	1,871	-7.3	-13.2	27	9.8
750	31	2,372	-9.0	-16.6	27	11.1
700	31	2,905	-10.5	-20.0	27	12.4
650	31	3,473	-13.3	-25.5	27	13.5
600	31	4,078	-16.8	-29.0	27	15.1
550	31	4,726	-20.9	-32.5	26	16.1
500	31	5,424	-25.3	-37.0	26	18.6
450	31	6,181	-30.5	-40.1	28	20.2
400	31	7,009	-36.2	-44.1	27	22.1
350	31	7,926	-42.3	-49.8	27	22.9
300	31	8,951	-48.8		27	24.5
250	31	10,136	-53.4		27	26.2
200	31	11,568	-53.9		28	23.4
175	31	12,426	-53.4		28	22.5
150	31	13,420	-53.4		28	19.2
125	31	14,592	-54.2		27	17.1
100	31	16,016	-56.0		27	13.8
80	31	17,431	-57.0		27	11.1
70	31	18,277	-57.1		28	10.3
60	30	19,251	-57.0		28	7.8
50	28	20,408	-56.9		27	5.6
40	28	21,824	-56.8		28	5.4
30	29	23,648	-56.6		28	3.5
25	26	24,813	-56.0		27	3.8
20	26	26,238	-54.3		27	2.7
15	25	28,089	-52.4		25	3.6
10	14	30,740	-49.8		25	5.1

CAPE HATTERAS, N. C.
1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.h.
SURFACE	31	4	9.7	4.8	32	1.2
1000	30	141	10.3	3.8	29	2.2
950	31	560	8.1	-.4	28	4.7
900	31	1,005	5.9	-4.3	27	6.4
850	31	1,472	4.1	-6.4	26	9.0
800	31	1,963	1.5	-10.3	26	11.0
750	31	2,481	-.4	-12.6	26	12.8
700	31	3,030	-2.9	-16.1	27	14.1
650	31	3,614	-5.9	-20.1	27	16.9
600	31	4,237	-9.6	-23.0	27	19.1
550	31	4,904	-13.6	-29.0	27	20.4
500	31	5,622	-18.5	-33.8	27	21.2
450	31	6,400	-24.0	-37.9	27	22.6
400	31	7,248	-30.4	-43.5	27	24.3
350	31	8,186	-37.8	-48.1	27	28.1
300	31	9,228	-45.7		27	32.1
250	31	10,422	-53.1		27	34.9
200	31	11,841	-57.6		27	36.3
175	31	12,684	-57.6		27	34.9
150	30	13,660	-58.1		27	32.4
125	30	14,803	-60.3		27	28.7
100	30	16,186	-62.8		27	22.0
80	30	17,560	-62.6		27	15.1
70	30	18,385	-61.9		27	10.6
60	29	19,341	-60.7		26	7.6
50	29	20,480	-59.2		28	6.0
40	28	21,897	-57.3		26	2.6
30	28	23,714	-55.6		34	.7
25	27	24,878	-55.1		27	.6
20	26	26,307	-54.2		27	2.5
15	24	28,163	-51.4		26	5.6
10	18	30,824	-47.3		27	12.3

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1972

* CARIBOU, MAINE
99[illegible] MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-11.9	-14.7	36	.5
1000						
950	31	512	-10.1	-13.4	33	.7
900	31	928	-11.0	-14.7	29	1.0
850	31	1,368	-11.6	-16.2	25	2.9
800	31	1,835	-11.4	-17.1	25	5.4
750	31	2,342	-11.9	-17.7	25	7.4
700	31	2,840	-12.5	-19.9	25	9.4
650	31	3,424	-14.8	-22.4	25	10.8
600	31	4,027	-18.0	-26.1	25	11.7
550	31	4,672	-21.8	-29.5	25	13.0
500	31	5,366	-26.0	-34.5	26	14.2
450	31	6,123	-31.3	-39.2	26	14.4
400	31	6,948	-37.1	-43.7	26	15.2
350	31	7,860	-43.5		25	17.7
300	31	8,881	-49.6		25	18.4
250	31	10,064	-53.2		25	18.4
200	31	11,495	-53.8		26	19.7
175	28	12,355	-53.0		26	17.7
150	27	13,352	-52.9		26	17.4
125	27	14,528	-53.2		26	16.7
100	26	15,963	-54.4		26	14.9
80	26	17,388	-55.8		27	12.5
70	26	18,239	-55.4		27	12.0
60	26	19,222	-55.5		26	11.1
50	25	20,392	-55.2		26	9.5
40	25	21,806	-55.4		26	8.4
30	25	23,641	-54.8		25	7.0
25	25	24,810	-54.2		25	4.9
20	21	26,239	-53.5		24	6.9
15	16	28,088	-52.0		24	9.6
10	14	30,746	-49.9			
7						

CHARLESTON, S. C.
1015 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	9.5	6.5	28	.7
1000	31	139	11.5	5.4	25	1.0
950	31	563	10.7	1.8	27	4.5
900	31	1,012	8.7	-1.7	27	7.2
850	31	1,483	6.5	-6.1	26	9.4
800	31	1,979	4.8	-8.3	27	10.4
750	31	2,504	2.9	-13.9	27	11.7
700	31	3,059	-.3	-17.1	27	12.9
650	31	3,648	-4.0	-19.5	27	15.0
600	31	4,275	-7.9	-24.0	27	16.3
550	31	4,945	-12.5	-28.6	27	18.7
500	31	5,666	-17.4	-34.0	27	20.0
450	31	6,448	-22.8	-38.2	27	22.8
400	31	7,300	-29.1	-43.7	27	24.6
350	31	8,244	-36.1	-49.1	27	26.8
300	31	9,294	-44.0		27	29.3
250	31	10,495	-52.2		27	32.2
200	31	11,917	-57.6		27	34.7
175	31	12,760	-57.9		27	35.0
150	31	13,731	-58.9		27	33.3
125	31	14,867	-62.3		27	28.9
100	31	16,233	-65.4		27	23.5
80	31	17,591	-65.0		27	16.3
70	31	18,407	-64.0		28	11.3
60	31	19,355	-62.5		28	7.1
50	31	20,488	-60.0		29	4.0
40	30	21,888	-58.0		29	1.3
30	28	23,713	-55.4		32	.9
25	28	24,878	-54.6		32	1.0
20	28	26,313	-52.7		29	.9
15	27	28,176	-50.7		26	3.7
10	15	30,843	-45.5			
7						

CHATHAM, MASS.
1013 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	1.0	-3.0	22	.9
1000	29	127	-.2	-5.4	23	.9
950	31	529	-1.6	-5.7	24	4.8
900	31	958	-3.8	-7.8	25	7.1
850	31	1,409	-4.6	-10.1	25	9.5
800	31	1,884	-5.7	-11.8	26	11.0
750	30	2,389	-7.5	-15.7	26	12.0
700	30	2,923	-10.1	-19.5	26	12.8
650	30	3,492	-13.2	-22.5	26	13.5
600	30	4,098	-16.5	-26.9	26	14.4
550	30	4,748	-19.7	-31.4	26	16.0
500	30	5,450	-24.1	-36.1	26	17.7
450	30	6,211	-29.2	-39.9	26	19.4
400	30	7,042	-35.5	-46.1	26	22.1
350	30	7,961	-42.0	-45.4	26	24.3
300	30	8,988	-48.4		26	25.7
250	30	10,174	-53.1		26	26.4
200	29	11,602	-54.3		26	25.4
175	28	12,466	-54.3		26	23.7
150	27	13,457	-54.3		26	21.5
125	26	14,621	-56.1		26	19.5
100	23	16,029	-57.2		27	13.8
80	23	17,440	-57.2		27	9.9
70	23	18,285	-57.3		26	8.5
60	23	19,260	-57.1		26	6.8
50	23	20,416	-56.5		26	5.3
40	23	21,832	-56.3		26	4.1
30	23	23,663	-55.8		25	4.5
25	23	24,825	-55.3		24	3.9
20	21	26,255	-54.4		25	4.1
15	19	28,114	-52.4		25	2.6
10	13	30,741	-48.6		26	2.8
7	9	33,090	-45.0			

CHIHUAHUA, MEXICO
856 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	10.9	-1.7	25	.7
1000						
950						
900						
850	30	1,489	12.9	-1.1	25	1.0
800	31	1,996	12.9	-2.0	27	3.1
750	31	2,535	9.2	-4.9	27	3.6
700	31	3,102	4.9	-8.2	27	4.2
650	31	3,702	.4	-12.1	26	4.8
600	31	4,338	-4.6	-15.4	27	5.0
550	31	5,017	-9.4	-20.8	26	5.8
500	31	5,747	-14.7	-26.1	26	8.8
450	31	6,536	-20.6	-31.4	26	10.3
400	31	7,396	-27.2	-38.8	26	10.4
350	31	8,347	-34.4	-44.6	26	11.2
300	31	9,404	-42.9		26	13.9
250	31	10,609	-52.0		26	17.9
200	31	12,031	-58.3		26	20.2
175	31	12,869	-59.2		26	22.2
150	31	13,833	-60.8		26	21.2
125	31	14,956	-64.8		26	19.2
100	31	16,304	-68.2		26	16.6
80	31	17,641	-69.1		26	14.3
70	30	18,439	-68.6		26	11.1
60	30	19,366	-67.3		25	7.5
50	30	20,476	-62.7		26	2.9
40	30	21,862	-59.8		31	1.1
30	30	23,673	-57.2		11	.5
25	29	24,832	-55.9		11	.3
20	28	26,257	-54.4		26	1.6
15	27	28,112	-51.7		27	6.6
10	23	30,769	-45.9		27	10.8
7						

* COLD BAY, ALASKA
1010 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	30	-9.6	-13.9	30	1.5
1000	26	120	-8.5	-14.3	30	1.0
950	29	505	-9.6	-14.1	32	2.6
900	29	922	-10.6	-17.1	32	4.2
850	29	1,361	-11.3	-20.1	32	4.3
800	29	1,825	-12.7	-22.8	31	4.2
750	29	2,316	-14.6	-24.9	29	5.2
700	29	2,836	-17.2	-27.3	29	6.2
650	29	3,388	-20.4	-30.6	28	8.0
600	29	3,976	-23.7	-33.5	28	9.3
550	29	4,607	-27.5	-36.0	28	10.7
500	29	5,287	-31.4	-38.4	27	12.0
450	29	6,027	-35.7	-40.7	27	13.1
400	29	6,838	-40.4	-43.4	28	14.6
350	29	7,741	-45.8		27	16.5
300	29	8,753	-50.6		27	18.3
250	29	9,935	-52.0		27	16.8
200	29	11,391	-48.8		27	11.6
175	29	12,270	-48.4		27	10.9
150	29	13,284	-48.9		26	7.8
125	27	14,472	-49.9		26	7.3
100	27	15,927	-50.9		26	5.7
80	26	17,380	-51.3		25	4.4
70	26	18,247	-51.6		25	3.8
60	26	19,247	-52.0		25	3.2
50	25	20,423	-52.0		25	2.2
40	24	21,862	-52.5		24	1.6
30	24	23,718	-53.3		22	.9
25	23	24,889	-53.4		12	.4
20	21	26,328	-53.1		10	1.7
15	19	28,191	-52.6		19	.4
10	15	30,833	-51.8		26	1.6
7	7	33,052	-53.6			

DAYTON, OHIO
979 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	.0	-3.4	26	1.4
1000						
950	31	541	.1	-4.6	25	3.8
900	31	974	-1.1	-7.1	26	6.8
850	31	1,429	-2.0	-9.8	27	9.3
800	31	1,910	-3.4	-12.6	28	10.7
750	31	2,419	-5.1	-16.7	28	11.4
700	31	2,959	-7.9	-20.0	28	12.7
650	31	3,532	-10.8	-21.4	28	13.9
600	31	4,144	-13.9	-24.7	28	15.6
550	31	4,799	-18.2	-28.7	28	17.7
500	31	5,505	-23.0	-32.7	28	19.7
450	31	6,269	-28.1	-36.3	28	21.5
400	31	7,104	-34.1	-41.2	27	23.6
350	31	8,030	-40.5	-45.2	27	26.1
300	31	9,061	-47.5		27	28.3
250	31	10,250	-53.3		27	31.0
200	31	11,674	-55.6		28	31.0
175	31	12,527	-55.0		28	26.4
150	31	13,513	-55.0		28	23.0
125	31	14,675	-56.4		27	20.6
100	31	16,086	-58.5		27	15.6
80	31	17,486	-59.2		28	11.5
70	31	18,323	-59.0		28	9.2
60	31	19,290	-59.0		28	8.0
50	30	20,436	-58.4		29	6.0
40	30	21,844	-57.6		28	5.3
30	29	23,664	-56.8		29	3.8
25	29	24,821	-56.1		28	5.0
20	29	26,246	-54.4		27	4.5
15	26	28,089	-52.6		25	5.8
10	[illegible]	30,725	-49.3			
7						

DEL RIO, TEXAS
977 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	15.1	9.4	11	2.6
1000						
950	31	555	15.3	9.1	14	3.7
900	31	1,014	14.7	7.0	17	4.3
850	31	1,497	13.8	1.8	21	3.6
800	31	2,006	11.7	-3.8	25	3.7
750	31	2,543	8.8	-10.0	28	4.6
700	31	3,109	4.7	-12.7	29	6.1
650	31	3,708	-.1	-15.5	28	6.8
600	31	4,343	-4.9	-20.8	28	7.8
550	31	5,020	-10.0	-24.2	27	8.4
500	31	5,747	-15.4	-30.8	26	10.8
450	31	6,534	-21.2	-37.1	27	12.3
400	31	7,392	-27.8	-43.2	27	14.8
350	31	8,341	-35.0	-48.1	27	17.0
300	31	9,394	-43.1		26	20.5
250	31	10,599	-51.9		26	24.6
200	30	12,022	-58.1		26	28.4
175	30	12,861	-59.1		26	30.0
150	29	13,822	-60.7		26	29.5
125	29	14,944	-65.1		26	24.9
100	29	16,292	-68.0		26	18.9
80	29	17,629	-69.2		26	12.9
70	29	18,427	-68.6		26	8.5
60	29	19,356	-66.4		26	5.2
50	29	20,471	-61.9		29	1.0
40	29	21,863	-59.4		33	.7
30	29	23,675	-56.8		01	.6
25	29	24,834	-55.6		27	1.3
20	29	26,261	-53.9		27	3.9
15	26	28,125	-50.3		27	6.7
10	21	30,810	-44.4		27	18.0
7	5	33,239	-38.5			

DENVER, COLO.
834 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	1.3	-6.8	19	2.4
1000						
950						
900						
850						
800	30	1,952	4.9	-10.1	26	3.0
750	30	2,476	2.4	-13.5	29	6.1
700	30	3,029	-1.8	-16.7	30	9.3
650	30	3,614	-6.0	-19.0	30	11.3
600	30	4,236	-10.3	-22.9	30	13.1
550	30	4,900	-15.1	-27.3	30	14.6
500	30	5,613	-20.4	-32.3	29	15.8
450	30	6,384	-26.1	-36.6	29	17.6
400	30	7,225	-32.7	-40.6	29	18.8
350	30	8,155	-39.8	-47.4	30	20.4
300	30	9,188	-47.6		30	21.3
250	30	10,371	-55.2		29	22.9
200	30	11,780	-59.3		29	23.0
175	30	12,616	-59.6		28	20.8
150	30	13,582	-58.6		28	19.2
125	29	14,730	-59.3		28	15.6
100	29	16,122	-60.5		29	11.2
80	29	17,509	-60.7		28	7.0
70	29	18,339	-61.2		28	4.9
60	29	19,297	-60.9		29	3.2
50	29	20,433	-60.0		33	1.9
40	29	21,831	-58.6		02	1.2
30	28	23,646	-58.0		02	2.1
25	26	24,798	-57.5		04	3.6
20	25	26,209	-57.0		04	4.1
15	22	28,040	-55.2		03	2.3
10	15	30,665	-49.9		28	4.7
7						

DODGE CITY, KANS.
922 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	2.7	-5.6	31	.7
1000						
950						
900	31	989	5.8	-4.5	31	1.9
850	31	1,458	7.2	-7.2	31	4.7
800	31	1,956	5.7	-9.6	31	6.7
750	31	2,482	3.2	-12.8	31	8.2
700	31	3,037	-.4	-16.3	30	10.2
650	31	3,625	-4.6	-19.4	29	12.2
600	31	4,250	-9.3	-22.5	29	13.9
550	31	4,917	-14.2	-26.5	29	14.7
500	31	5,632	-19.3	-32.7	29	15.8
450	31	6,407	-24.9	-38.0	29	16.8
400	31	7,253	-31.4	-42.7	28	20.0
350	31	8,186	-38.9	-47.0	28	21.5
300	31	9,223	-46.9		28	23.4
250	31	10,410	-54.5		28	24.1
200	31	11,819	-60.1		28	25.8
175	31	12,653	-59.0		28	24.2
150	31	13,623	-58.0		28	22.8
125	31	14,769	-59.5		28	19.0
100	31	16,158	-61.3		28	13.5
80	30	17,540	-61.9		28	8.1
70	28	18,366	-62.1		28	6.6
60	26	19,324	-61.7		28	5.2
50	26	20,456	-60.4		29	3.4
40	26	21,853	-58.8		32	1.6
30	25	23,665	-57.8		35	1.3
25	24	24,812	-57.8		35	1.4
20	22	26,226	-55.8		32	2.0
15	20	28,066	-54.0		28	5.1
10	14	30,701	-49.5		28	10.6
7						

EL PASO, TEXAS
880 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	11.2	-6.8	26	1.4
1000						
950						
900						
850	31	1,488	14.1	-4.7	29	2.5
800	31	1,997	11.4	-7.2	29	4.8
750	31	2,532	7.8	-10.2	28	6.7
700	31	3,096	3.3	-13.3	27	7.3
650	31	3,692	-1.6	-15.9	27	7.7
600	31	4,323	-6.6	-19.6	27	8.8
550	31	4,996	-11.8	-23.7	27	9.2
500	31	5,718	-17.0	-31.4	28	9.8
450	31	6,500	-22.6	-37.4	28	10.1
400	31	7,353	-29.1	-43.3	27	11.5
350	31	8,296	-36.5	-48.8	27	13.6
300	31	9,343	-45.0		27	15.2
250	31	10,539	-53.6		27	16.5
200	31	11,950	-60.4		27	18.6
175	30	12,783	-60.6		26	22.2
150	30	13,740	-61.8		26	23.3
125	30	14,864	-64.2		26	20.9
100	28	16,221	-66.3		27	15.7
80	28	17,567	-67.4		27	10.4
70	28	18,372	-67.3		27	6.7
60	26	19,308	-65.4		27	4.1
50	25	20,424	-62.1		29	2.3
40	24	21,809	-60.3		31	1.4
30	24	23,611	-58.7		33	1.1
25	24	24,760	-57.3		29	1.9
20	23	26,181	-55.1		27	4.0
15	21	28,028	-52.6		27	8.3
10	14	30,668	-48.9			
7						

ELY, NEV.
809 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	-1.5	-7.7	21	2.4
1000						
950						
900						
850						
800	31	2,000	2.7	-5.9	22	1.6
750	31	2,523	2.0	-8.9	29	1.9
700	31	3,076	-2.0	-13.0	29	5.2
650	31	3,661	-5.7	-16.9	29	8.2
600	31	4,284	-9.3	-21.3	29	10.1
550	31	4,951	-14.0	-24.8	29	12.3
500	31	5,668	-18.9	-28.9	29	14.2
450	31	6,445	-24.3	-35.0	29	15.9
400	31	7,292	-30.9	-40.3	30	17.6
350	31	8,229	-37.9	-46.0	30	19.7
300	31	9,270	-45.8		30	20.1
250	31	10,462	-54.1		30	21.5
200	31	11,869	-60.9		29	21.9
175	31	12,697	-61.6		29	21.9
150	31	13,656	-60.6		29	18.5
125	30	14,792	-60.8		29	16.2
100	29	16,178	-61.7		28	10.1
80	27	17,555	-62.6		29	6.7
70	27	18,380	-62.0		30	5.1
60	25	19,338	-62.0		32	3.4
50	24	20,472	-59.8		01	2.5
40	24	21,871	-58.6		04	2.5
30	23	23,684	-57.3		06	2.9
25	22	24,840	-56.6		06	2.4
20	22	26,258	-55.2		05	2.9
15	19	28,094	-54.5		35	1.8
10	[illegible]	30,695	-49.9			
7						

EMPALME, MEXICO
1011 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	15.3	9.6	01	1.2
1000	31	109	19.9	7.5	36	1.1
950	31	552	20.9	2.2	36	1.1
900	31	1,017	18.7	-1.7	35	1.4
850	31	1,504	15.6	-3.8	24	.3
800	31	2,015	12.2	-6.8	23	.8
750	31	2,552	8.6	-8.8	23	1.1
700	31	3,118	4.5	-12.6	26	1.1
650	31	3,716	.3	-15.8	27	1.7
600	31	4,353	-4.3	-20.6	28	3.1
550	31	5,032	-9.2	-26.4	28	4.4
500	31	5,762	-14.6	-30.4	28	6.3
450	31	6,551	-20.5	-35.2	27	6.9
400	31	7,411	-27.2	-40.1	27	8.2
350	31	8,361	-34.5	-47.4	27	10.3
300	31	9,417	-42.8		27	12.1
250	31	10,623	-51.9		27	15.1
200	31	12,045	-58.3		26	17.3
175	31	12,882	-59.5		26	19.2
150	31	13,844	-61.1		26	21.1
125	31	14,966	-65.4		26	18.7
100	30	16,314	-68.6		26	16.2
80	29	17,649	-66.7		27	10.0
70	29	18,448	-68.7		27	6.9
60	29	19,374	-67.8		27	4.1
50	28	20,482	-63.4		28	1.5
40	28	21,869	-59.2		03	.9
30	27	23,681	-57.0		07	1.5
25	25	24,840	-55.5		31	1.4
20	25	26,269	-53.8		29	2.4
15	23	28,138	-50.3		27	6.0
10	15	30,804	-44.5		27	13.2
7						

* FAIRBANKS, ALASKA
999 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	-22.3	-29.0	36	.7
1000						
950	31	508	-17.6	-22.4	10	.9
900	31	912	-18.3	-22.8	16	1.1
850	31	1,338	-19.0	-23.2	18	1.2
800	31	1,789	-19.7	-24.6	19	1.3
750	31	2,268	-20.9	-26.2	19	1.9
700	31	2,775	-23.2	-29.3	22	2.4
650	31	3,315	-25.9	-32.4	23	2.9
600	31	3,891	-29.4	-35.8	23	3.4
550	31	4,507	-33.5	-39.2	23	3.9
500	31	5,170	-37.6	-44.0	24	4.5
450	31	5,891	-41.9	-45.9	24	4.4
400	31	6,680	-46.6		24	5.9
350	31	7,560	-50.9		24	7.3
300	31	8,556	-52.3		26	9.0
250	31	9,741	-49.6		26	10.9
200	31	11,211	-47.8		27	12.6
175	31	12,092	-48.2		27	13.4
150	31	13,107	-48.3		28	14.0
125	31	14,306	-49.2		27	14.5
100	30	15,765	-50.2		28	15.2
80	29	17,215	-50.6		28	14.6
70	29	18,086	-50.9		28	15.3
60	29	19,088	-51.3		28	15.7
50	28	20,275	-51.7		28	16.0
40	27	21,725	-52.4		29	15.0
30	25	23,597	-52.7		29	13.3
25	23	24,776	-53.3		30	10.5
20	19	26,266	-53.5		31	9.8
15	16	28,094	-54.9		31	11.7
10						
7						

FLINT, MICH.
985 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	236	-3.1	-7.3	31	.6
1000						
950	31	524	-4.2	-8.2	27	2.1
900	31	950	-5.2	-9.8	28	4.6
850	31	1,398	-6.3	-10.9	29	6.8
800	31	1,872	-6.9	-13.6	29	7.8
750	31	2,375	-7.9	-15.8	29	8.6
700	31	2,910	-9.7	-18.4	28	11.0
650	31	3,480	-12.6	-20.3	28	12.4
600	31	4,087	-16.0	-23.9	28	14.0
550	31	4,738	-20.0	-28.2	28	16.2
500	31	5,438	-24.7	-32.6	28	17.9
450	31	6,197	-29.9	-37.7	28	20.3
400	31	7,026	-35.5	-41.2	28	21.9
350	31	7,947	-42.5	-44.3	28	24.3
300	31	8,975	-48.4		28	26.5
250	31	10,166	-52.6		28	29.7
200	31	11,604	-53.6		28	26.8
175	31	12,466	-52.3		28	23.5
150	31	13,465	-52.6		27	19.4
125	23	14,615	-53.8		28	18.3
100	23	16,042	-56.0		27	15.5
80	23	17,458	-56.9		28	11.7
70	23	18,304	-56.5		28	10.0
60	23	19,283	-56.5		28	8.9
50	22	20,442	-56.7		29	6.2
40	22	21,857	-56.6		28	4.9
30	22	23,682	-56.5		31	4.1
25	22	24,842	-55.8		31	3.4
20	21	26,265	-54.6		30	2.0
15	19	28,119	-52.9		27	3.1
10	11	30,763	-50.3			
7						

FORT WORTH, TEXAS
993 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	11.7	4.3	22	1.0
1000						
950	31	552	12.5	2.8	21	4.4
900	31	1,006	12.4	.2	23	5.0
850	31	1,484	11.2	-4.0	27	4.7
800	31	1,989	9.3	-7.8	29	6.1
750	31	2,520	5.9	-11.4	29	7.4
700	31	3,081	2.0	-15.6	29	9.5
650	31	3,674	-2.2	-19.2	29	11.1
600	31	4,305	-6.8	-22.4	29	12.2
550	31	4,978	-11.2	-28.2	28	13.3
500	31	5,702	-16.3	-33.2	28	14.8
450	31	6,487	-22.1	-38.0	28	16.2
400	31	7,341	-29.0	-43.7	28	18.2
350	31	8,285	-36.2	-49.7	27	20.7
300	31	9,333	-44.5		27	24.1
250	31	10,531	-53.0		27	27.0
200	30	11,946	-58.8		27	28.2
175	29	12,785	-59.2		27	29.4
150	29	13,750	-60.1		27	27.3
125	27	14,885	-62.5		27	26.2
100	25	16,256	-64.7		27	18.3
80	23	17,612	-65.9		27	12.4
70	22	18,427	-65.0		28	8.3
60	22	19,368	-64.0		28	5.8
50	21	20,497	-60.9		31	2.1
40	21	21,894	-58.4		30	1.4
30	21	23,713	-56.6		29	1.5
25	21	24,870	-56.2		27	3.0
20	21	26,295	-54.2		27	4.5
15	20	28,155	-50.4		26	7.0
10	14	30,818	-46.0		26	15.0
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT.
932 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-4.3	-7.9	06	1.1
1000						
950						
900	31	969	-1.2	-6.7	29	3.0
850	31	1,426	-1.4	-9.0	30	6.2
800	31	1,907	-3.4	-11.0	30	8.5
750	31	2,415	-6.3	-14.4	30	10.8
700	31	2,951	-9.8	-17.3	30	12.3
650	31	3,520	-13.2	-20.0	30	13.8
600	31	4,125	-17.0	-24.4	30	15.5
550	31	4,773	-21.4	-28.2	30	17.0
500	31	5,469	-26.0	-32.9	30	17.9
450	31	6,224	-31.3	-36.8	30	19.4
400	31	7,048	-37.4	-41.4	30	21.1
350	31	7,960	-43.8	-43.5	30	22.8
300	31	8,977	-50.5		30	24.5
250	31	10,153	-54.9		29	24.2
200	31	11,576	-55.0		30	19.3
175	31	12,432	-54.0		29	18.0
150	31	13,422	-53.9		29	15.7
125	31	14,593	-54.8		29	14.4
100	31	16,016	-56.3		29	12.1
80	29	17,437	-57.3		29	10.4
70	28	18,278	-57.7		30	9.1
60	28	19,252	-57.5		30	7.8
50	27	20,406	-56.8		31	6.4
40	26	21,823	-56.5		33	4.3
30	26	23,650	-56.6		35	3.9
25	25	24,809	-56.9		01	4.0
20	24	26,226	-56.5		03	4.3
15	21	28,057	-55.9		04	4.5
10	12	30,675	-52.9			
7						

GRAND JUNCTION, COLO.
851 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	2.0	-10.9	12	2.2
1000						
950						
900						
850	19	1,518	6.5	-9.8	13	3.2
800	31	1,984	5.8	-10.8	18	1.5
750	31	2,508	2.4	-12.6	27	3.3
700	31	3,062	-1.9	-14.6	28	6.3
650	31	3,646	-6.2	-17.3	29	8.6
600	31	4,267	-10.6	-20.3	29	11.1
550	31	4,932	-14.8	-25.5	29	12.6
500	31	5,646	-19.6	-32.0	29	14.9
450	31	6,421	-25.0	-36.7	29	16.9
400	31	7,266	-31.5	-41.4	29	18.3
350	31	8,200	-38.7	-47.1	29	19.2
300	31	9,238	-46.5		29	21.7
250	31	10,426	-54.5		30	23.2
200	31	11,837	-59.6		29	24.0
175	31	12,672	-59.6		29	22.7
150	31	13,639	-59.0		29	17.3
125	30	14,779	-59.5		28	16.0
100	30	16,170	-61.4		28	11.7
80	30	17,550	-62.4		29	8.8
70	30	18,375	-61.8		29	6.1
60	30	19,332	-61.3		29	4.1
50	30	20,467	-59.8		31	2.5
40	30	21,868	-58.3		36	1.7
30	29	23,683	-57.5		05	1.7
25	29	24,836	-57.3		04	2.0
20	29	26,248	-56.9		03	2.8
15	22	28,081	-54.6		32	1.7
10	8	30,688	-50.8			
7						

* GREAT FALLS, MONT.
885 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	-.2	-6.5	23	4.0
1000						
950						
900						
850	31	1,441	2.0	-8.4	26	8.3
800	31	1,927	-.8	-9.3	27	8.5
750	31	2,438	-4.9	-11.1	28	9.2
700	31	2,977	-8.5	-14.9	28	10.6
650	31	3,549	-11.7	-19.4	29	13.2
600	31	4,158	-15.7	-24.0	29	14.1
550	31	4,808	-20.0	-28.2	29	15.4
500	31	5,508	-25.0	-33.6	29	17.2
450	31	6,267	-30.2	-38.6	29	19.8
400	31	7,094	-36.2	-42.3	29	22.2
350	31	8,011	-42.9	-46.3	29	24.2
300	31	9,032	-49.5		30	25.4
250	31	10,212	-54.7		30	26.4
200	31	11,632	-55.6		30	23.4
175	31	12,486	-54.5		29	19.7
150	31	13,472	-54.9		29	18.3
125	30	14,629	-55.3		29	16.5
100	30	16,049	-56.4		29	12.2
80	28	17,461	-56.9		29	9.8
70	28	18,306	-57.1		29	8.3
60	27	19,280	-56.8		30	5.2
50	24	20,444	-56.5		32	4.5
40	22	21,862	-56.1		01	3.7
30	20	23,697	-56.3		03	4.9
25	20	24,855	-56.4		05	5.5
20	14	26,276	-56.5		06	7.8
15	11	28,116	-55.1		06	6.6
10	10	30,717	-53.4		06	7.0
7	7	33,034	-51.0			

GREEN BAY, WIS.
989 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-6.6	-9.5	35	2.4
1000						
950	31	525	-5.8	-10.3	36	2.4
900	31	949	-6.4	-12.9	34	3.5
850	31	1,395	-6.7	-14.3	33	5.4
800	31	1,868	-7.3	-15.4	32	6.9
750	31	2,370	-9.0	-16.3	31	8.5
700	31	2,902	-11.2	-19.0	30	10.6
650	31	3,468	-14.3	-21.5	29	11.9
600	31	4,071	-17.5	-25.9	29	13.4
550	31	4,718	-21.1	-29.4	29	14.9
500	31	5,416	-25.6	-34.7	29	16.5
450	31	6,171	-30.9	-38.5	29	18.0
400	31	6,997	-36.7	-44.2	29	20.4
350	31	7,913	-42.7	-48.5	29	21.7
300	31	8,936	-49.0		28	24.7
250	31	10,120	-53.7		28	27.3
200	31	11,551	-53.5		28	23.3
175	31	12,413	-52.4		29	21.2
150	31	13,408	-53.0		28	19.1
125	30	14,579	-53.9		29	18.6
100	30	16,008	-55.3		28	14.9
80	30	17,428	-56.5		29	12.7
70	30	18,274	-56.8		29	10.9
60	30	19,251	-56.9		29	9.2
50	30	20,406	-56.6		29	7.1
40	30	21,823	-56.0		30	6.1
30	29	23,662	-56.0		31	3.9
25	28	24,823	-56.1		30	3.3
20	28	26,245	-55.4		30	2.2
15	27	28,086	-53.6		28	2.3
10	23	30,700	-50.4		26	5.8
7	10	33,062	-46.4			

GREENSBORO, N. C.
993 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	4.2	-.3	26	1.0
1000						
950	31	555	6.1	-.7	26	4.5
900	31	997	4.7	-2.9	27	7.3
850	31	1,461	2.5	-4.1	28	9.0
800	31	1,950	.7	-7.1	28	11.1
750	31	2,467	-1.0	-13.5	28	12.6
700	31	3,015	-3.5	-18.4	28	14.3
650	31	3,598	-6.5	-20.0	27	15.8
600	31	4,219	-10.1	-23.5	27	17.8
550	31	4,884	-14.4	-27.2	27	19.6
500	31	5,600	-19.3	-31.8	27	21.5
450	31	6,375	-24.8	-37.0	27	23.1
400	31	7,221	-31.1	-42.6	27	25.2
350	31	8,157	-38.0	-47.3	27	26.8
300	31	9,198	-46.0		27	30.1
250	31	10,391	-53.5		27	33.3
200	31	11,810	-57.3		28	32.9
175	31	12,656	-56.3		27	29.8
150	31	13,636	-57.0		28	27.4
125	31	14,783	-59.8		27	24.6
100	31	16,171	-61.7		27	19.4
80	31	17,554	-61.3		28	14.2
70	30	18,382	-61.1		28	10.5
60	30	19,341	-60.6		28	8.2
50	30	20,481	-58.8		27	4.6
40	29	21,885	-57.4		28	4.2
30	28	23,708	-56.0		28	3.2
25	28	24,869	-55.3		28	4.1
20	27	26,297	-54.4		28	2.7
15	20	28,149	-52.0		27	4.7
10	19	30,800	-47.7		26	11.2
7	6	33,166	-43.6			

GUADALUPE IS., MEXICO
1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	23	14.1	11.1	34	5.5
1000	26	144	12.8	9.3	33	6.4
950	26	573	11.4	2.9	33	3.5
900	26	1,028	15.6	-11.6	34	2.5
850	26	1,512	14.7	-12.8	34	3.1
800	26	2,021	12.2	-14.4	32	3.1
750	26	2,558	8.9	-16.2	31	2.0
700	26	3,124	5.0	-19.3	34	1.5
650	26	3,723	.7	-22.3	33	1.6
600	26	4,360	-3.9	-25.7	31	2.0
550	26	5,040	-9.2	-28.8	30	1.9
500	25	5,771	-14.7	-32.4	33	3.2
450	25	6,560	-20.6	-37.8	33	4.6
400	25	7,419	-27.4	-43.8	34	5.3
350	25	8,369	-34.4	-49.4	34	5.4
300	25	9,427	-42.3		32	4.7
250	25	10,636	-51.3		32	8.1
200	25	12,059	-58.4		31	8.1
175	23	12,899	-59.7		30	8.5
150	23	13,860	-61.1		30	9.3
125	23	14,986	-64.0			
100	22	16,342	-66.6			
80	22	17,689	-67.0			
70	22	18,498	-66.5			
60	22	19,433	-65.7			
50	22	20,546	-62.8			
40	20	21,936	-59.1			
30	16	23,758	-56.2			
25	16	24,919	-55.4			
20	14	26,349	-53.0			
15	11	28,207	-49.8			
10						
7						
5						
4						

* GUAM, MARIANA IS.
999 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.5	22.2	07	4.0
1000						
950	31	553	21.6	19.1	07	9.4
900	31	1,021	19.1	15.5	08	7.9
850	31	1,512	16.8	12.7	09	5.5
800	31	2,028	14.3	8.0	09	3.9
750	31	2,572	12.0	4.3	10	2.7
700	31	3,147	9.2	-.8	12	2.1
650	31	3,759	6.1	-5.7	13	1.3
600	31	4,411	2.5	-10.7	12	1.2
550	31	5,109	-1.3	-15.8	11	1.2
500	31	5,863	-5.5	-20.8	08	.7
450	31	6,683	-9.9	-27.9	07	1.0
400	31	7,581	-15.9	-33.3	02	.5
350	31	8,577	-22.9	-38.5	25	1.1
300	31	9,685	-31.2	-46.3	24	2.6
250	31	10,950	-41.6		23	5.2
200	31	12,423	-54.0		23	6.8
175	30	13,267	-60.8		22	7.3
150	30	14,207	-68.7		21	6.4
125	30	15,279	-76.1		18	4.3
100	29	16,544	-82.6		13	3.2
80	26	17,791	-81.0		07	1.7
70	26	18,552	-75.9		29	1.7
60	26	19,454	-71.5		27	4.6
50	25	20,545	-66.9		26	7.1
40	25	21,910	-62.0		27	4.9
30	25	23,714	-56.5		01	1.0
25	23	24,883	-52.8		08	3.7
20	22	26,342	-48.7		08	7.6
15	20	28,252	-45.7		08	14.4
10	5	30,971	-42.6			
7						
5						
4						

HILO, HAWAII
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	20.3	16.4	22	1.6
1000	31	122	21.0	17.1	19	1.7
950	31	565	18.2	14.5	17	2.8
900	31	1,027	15.4	11.8	16	2.3
850	31	1,510	12.9	5.8	18	2.0
800	31	2,019	12.1	-2.8	21	1.3
750	31	2,557	9.7	-9.5	25	3.5
700	31	3,127	7.2	-16.0	27	4.9
650	31	3,733	3.8	-18.5	28	6.0
600	31	4,378	.1	-22.4	28	6.7
550	31	5,069	-4.5	-25.9	28	9.1
500	31	5,812	-9.7	-29.5	28	10.4
450	31	6,617	-15.1	-34.1	28	12.1
400	31	7,497	-20.9	-38.8	29	15.2
350	31	8,473	-28.1	-44.4	29	19.5
300	31	9,559	-35.6	-51.4	29	23.0
250	31	10,804	-44.7		29	26.2
200	31	12,263	-55.0		28	31.8
175	31	13,105	-60.8		28	31.2
150	31	14,050	-66.9		28	28.8
125	29	15,127	-73.3		28	23.5
100	29	16,417	-77.9		28	15.8
80	28	17,689	-76.9		27	9.4
70	28	18,463	-73.7		26	4.7
60	27	19,377	-70.1		25	1.7
50	27	20,472	-66.1		31	.9
40	27	21,842	-61.1		10	2.3
30	26	23,652	-56.3		06	2.1
25	26	24,817	-53.6		08	3.2
20	26	26,263	-50.3		07	.3
15	25	28,153	-48.0		32	.6
10	23	30,863	-43.1		22	2.5
7	14	33,292	-37.2			
5						
4						

HUNTINGTON W. VA.
986 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	2.7	-3.5	24	1.0
1000						
950	31	548	3.0	-3.7	25	4.0
900	31	984	.9	-5.6	26	7.5
850	31	1,443	-.6	-8.2	27	9.8
800	31	1,926	-2.2	-11.6	28	10.8
750	31	2,437	-4.0	-14.5	28	11.7
700	31	2,980	-6.5	-18.3	28	13.4
650	31	3,556	-9.4	-23.0	28	15.2
600	31	4,170	-12.8	-25.3	28	16.3
550	31	4,829	-16.9	-28.1	28	18.5
500	31	5,538	-21.4	-33.6	27	20.9
450	31	6,308	-26.5	-37.9	27	22.9
400	31	7,148	-32.6	-43.9	27	25.9
350	31	8,079	-38.9	-49.4	27	29.0
300	31	9,118	-46.1		27	31.1
250	31	10,311	-53.2		27	33.5
200	31	11,736	-55.9		27	32.7
175	31	12,588	-54.9		27	29.6
150	31	13,573	-55.4		27	25.9
125	31	14,731	-57.2		27	22.5
100	31	16,136	-59.2		27	17.3
80	31	17,532	-59.5		28	12.2
70	31	18,368	-59.6		28	9.3
60	30	19,336	-59.2		28	7.8
50	30	20,482	-58.0		29	6.0
40	29	21,891	-57.4		28	4.1
30	29	23,714	-55.8		28	3.5
25	29	24,877	-55.3		28	4.8
20	28	26,303	-54.3		27	4.4
15	24	28,158	-52.2		26	4.8
10	17	30,824	-47.8		25	6.1
7						
5						
4						

* INTERNATIONAL FALLS, MINN.
973 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-10.1	-15.0	06	.5
1000						
950	30	545	-8.6	-13.8	08	.8
900	31	958	-9.4	-15.1	31	1.2
850	31	1,399	-10.0	-16.9	32	3.2
800	31	1,866	-10.9	-19.0	32	4.6
750	31	2,361	-12.8	-19.5	31	6.0
700	31	2,885	-14.9	-20.5	30	6.9
650	31	3,443	-17.4	-25.5	30	8.1
600	31	4,040	-20.3	-30.2	30	10.8
550	31	4,679	-24.1	-33.0	30	12.3
500	31	5,368	-28.6	-37.4	30	14.0
450	31	6,115	-33.5	-41.6	30	16.6
400	31	6,933	-39.0	-46.7	30	18.3
350	31	7,840	-44.7		30	20.3
300	31	8,855	-50.6		30	21.5
250	31	10,033	-54.0		30	22.3
200	31	11,465	-52.6		29	19.9
175	31	12,329	-52.0		30	19.1
150	31	13,327	-52.4		29	17.8
125	30	14,508	-53.6		29	16.1
100	30	15,940	-54.5		29	15.9
80	30	17,366	-55.4		30	14.0
70	29	18,215	-55.4		30	11.0
60	29	19,198	-55.5		30	9.7
50	29	20,361	-55.3		30	8.1
40	29	21,784	-55.7		31	6.6
30	27	23,614	-55.7		33	4.3
25	27	24,777	-56.2		33	4.6
20	27	26,202	-55.6		34	4.3
15	20	28,032	-53.6		36	3.7
10	19	30,650	-51.9		33	2.1
7	17	32,980	-49.2		31	4.6
5	13	35,199	-45.0		30	6.9
4	7	36,746	-41.8			

JACKSON, MISS.
1005 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	10.3	7.8	07	.4
1000						
950	31	567	10.8	3.5	26	1.1
900	31	1,018	10.2	-2.0	28	4.2
850	31	1,492	8.7	-3.7	28	7.2
800	31	1,992	6.7	-6.1	28	9.6
750	31	2,519	4.0	-11.2	28	11.2
700	31	3,077	.8	-15.1	28	12.4
650	31	3,668	-2.9	-18.5	28	13.1
600	31	4,298	-6.6	-21.8	28	14.9
550	31	4,972	-10.8	-27.4	27	17.5
500	31	5,699	-15.5	-32.1	27	19.7
450	31	6,485	-21.1	-37.0	27	20.9
400	31	7,344	-27.6	-41.8	27	21.3
350	30	8,291	-35.0	-46.9	27	22.9
300	30	9,345	-43.4		27	25.1
250	30	10,547	-52.4		27	30.4
200	30	11,966	-58.1		27	35.2
175	30	12,807	-58.4		27	35.5
150	30	13,774	-59.6		27	34.5
125	29	14,903	-62.7		27	29.3
100	28	16,275	-65.7		27	21.5
80	28	17,624	-67.0		27	15.6
70	28	18,434	-65.6		27	11.3
60	28	19,377	-63.7		28	7.6
50	27	20,504	-60.6		29	2.5
40	24	21,896	-58.4		30	2.1
30	24	23,722	-54.7		35	1.1
25	23	24,887	-53.8		26	1.9
20	21	26,326	-52.3		26	3.1
15	18	28,210	-48.6		27	6.7
10	14	30,887			26	13.3
7	6	33,301				
5						

JOHN F. KENNEDY INT. AP NY
1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	2.0	-4.0	30	1.8
1000	26	140	.5	-5.3	30	2.1
950	29	535	-.3	-5.6	26	4.5
900	29	967	-1.8	-8.2	26	7.2
850	29	1,421	-2.6	-9.7	27	9.7
800	29	1,901	-4.0	-11.4	27	10.6
750	29	2,409	-6.2	-13.5	26	11.7
700	29	2,946	-8.7	-17.4	26	13.2
650	29	3,518	-11.6	-20.4	26	15.0
600	29	4,127	-15.2	-25.0	27	16.8
550	29	4,781	-18.7	-30.8	27	19.4
500	29	5,485	-22.8	-35.1	27	20.5
450	29	6,250	-28.1	-38.9	27	22.0
400	29	7,085	-34.0	-44.3	27	24.6
350	29	8,010	-40.7	-45.3	27	28.2
300	29	9,040	-47.9		27	29.9
250	29	10,228	-53.2		28	31.0
200	29	11,657	-55.1		27	27.2
175	29	12,512	-54.1		27	25.4
150	29	13,500	-54.7		27	21.6
125	28	14,665	-56.2		27	20.9
100	28	16,078	-57.7		27	16.8
80	28	17,484	-58.1		27	12.9
70	28	18,325	-58.2		27	9.5
60	28	19,296	-58.1		28	8.3
50	28	20,448	-56.9		27	5.2
40	28	21,862	-56.8		27	4.7
30	27	23,687	-56.0		26	5.4
25	27	24,849	-55.5		26	4.9
20	25	26,279	-54.0		26	3.7
15	22	28,135	-52.5		25	4.5
10	12	30,742	-50.1			
7						
5						

JOHNSTON IS., PACIFIC AREA
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.6	20.4	07	4.5
1000	31	116	23.5	19.2	07	4.5
950	31	563	19.7	17.5	07	4.1
900	31	1,028	16.8	13.1	09	3.1
850	31	1,514	14.8	7.4	10	1.5
800	31	2,026	13.1	-.8	16	.4
750	31	2,567	11.7	-6.9	23	1.6
700	31	3,141	9.0	-11.3	25	2.1
650	31	3,750	5.4	-14.7	26	2.8
600	31	4,399	1.6	-19.0	27	3.3
550	31	5,094	-2.8	-22.1	26	4.2
500	31	5,842	-8.0	-27.0	27	6.5
450	31	6,653	-13.0	-31.4	27	8.8
400	31	7,541	-18.4	-37.4	28	12.7
350	31	8,527	-25.4	-41.8	28	14.9
300	31	9,625	-33.5	-49.1	28	16.7
250	31	10,879	-42.8		28	18.4
200	31	12,348	-54.1		28	17.6
175	31	13,192	-60.8		28	18.1
150	31	14,134	-68.1		28	19.2
125	29	15,207	-74.7		29	17.8
100	29	16,486	-80.1		29	9.4
80	25	17,747	-80.2		30	4.0
70	25	18,510	-75.5		29	2.8
60	23	19,420	-70.4		26	2.3
50	23	20,517	-65.6		25	1.9
40	22	21,889	-61.2		23	.6
30	22	23,696	-56.1		09	1.3
25	22	24,865	-52.8		06	2.0
20	22	26,320	-48.6		08	3.6
15	22	28,223	-46.3		07	6.2
10	22	30,948	-41.9		12	7.0
7	8	33,377	-38.4			
5						

KEY WEST, FLA.
1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	22.0	18.3	10	1.7
1000	29	136	21.8	17.8	09	2.5
950	29	580	18.5	14.7	11	2.3
900	29	1,042	15.9	8.8	13	1.1
850	29	1,526	13.4	1.2	24	1.1
800	29	2,034	11.0	-4.3	27	1.6
750	29	2,570	8.3	-10.6	29	2.9
700	29	3,136	5.0	-14.5	30	4.5
650	29	3,737	1.6	-18.0	30	5.9
600	29	4,377	-2.4	-22.9	29	7.8
550	29	5,062	-6.8	-27.1	28	9.8
500	29	5,798	-11.8	-30.5	28	11.8
450	29	6,597	-17.5	-35.1	29	15.9
400	29	7,467	-24.1	-40.1	28	18.9
350	29	8,431	-31.3	-46.6	28	21.5
300	29	9,501	-39.6	-52.4	28	24.7
250	29	10,726	-47.7		27	32.4
200	29	12,176	-54.2		27	36.7
175	29	13,026	-57.7		27	35.0
150	29	13,988	-62.6		27	32.8
125	28	15,094	-68.5		27	27.1
100	28	16,415	-73.4		27	21.8
80	27	17,713	-74.5		27	13.5
70	27	18,494	-72.2		27	8.6
60	27	19,409	-69.0		27	5.3
50	27	20,513	-64.0		34	2.1
40	25	21,896	-59.5		06	2.4
30	24	23,719	-54.9		32	1.1
25	21	24,892	-52.9		32	1.3
20	21	26,340	-51.6		28	4.0
15	18	28,223	-47.5			
10	18	30,939	-41.5			
7	12	33,394	-35.6			
5	6	35,775	-31.5			

+ KOROR, CAROLINE IS.
1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	26.9	24.4	05	2.1
1000	31	88	26.4	22.8	05	2.3
950	31	541	23.5	20.1	07	4.0
900	31	1,012	20.7	16.3	07	4.1
850	31	1,505	18.0	12.2	08	3.5
800	31	2,024	15.6	8.6	08	3.2
750	31	2,570	12.9	5.2	09	3.1
700	31	3,147	9.8	2.3	11	2.8
650	31	3,760	6.4	-1.8	11	3.6
600	31	4,412	2.8	-6.5	10	4.2
550	31	5,112	-1.1	-10.8	10	5.1
500	31	5,867	-5.2	-16.6	09	5.1
450	31	6,688	-9.9	-22.6	10	6.1
400	31	7,587	-15.6	-29.2	10	7.4
350	31	8,585	-22.3	-36.6	10	8.2
300	31	9,696	-30.7	-45.2	10	7.9
250	31	10,963	-41.2		11	9.0
200	31	12,438	-53.6		11	11.7
175	31	13,283	-60.6		11	13.6
150	31	14,225	-68.3		11	15.6
125	31	15,299	-75.9		11	15.1
100	31	16,568	-80.9		10	9.4
80	31	17,826	-78.3		33	1.1
70	30	18,600	-72.2		28	5.2
60	30	19,515	-69.0		28	8.8
50	30	20,618	-64.4		27	11.2
40	29	21,993	-61.3		27	10.9
30	29	23,797	-57.4		28	4.4
25	24	24,956	-54.8		10	2.2
20	29	26,393	-51.7		10	11.4
15	29	28,276	-47.6		09	19.3
10	14	30,977	-41.6		10	26.0
7	8	33,449	-34.1			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.9	23.8	07	5.9
1000	31	91	26.3	23.4	07	6.6
950	31	543	22.9	21.1	07	8.1
900	31	1,014	19.9	17.3	08	7.7
850	31	1,506	17.3	14.1	09	7.2
800	31	2,023	15.2	9.8	09	6.5
750	31	2,569	12.8	2.8	08	6.1
700	31	3,146	9.7	-2.5	09	5.7
650	31	3,758	6.4	-6.1	09	5.3
600	31	4,410	2.5	-8.6	09	4.8
550	31	5,109	-1.7	-11.1	09	4.6
500	31	5,862	-6.0	-15.9	10	4.0
450	31	6,679	-10.9	-22.8	11	3.0
400	31	7,576	-16.1	-30.3	12	2.1
350	31	8,569	-22.9	-38.6	09	1.6
300	31	9,679	-31.6	-45.4	02	1.3
250	31	10,942	-41.8	-53.5	30	.6
200	31	12,413	-54.5	-64.3	30	1.0
175	31	13,254	-61.5		27	.5
150	31	14,192	-69.1		23	.8
125	27	15,259	-77.3		11	1.2
100	24	16,511	-84.1		08	3.9
80	27	17,751	-80.1		25	.6
70	17	18,515	-75.3		27	6.2
60	17	19,419	-71.7		27	11.3
50	17	20,507	-67.1		27	12.1
40	15	21,871	-62.4		27	10.0
30	15	23,666	-57.5		27	1.9
25	15	24,824	-55.4		07	3.7
20	15	26,257	-52.4		09	11.3
15	13	28,131	-48.2		09	20.0
10	4	30,813	-42.6			
7						

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	13.2	11.9	03	1.1
1000	31	131	14.9	9.6	09	1.0
950	31	565	13.7	3.6	19	.9
900	31	1,020	13.5	-3.4	25	3.0
850	31	1,500	11.8	-6.7	27	5.3
800	31	2,005	8.9	-9.9	27	6.2
750	31	2,536	6.1	-15.3	28	7.6
700	31	3,097	2.6	-19.0	28	8.6
650	31	3,691	-1.5	-20.0	28	9.8
600	31	4,324	-5.7	-24.4	29	12.1
550	31	5,000	-10.1	-29.3	27	14.3
500	31	5,727	-15.3	-32.8	27	15.3
450	31	6,514	-21.0	-38.8	27	15.1
400	31	7,373	-27.6	-43.7	27	16.1
350	31	8,322	-34.9	-50.2	27	17.6
300	31	9,376	-43.1		27	21.8
250	31	10,581	-51.8		27	27.3
200	30	12,003	-58.0		27	32.0
175	30	12,843	-58.6		27	32.6
150	30	13,807	-61.1		26	30.5
125	30	14,931	-64.4		27	27.7
100	29	16,286	-67.7		27	20.5
80	29	17,623	-69.0		27	12.8
70	29	18,423	-68.2		27	10.6
60	28	19,352	-65.4		28	6.6
50	28	20,472	-62.0		29	2.3
40	27	21,862	-58.9		34	1.1
30	26	23,679	-56.5		02	1.3
25	26	24,838	-55.7		29	1.1
20	25	26,265	-54.1		28	2.8
15	24	28,133	-50.3		26	6.3
10	20	30,802	-44.3		27	16.3
7	6	33,242	-36.1			

LANDER, WYO. 826 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	.0	-8.5	20	1.4
1000						
950						
900						
850						
800	31	1,954	2.2	-11.1	22	.9
750	31	2,472	-.8	-13.5	30	3.6
700	31	3,020	-4.2	-16.6	30	8.4
650	31	3,600	-8.4	-19.2	30	11.3
600	31	4,216	-12.7	-23.7	29	13.9
550	31	4,873	-17.5	-28.2	29	16.5
500	31	5,581	-22.3	-33.3	29	17.7
450	31	6,346	-27.8	-37.4	29	17.3
400	31	7,182	-34.0	-42.0	29	18.9
350	31	8,107	-40.9	-46.5	29	21.7
300	31	9,135	-48.5		29	23.9
250	31	10,316	-55.5		29	26.0
200	31	11,724	-58.5		29	24.3
175	31	12,564	-58.4		29	21.7
150	31	13,537	-57.3		29	17.8
125	31	14,688	-58.0		29	15.2
100	31	16,090	-59.0		29	11.0
80	31	17,482	-60.5		29	8.7
70	31	18,314	-60.6		29	6.5
60	31	19,275	-60.1		30	4.2
50	30	20,418	-59.3		32	1.2
40	30	21,818	-58.4		01	1.6
30	30	23,634	-57.6		04	2.7
25	28	24,790	-57.2		06	3.9
20	27	26,201	-57.2		05	4.6
15	21	28,029	-56.0		04	3.4
10	9	30,621	-53.9			
7						

* LIHUE KAUAI, HAWAII 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	20.5	17.3	26	.7
1000	31	127	20.8	16.5	22	.5
950	31	569	17.9	14.8	21	1.2
900	31	1,031	14.9	11.5	24	3.4
850	31	1,513	12.0	7.1	25	5.3
800	31	2,020	10.6	.2	26	7.8
750	31	2,557	9.6	-6.0	26	9.2
700	31	3,127	6.9	-8.9	26	10.2
650	31	3,732	3.6	-15.3	26	11.7
600	31	4,377	-.2	-19.1	27	12.7
550	31	5,067	-4.7	-22.6	27	14.3
500	31	5,810	-10.1	-26.5	27	15.9
450	31	6,613	-15.8	-29.6	27	17.2
400	31	7,490	-21.9	-34.8	28	20.0
350	31	8,464	-27.9	-41.4	28	23.6
300	31	9,550	-35.8	-49.2	28	27.0
250	31	10,794	-44.7		29	31.4
200	31	12,255	-54.6		28	33.2
175	31	13,099	-59.9		28	33.1
150	31	14,048	-66.1		28	30.6
125	31	15,137	-72.1		28	24.7
100	31	16,436	-76.6		28	16.9
80	30	17,723	-75.9		27	9.1
70	30	18,500	-72.5		26	6.4
60	30	19,416	-68.6		25	3.4
50	30	20,518	-65.4		21	.8
40	28	21,897	-59.6		13	1.4
30	28	23,714	-55.7		09	1.7
25	27	24,887	-53.0		01	.7
20	27	26,336	-50.5		32	2.8
15	27	28,224	-47.3		27	5.0
10	23	30,946	-42.1		25	12.6
7	9	33,415	-35.5			

LITTLE ROCK, ARK. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	7.2	4.0	24	.8
1000						
950	31	553	8.5	.2	26	3.3
900	31	999	7.6	-2.5	28	5.4
850	31	1,469	6.6	-6.6	28	7.4
800	31	1,966	5.2	-9.5	29	9.9
750	31	2,491	2.3	-12.8	29	11.5
700	31	3,045	-.9	-14.8	29	13.4
650	31	3,632	-4.6	-17.8	29	14.7
600	31	4,257	-8.8	-21.8	29	16.3
550	31	4,926	-13.2	-25.6	28	18.6
500	31	5,645	-17.8	-30.8	28	20.9
450	31	6,425	-23.2	-35.8	28	22.4
400	31	7,276	-29.8	-41.6	28	23.5
350	31	8,217	-36.9	-47.7	27	25.2
300	31	9,262	-45.2		27	27.6
250	30	10,459	-53.9		27	30.3
200	29	11,869	-58.2		27	30.7
175	29	12,710	-58.3		27	31.5
150	29	13,680	-58.7		27	30.8
125	29	14,817	-61.7		27	26.0
100	27	16,192	-63.3		27	19.0
80	27	17,562	-63.5		27	12.3
70	27	18,383	-63.1		27	9.8
60	26	19,334	-61.9		29	5.9
50	25	20,469	-59.6		29	3.5
40	25	21,869	-58.3		30	2.2
30	25	23,689	-56.4		27	2.8
25	25	24,849	-55.6		27	3.6
20	24	26,282	-53.0		26	5.7
15	23	28,148	-50.1		26	7.0
10	14	30,815	-45.2			
7						

MCGRATH, ALASKA 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	-22.1	-24.9	30	1.0
1000						
950	31	503	-18.2	-23.2	02	3.3
900	31	907	-18.4	-23.1	04	3.5
850	31	1,334	-17.8	-24.4	03	3.7
800	31	1,787	-18.6	-26.3	03	4.2
750	31	2,267	-20.2	-28.8	01	3.8
700	31	2,776	-22.3	-31.5	36	3.4
650	31	3,318	-25.1	-34.4	33	2.7
600	31	3,895	-28.5	-38.1	33	3.5
550	31	4,514	-32.1	-42.0	33	4.4
500	31	5,181	-36.3	-45.7	31	4.9
450	31	5,905	-40.6	-49.2	30	6.2
400	31	6,700	-44.8		30	7.9
350	31	7,588	-48.5		30	10.5
300	31	8,594	-50.5		28	12.5
250	31	9,789	-48.0		28	11.7
200	31	11,268	-46.4		27	11.4
175	31	12,155	-46.5		27	12.1
150	31	13,178	-47.2		27	11.6
125	31	14,381	-48.6		27	11.1
100	30	15,851	-49.4		27	10.5
80	30	17,313	-49.8		26	10.3
70	30	18,186	-50.1		27	9.7
60	30	19,192	-50.8		27	8.4
50	30	20,379	-50.9		27	8.6
40	30	21,830	-51.6		28	8.9
30	29	23,702	-52.3		27	7.5
25	28	24,886	-52.8		28	7.3
20	27	26,328	-53.6		28	7.7
15	21	28,215	-53.4		30	3.2
10						
7						

+ MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.6	24.2	07	5.3
1000	31	100	27.0	19.7	08	5.9
950	31	552	23.4	17.7	08	7.4
900	31	1,023	20.7	14.1	09	7.7
850	31	1,516	17.9	10.7	09	7.5
800	31	2,033	15.4	6.2	09	6.5
750	31	2,578	13.2	1.2	09	6.3
700	31	3,156	10.3	-3.6	09	5.9
650	31	3,769	7.0	-7.4	09	5.4
600	31	4,423	3.1	-12.0	10	5.0
550	31	5,123	-.8	-14.6	09	5.4
500	31	5,878	-5.1	-19.4	09	5.5
450	31	6,698	-9.8	-24.8	09	4.4
400	31	7,599	-14.9	-31.0	09	3.5
350	31	8,599	-21.5	-38.2	09	2.0
300	31	9,714	-30.0	-45.8	10	2.1
250	31	10,985	-40.3	-53.6	06	1.8
200	31	12,466	-52.8		02	1.6
175	31	13,315	-59.7		05	2.0
150	30	14,261	-67.3		08	2.2
125	30	15,339	-75.3		09	3.5
100	30	16,606	-82.1		08	5.8
80	30	17,865	-77.2		30	2.0
70	30	18,641	-72.5		28	8.1
60	30	19,557	-68.1		27	10.6
50	30	20,665	-64.1		27	12.9
40	30	22,043	-60.5		27	12.3
30	29	23,857	-55.5		27	4.6
25	29	25,026	-53.5		10	3.2
20	28	26,478	-50.3		09	13.4
15	28	28,374	-46.4		09	21.9
10	21	31,099	-40.2		09	27.4
7	10	33,527	-36.0			

* MEDFORD, OREG. 972 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	5.4	2.1	21	.3
1000						
950	31	589	6.6	2.0	20	.6
900	31	1,033	6.0	.1	20	2.2
850	31	1,500	3.9	-3.4	22	4.3
800	31	1,991	1.4	-6.9	24	6.2
750	31	2,508	-1.1	-11.0	26	8.4
700	31	3,056	-3.7	-16.3	27	10.6
650	31	3,638	-6.8	-19.0	27	12.2
600	31	4,258	-10.3	-21.7	27	14.3
550	31	4,923	-14.7	-26.1	27	14.9
500	31	5,637	-20.0	-30.3	27	16.4
450	30	6,413	-25.0	-34.3	27	18.1
400	30	7,259	-31.0	-38.9	27	20.2
350	30	8,195	-38.2	-43.0	27	22.4
300	30	9,235	-46.3		27	24.3
250	30	10,424	-54.5		28	26.1
200	30	11,831	-60.5		28	24.1
175	30	12,661	-61.1		28	22.5
150	30	13,623	-59.8		28	18.0
125	29	14,768	-59.3		28	15.1
100	27	16,165	-60.8		28	10.9
80	27	17,553	-60.9		29	7.2
70	26	18,382	-61.0		30	5.1
60	24	19,343	-60.4		32	3.2
50	22	20,484	-59.8		36	2.1
40	18	21,875	-58.6		02	2.6
30	17	23,689	-57.5		06	3.3
25	17	24,842	-57.1		05	4.0
20	16	26,251	-56.6		05	4.0
15	14	28,080	-55.7		07	3.8
10	9	30,690	-52.8			
7						

MERIDA, MEXICO 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	20.0	18.6	11	1.3
1000	31	115	21.7	19.3	11	4.5
950	31	561	20.6	15.1	13	7.7
900	31	1,028	19.3	8.1	13	5.7
850	31	1,518	16.8	4.3	13	2.7
800	31	2,032	13.6	1.3	28	.8
750	31	2,573	10.8	-5.2	28	1.8
700	31	3,144	7.6	-11.7	31	3.8
650	31	3,750	3.5	-14.2	31	5.1
600	31	4,395	-.6	-19.6	30	6.1
550	31	5,085	-4.7	-25.0	30	7.5
500	31	5,827	-9.8	-27.8	28	10.2
450	31	6,633	-14.9	-32.5	28	13.4
400	31	7,513	-21.4	-39.3	28	17.4
350	31	8,486	-28.8	-44.8	27	20.4
300	31	9,567	-37.2	-51.6	27	23.0
250	31	10,805	-45.7		26	27.7
200	31	12,264	-53.8		26	29.8
175	30	13,114	-58.1		26	28.2
150	28	14,073	-63.0		25	23.1
125	27	15,182	-68.6		26	18.8
100	26	16,500	-74.6		26	14.4
80	24	17,789	-77.0		29	7.1
70	24	18,560	-74.7		28	8.2
60	24	19,464	-70.7		28	3.8
50	24	20,565	-63.6		29	[illegible]
40	23	21,953	-58.9		06	3.1
30	21	23,777	-54.2		06	4.1
25	20	24,950	-52.0		02	1.2
20	19	26,406	-49.9		32	1.3
15	19	28,305	-45.7		26	5.5
10	15	31,053	-39.3			
7						

MIAMI, FLA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	18.9	15.5	06	.4
1000	31	139	20.5	16.2	09	1.4
950	31	581	18.0	12.7	13	1.7
900	31	1,042	14.8	8.9	19	1.0
850	31	1,524	12.0	4.3	26	2.1
800	31	2,030	10.0	-4.7	26	3.4
750	31	2,564	7.2	-9.4	27	4.0
700	31	3,128	3.9	-15.1	28	5.6
650	31	3,726	.5	-20.1	29	7.7
600	31	4,363	-3.5	-22.6	29	8.7
550	31	5,045	-7.9	-26.6	28	11.0
500	31	5,779	-12.8	-31.8	28	12.6
450	31	6,575	-18.1	-35.6	28	14.9
400	31	7,444	-24.8	-41.3	28	18.3
350	31	8,404	-31.8	-47.6	28	22.1
300	31	9,473	-39.8	-52.1	28	25.0
250	31	10,697	-47.7		28	30.0
200	30	12,148	-54.0		27	37.9
175	30	12,999	-57.1		27	36.6
150	30	13,964	-62.0		27	34.6
125	30	15,077	-67.3		27	31.8
100	30	16,405	-72.0		27	25.6
80	30	17,713	-73.2		27	16.8
70	30	18,499	-71.3		28	11.0
60	30	19,418	-67.7		28	6.9
50	30	20,527	-63.1		30	3.7
40	30	21,913	-59.1		03	1.8
30	30	23,736	-55.0		06	2.8
25	29	24,908	-53.3		02	1.6
20	27	26,356	-51.3		31	1.0
15	26	28,234	-48.6		26	7.0
10	20	30,956	-41.8		27	17.6
7						

MIDLAND, TEXAS 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	9.2	-.1	17	.9
1000						
950						
900	31	1,004	11.5	.8	20	2.5
850	31	1,484	12.8	-2.7	25	5.2
800	31	1,992	11.3	-6.5	27	6.5
750	31	2,527	8.0	-10.0	27	7.4
700	31	3,091	3.4	-13.4	28	8.1
650	31	3,688	-.9	-18.1	28	9.3
600	31	4,320	-5.8	-21.2	28	9.8
550	31	4,996	-10.8	-26.5	28	9.8
500	31	5,72[illegible]	-16.2	-31.5	27	11.4
450	31	6,505	-22.2	-37.0	27	13.5
400	31	7,359	-28.9	-42.5	27	15.8
350	31	8,303	-36.4	-48.8	27	16.9
300	31	9,351	-44.6		27	20.1
250	31	10,548	-53.3		27	23.1
200	31	11,96[illegible]	-59.1		27	24.3
175	30	12,8[illegible]5	-60.3		26	24.7
150	30	13,766	-61.2		26	25.5
125	30	14,892	-63.4		26	23.3
100	30	16,252	-66.6		27	17.7
80	29	17,598	-66.9		27	11.6
70	29	18,405	-66.5		26	7.3
60	29	19,342	-64.9		26	4.7
50	29	20,462	-62.3		25	1.7
40	29	21,852	-59.3		29	1.3
30	29	23,662	-57.7		35	.6
25	29	24,815	-56.8		29	2.3
20	27	26,234	-55.1		28	4.3
15	27	28,081	-52.5		27	4.9
10	27	30,732	-47.6		27	13.7

MONTERREY, MEXICO 962 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	15.6	12.7	33	.9
1000						
950	31	555	17.2	12.5	35	1.3
900	31	1,018	17.6	7.9	35	.7
850	31	1,505	16.2	2.2	18	1.4
800	31	2,019	13.5	-2.4	23	2.5
750	31	2,559	10.7	-7.0	25	4.1
700	31	3,129	6.4	-10.2	26	5.2
650	31	3,732	1.8	-14.0	27	7.1
600	31	4,371	-3.1	-17.4	27	10.1
550	31	5,053	-8.4	-21.6	27	10.9
500	31	5,785	-13.5	-29.2	26	11.7
450	31	6,578	-19.1	-34.6	26	12.7
400	31	7,444	-25.6	-39.9	26	15.4
350	31	8,401	-32.6	-45.9	26	19.7
300	31	9,466	-40.9	-52.4	25	24.4
250	31	10,682	-50.3		25	25.4
200	31	12,112	-57.8		25	30.6
175	31	12,953	-58.9		25	30.4
150	31	13,913	-62.3		25	27.8
125	31	15,028	-66.8		26	24.4
100	31	16,361	-71.1		26	19.2
80	30	17,674	-72.7		26	12.4
70	30	18,462	-70.6		26	9.4
60	30	19,379	-69.1		26	5.8
50	29	20,483	-63.0		28	1.6
40	29	21,868	-60.0		06	1.0
30	28	23,682	-56.5		08	1.9
25	28	24,842	-55.1		19	.3
20	27	26,275	-52.9		26	4.1
15	26	28,147	-49.4		26	9.3
10	15	30,834	-42.5			

MONETT, MO. 963 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	5.4	1.3	18	1.1
1000						
950	29	554	5.5	-.9	23	1.8
900	31	990	5.7	-2.2	26	6.3
850	31	1,458	5.6	-5.3	28	8.8
800	31	1,952	3.8	-9.7	29	10.2
750	31	2,474	1.2	-12.4	30	11.8
700	31	3,025	-2.1	-16.2	29	13.0
650	31	3,610	-5.8	-19.5	29	14.8
600	31	4,232	-10.2	-22.7	29	16.8
550	31	4,897	-14.8	-27.2	29	18.1
500	31	5,612	-19.3	-33.0	29	19.4
450	31	6,387	-24.8	-38.9	29	21.1
400	31	7,233	-31.3	-44.5	28	23.5
350	31	8,168	-38.3	-49.3	28	24.7
300	31	9,208	-45.8		28	26.3
250	31	10,401	-53.8		28	28.8
200	31	11,816	-58.7		28	29.3
175	31	12,655	-58.0		28	29.2
150	31	13,629	-57.6		28	27.7
125	31	14,775	-59.5		28	22.8
100	30	16,161	-61.5		28	16.2
80	29	17,541	-61.8		28	10.8
70	29	18,368	-61.6		28	8.4
60	29	19,324	-61.1		29	6.2
50	29	20,462	-59.0		30	3.3
40	28	21,866	-58.4		31	2.4
30	26	23,685	-57.1		28	2.0
25	23	24,846	-56.0		26	3.4
20	20	26,275	-53.9		26	5.8
15	19	28,143	-50.8		27	6.3
10	14	30,815	-45.7		28	8.8

MONTGOMERY, ALA. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	9.6	6.4	31	.7
1000	30	144	10.9	4.5	28	.9
950	31	569	10.4	3.2	26	2.8
900	31	1,019	10.1	-.2	27	4.7
850	31	1,493	8.2	-2.2	28	8.0
800	31	1,992	5.9	-5.7	28	10.3
750	31	2,518	3.3	-9.5	28	12.0
700	31	3,074	.0	-12.4	28	13.1
650	31	3,665	-3.2	-16.0	28	15.2
600	31	4,294	-7.0	-19.0	28	17.1
550	31	4,967	-11.5	-23.1	27	19.0
500	31	5,691	-16.4	-26.9	27	19.7
450	31	6,476	-21.8	-33.8	27	21.2
400	31	7,332	-28.1	-40.0	28	22.2
350	31	8,278	-35.7	-45.4	28	24.3
300	31	9,329	-44.1		28	27.2
250	30	10,527	-52.7		27	32.2
200	29	11,946	-58.1		27	35.8
175	29	12,789	-57.7		28	36.1
150	29	13,760	-59.0		27	33.1
125	28	14,892	-62.3		27	29.5
100	27	16,258	-65.8		27	22.4
80	26	17,613	-65.9		28	14.7
70	26	18,427	-64.9		28	11.3
60	26	19,371	-63.2		29	6.2
50	25	20,502	-60.3		31	2.9
40	25	21,902	-58.0		30	1.8
30	23	23,733	-55.4		04	1.1
25	23	24,899	-54.3		06	.1
20	23	26,336	-52.7		27	1.1
15	20	28,202	-49.9		26	4.0
10						

NASHVILLE, TENN. 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	5.5	1.1	28	.1
1000						
950	31	553	6.0	-1.4	25	3.8
900	31	995	3.9	-4.5	27	6.8
850	31	1,459	2.6	-7.9	28	8.7
800	31	1,948	1.0	-11.6	28	10.3
750	31	2,465	-1.0	-14.8	28	12.4
700	31	3,013	-3.8	-17.2	28	14.3
650	31	3,595	-6.9	-19.7	28	16.8
600	31	4,215	-10.6	-23.7	28	18.2
550	31	4,879	-15.0	-26.1	28	20.3
500	31	5,593	-19.7	-32.3	28	22.2
450	31	6,368	-24.7	-37.3	28	24.2
400	31	7,215	-30.8	-42.9	27	26.7
350	31	8,152	-37.9	-48.8	27	28.3
300	31	9,193	-46.3		27	30.4
250	31	10,382	-54.3		27	33.4
200	31	11,794	-58.2		27	33.1
175	31	12,638	-57.2		27	32.4
150	31	13,612	-57.7		28	30.5
125	31	14,758	-59.7		27	25.2
100	31	16,145	-61.7		27	18.7
80	31	17,522	-62.8		28	13.4
70	31	18,346	-61.9		28	10.4
60	31	19,301	-61.3		28	7.2
50	31	20,437	-59.5		28	4.9
40	31	21,836	-58.6		29	3.0
30	30	23,651	-57.0		28	3.3
25	30	24,807	-56.4		27	4.0
20	26	26,229	-54.9		26	3.2
15	25	28,080	-52.7		26	5.4
10	17	30,737	-48.1		27	10.5

See reference note at end of table

RAWINSONDE DATA

Average monthly values

• NOME, ALASKA 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-23.4	-29.3	04	1.7
1000	30	149	-18.6	-24.1	04	1.7
950	31	527	-17.8	-23.1	03	2.6
900	31	931	-18.2	-23.7	02	3.7
850	31	1,357	-18.7	-24.8	01	4.7
800	31	1,808	-20.1	-26.2	36	5.4
750	31	2,285	-21.5	-27.5	35	5.7
700	31	2,792	-23.8	-30.7	35	5.9
650	31	3,330	-26.3	-34.0	34	5.8
600	31	3,905	-29.2	-37.1	33	6.3
550	31	4,523	-32.8	-40.3	32	7.0
500	31	5,188	-36.7	-44.1	31	7.0
450	31	5,912	-40.8	-43.9	31	7.9
400	31	6,706	-45.0		31	8.9
350	31	7,593	-48.9		31	9.2
300	31	8,595	-51.8		30	8.6
250	31	9,779	-50.6		28	9.2
200	31	11,245	-47.7		27	9.1
175	31	12,127	-47.6		26	10.5
150	31	13,146	-47.7		26	10.7
125	31	14,348	-48.7		26	10.5
100	31	15,812	-49.4		26	11.3
80	31	17,274	-49.6		26	10.8
70	31	18,148	-50.0		25	10.6
60	31	19,155	-50.3		25	9.8
50	31	20,344	-50.7		26	9.3
40	31	21,798	-51.0		25	8.0
30	30	23,657	-52.3		25	7.9
25	28	24,839	-52.8		25	5.9
20	27	26,287	-53.0		24	3.6
15	21	28,137	-53.2		26	5.2
10	10	30,737	-54.8			

NORTH PLATTE, NEBR. 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	-2.4	-5.8	35	.9
1000						
950						
900	30	989	.9	-7.3	33	2.1
850	31	1,446	2.9	-8.3	31	5.8
800	31	1,936	1.8	-11.0	31	8.4
750	31	2,454	-1.0	-13.3	31	11.5
700	31	3,001	-4.2	-16.8	30	13.8
650	31	3,581	-8.2	-20.0	30	15.6
600	31	4,198	-12.2	-23.0	30	16.7
550	31	4,858	-16.5	-25.9	30	17.5
500	30	5,568	-21.3	-31.1	29	17.7
450	30	6,337	-26.8	-36.0	29	18.4
400	30	7,176	-33.3	-42.1	29	18.9
350	29	8,098	-40.8	-47.2	29	19.6
300	29	9,126	-48.3		29	21.7
250	29	10,310	-54.6		29	24.5
200	29	11,724	-57.7		29	24.0
175	29	12,571	-55.9		28	21.6
150	29	13,554	-55.8		29	18.7
125	28	14,717	-57.3		29	17.1
100	28	16,123	-58.9		29	11.7
80	28	17,520	-60.1		29	7.4
70	27	18,356	-60.4		30	6.1
60	27	19,319	-59.7		29	5.7
50	27	20,461	-58.8		31	3.8
40	27	21,864	-58.0		34	2.9
30	27	23,680	-57.5		02	3.4
25	24	24,836	-56.9		04	3.8
20	21	26,256	-56.0		05	3.7
15	19	28,103	-52.7		07	2.1
10	9	30,736	-48.9			

OAKLAND, CALIF. 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	10.2	8.1	29	1.0
1000	31	164	10.7	7.5	28	1.3
950	31	592	10.7	2.1	32	3.2
900	31	1,042	10.3	-4.8	32	4.6
850	31	1,517	8.9	-7.4	30	4.9
800	31	2,016	6.4	-10.0	30	5.9
750	31	2,543	3.5	-13.1	30	7.2
700	31	3,099	.6	-18.3	30	8.2
650	31	3,690	-3.0	-20.9	29	8.9
600	31	4,319	-7.0	-24.2	29	10.6
550	31	4,992	-11.8	-27.7	29	11.3
500	31	5,714	-17.1	-30.6	29	13.0
450	31	6,496	-22.7	-35.6	28	14.1
400	31	7,349	-29.4	-41.0	28	15.2
350	31	8,291	-36.7	-46.6	28	17.0
300	31	9,337	-45.0		29	19.1
250	31	10,531	-54.3		29	20.5
200	30	11,936	-61.9		29	21.6
175	30	12,759	-62.6		29	20.6
150	30	13,713	-61.6		29	17.7
125	30	14,841	-62.5		28	15.4
100	29	16,213	-63.8		29	12.2
80	29	17,583	-63.4		29	7.9
70	29	18,403	-63.6		30	5.5
60	29	19,351	-62.9		32	3.5
50	29	20,480	-60.7		01	1.7
40	29	21,874	-59.3		03	2.4
30	29	23,682	-58.0		06	2.3
25	28	24,833	-57.4		07	2.6
20	27	26,250	-56.5		07	2.9
15	25	28,083	-54.7		04	.8
10	17	30,713	-50.0		26	4.6

OMAHA, NEBR. 966 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	-.8	-4.2	36	1.5
1000						
950	30	534	.0	-4.1	35	2.6
900	30	968	1.4	-6.9	32	5.5
850	30	1,429	1.6	-9.6	32	7.2
800	30	1,916	-.4	-11.6	31	8.4
750	30	2,430	-2.9	-13.2	31	10.2
700	30	2,974	-6.0	-15.4	30	11.8
650	30	3,551	-9.4	-19.2	29	13.4
600	30	4,165	-13.1	-24.3	29	15.9
550	30	4,823	-17.5	-28.1	29	17.5
500	30	5,530	-22.5	-32.3	29	18.6
450	30	6,296	-27.8	-37.1	29	20.3
400	30	7,131	-34.4	-42.5	29	21.3
350	30	8,054	-41.0	-45.8	29	22.9
300	30	9,083	-48.4		29	24.3
250	30	10,267	-54.4		29	24.9
200	30	11,683	-57.1		29	23.9
175	30	12,533	-54.8		29	22.6
150	30	13,517	-55.7		28	19.5
125	30	14,676	-56.7		29	17.8
100	30	16,085	-58.2		29	12.9
80	30	17,486	-59.5		29	10.3
70	30	18,322	-59.7		29	8.2
60	30	19,285	-59.9		29	7.0
50	30	20,427	-58.5		30	5.0
40	30	21,832	-58.1		33	4.0
30	30	23,648	-57.1		34	2.7
25	29	24,809	-57.3		02	2.0
20	29	26,222	-56.4		35	2.3
15	28	28,057	-54.0		30	1.9
10	18	30,711	-49.5		27	6.4

+ PAGO PAGO, AMERICAN SAMOA 101[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	29.2	24.0	08	2.[illegible]
1000	31	91	27.5	20.9	08	1.9
950	31	544	23.8	18.3	07	2.[illegible]
900	31	1,014	20.6	14.8	06	2.2
850	31	1,517	17.6	10.7	05	1.6
800	31	2,023	15.3	5.6	07	1.5
750	31	2,568	12.8	1.1	07	1.2
700	31	3,144	9.4	-2.3	01	1.1
650	29	3,757	6.1	-6.1	36	.8
600	29	4,408	2.4	-10.0	35	1.2
550	29	5,107	-1.5	-14.5	35	.6
500	29	5,860	-5.8	-19.6	16	.5
450	29	6,679	-10.5	-24.8	18	.9
400	29	7,575	-16.3	-30.3	18	2.2
350	29	8,570	-22.8	-37.1	17	2.3
300	29	9,679	-31.2	-45.3	19	2.5
250	29	10,944	-41.5	-52.8	20	4.6
200	29	12,417	-53.9		21	6.9
175	29	13,261	-60.7		21	6.9
150	29	14,203	-68.0		21	8.1
125	29	15,281	-74.8		20	6.8
100	29	16,558	-79.0		15	3.6
80	28	17,833	-76.5		10	5.7
70	28	18,609	-72.9		10	7.6
60	28	19,523	-69.1		10	9.6
50	26	20,626	-65.2		09	10.6
40	26	22,001	-60.8		08	11.7
30	26	23,813	-55.7		09	14.6
25	23	24,977	-53.2		09	18.4
20	21	26,428	-48.6		09	23.4
15	18	28,337	-44.9		09	28.0
10	8	31,068	-40.4			

• PEORIA, ILL. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	-.1	-4.7	07	.2
1000						
950	31	531	.2	-4.4	26	2.7
900	31	965	-.1	-6.6	28	6.6
850	31	1,421	-1.2	-7.6	30	8.6
800	31	1,904	-2.2	-11.4	30	9.8
750	31	2,415	-4.3	-14.9	29	11.9
700	31	2,956	-7.3	-17.7	29	13.9
650	31	3,531	-10.2	-20.2	29	15.6
600	31	4,144	-13.8	-23.8	29	17.0
550	31	4,799	-18.4	-28.6	29	18.1
500	31	5,503	-23.4	-35.1	29	19.7
450	31	6,266	-28.5	-39.0	29	21.9
400	31	7,101	-34.2	-43.3	28	23.3
350	31	8,026	-40.6	-45.8	28	24.8
300	31	9,057	-47.6		28	27.2
250	31	10,244	-54.1		28	28.9
200	31	11,664	-56.1		28	27.2
175	30	12,518	-56.0		28	25.5
150	30	13,501	-55.2		28	23.7
125	30	14,662	-56.6		28	19.8
100	30	16,073	-57.8		28	14.9
80	29	17,476	-59.2		29	10.5
70	29	18,312	-59.6		28	9.4
60	26	19,277	-59.1		29	7.4
50	25	20,422	-57.9		29	4.9
40	25	21,830	-57.6		30	3.6
30	24	23,647	-57.1		29	1.8
25	24	24,803	-56.2		29	2.1
20	23	26,228	-54.6		26	1.3
15	22	28,080	-52.2		25	3.4
10	20	30,727	-48.8		26	4.8
7	16	33,099	-43.0		26	9.2
5	10	35,420	-37.4			

• PITTSBURGH, PA. 971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-.8	-5.4	26	1.7
1000						
950	31	533	-.7	-5.6	26	3.2
900	31	964	-2.6	-8.6	27	6.5
850	31	1,416	-4.0	-10.6	27	8.1
800	31	1,894	-5.0	-13.6	27	9.5
750	31	2,400	-6.7	-15.3	28	12.1
700	31	2,937	-9.1	-19.0	28	13.6
650	31	3,508	-11.7	-23.5	28	14.3
600	31	4,117	-15.2	-26.5	28	16.0
550	31	4,770	-19.2	-30.5	28	17.6
500	31	5,472	-24.1	-34.9	28	20.0
450	31	6,233	-29.0	-39.1	28	22.7
400	31	7,066	-34.7	-44.2	28	24.6
350	31	7,988	-41.5	-49.4	27	25.8
300	31	9,016	-47.9		27	28.0
250	31	10,205	-52.7		27	31.3
200	31	11,635	-55.1		28	28.6
175	31	12,488	-54.5		28	24.8
150	31	13,476	-54.6		27	22.6
125	31	14,640	-56.3		27	19.9
100	31	16,051	-58.1		28	15.6
80	31	17,455	-58.2		28	11.1
70	31	18,295	-58.6		28	9.6
60	30	19,266	-58.3		28	7.8
50	29	20,416	-57.6		28	6.2
40	28	21,826	-57.2		28	5.5
30	28	23,649	-56.7		28	4.2
25	25	24,806	-55.9		27	5.6
20	25	26,232	-54.2		27	5.7
15	21	28,099	-52.3		25	3.1
10	17	30,734	-49.1		26	6.7
7	12	33,090	-45.2		28	12.4
5						

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	28.1	24.2	06	3.2
1000	31	80	26.9	21.6	06	3.5
950	31	532	23.5	19.1	08	6.6
900	31	1,003	20.3	15.6	08	7.5
850	31	1,495	17.4	11.5	09	6.9
800	31	2,012	15.5	7.1	09	6.3
750	31	2,558	12.9	2.7	09	6.2
700	31	3,135	9.7	-1.4	09	6.1
650	31	3,747	6.3	-5.2	09	6.5
600	31	4,399	2.7	-9.1	09	6.2
550	31	5,098	-1.1	-13.0	09	5.9
500	31	5,853	-5.4	-16.7	10	5.9
450	31	6,673	-9.8	-22.4	09	5.9
400	31	7,574	-15.0	-29.9	08	5.8
350	31	8,574	-21.6	-37.0	08	5.2
300	31	9,688	-30.1	-44.7	09	5.0
250	31	10,958	-40.6	-52.8	11	5.7
200	30	12,438	-53.1		13	7.9
175	29	13,282	-60.4		13	8.8
150	29	14,225	-68.2		13	8.7
125	29	15,298	-76.0		11	7.9
100	28	16,568	-81.8		10	7.7
80	27	17,821	-78.9		29	1.0
70	27	18,591	-73.4		27	6.6
60	27	19,503	-69.2		27	10.4
50	26	20,604	-65.0		27	12.0
40	26	21,976	-61.7		27	11.0
30	24	23,773	-57.9		27	5.8
25	22	24,928	-55.7		10	1.8
20	22	26,360	-52.5		09	10.7
15	20	28,235	-49.4		09	20.3
10	15	30,939	-41.9		09	26.9

PORTLAND, MAINE 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	-3.7	-7.3	34	1.1
1000						
950	31	518	-4.6	-9.0	33	1.1
900	31	943	-5.8	-10.1	24	3.1
850	31	1,391	-6.5	-12.3	25	5.2
800	31	1,864	-7.1	-13.5	25	8.0
750	31	2,367	-8.4	-17.5	25	9.7
700	31	2,900	-10.8	-19.3	25	10.8
650	31	3,467	-13.8	-22.8	25	12.6
600	31	4,072	-16.7	-25.9	25	14.1
550	31	4,721	-20.7	-29.8	26	14.8
500	31	5,419	-25.4	-34.3	26	15.1
450	31	6,176	-30.8	-38.9	27	15.4
400	31	7,002	-36.4	-43.5	27	17.3
350	31	7,919	-42.4	-43.2	26	20.1
300	31	8,944	-48.4		27	23.1
250	31	10,132	-53.0		27	24.7
200	31	11,565	-53.8		26	22.3
175	31	12,424	-53.1		26	18.9
150	31	13,418	-53.3		26	18.7
125	31	14,589	-54.4		26	18.1
100	31	16,014	-56.0		27	15.3
80	31	17,431	-56.4		27	9.4
70	30	18,279	-56.3		27	9.5
60	30	19,257	-56.5		27	7.9
50	30	20,416	-55.7		27	6.7
40	30	21,836	-56.1		26	5.3
30	30	23,665	-55.9		26	4.7
25	30	24,828	-55.1		26	5.1
20	29	26,257	-54.0		25	5.4
15	24	28,109	-53.1		24	5.5
10	23	30,734	-50.6		25	5.9
7	9	33,093	-46.4			

• QUILLAYUTE, WASH. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	4.9	3.7	16	1.8
1000	29	138	5.3	3.7	17	2.2
950	31	551	4.0	1.5	19	6.3
900	31	989	1.5	-1.8	20	7.2
850	31	1,448	-1.0	-4.7	21	8.0
800	31	1,930	-3.1	-7.6	22	8.3
750	31	2,440	-5.4	-12.0	23	9.0
700	31	2,978	-8.0	-15.3	24	10.7
650	31	3,551	-11.0	-19.5	25	12.2
600	31	4,163	-14.3	-22.8	25	13.8
550	31	4,817	-18.6	-26.9	25	15.9
500	31	5,521	-23.6	-30.9	25	18.1
450	31	6,283	-28.9	-34.0	26	20.3
400	31	7,116	-34.7	-40.0	26	21.5
350	31	8,038	-41.5	-43.8	26	23.3
300	30	9,059	-48.7		26	24.9
250	30	10,243	-54.4		26	25.6
200	30	11,662	-56.8		27	21.9
175	30	12,511	-56.1		27	16.6
150	29	13,492	-55.4		26	14.1
125	29	14,656	-55.4		27	11.4
100	27	16,078	-56.4		28	7.5
80	25	17,486	-57.6		28	5.5
70	25	18,328	-58.0		29	3.7
60	25	19,301	-57.2		31	2.0
50	23	20,458	-57.1		34	.8
40	21	21,873	-56.5		07	2.3
30	20	23,695	-57.0		07	5.1
25	17	24,860	-56.6		07	7.4
20	14	26,262	-56.6		07	3.9
15	9	28,099	-55.7			
10	5	30,697	-53.9			

RAPID CITY, S. DAK. 901 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	-2.2	-6.6	33	1.1
1000						
950						
900	21	1,003	-2.6	-7.2	30	.4
850	31	1,436	1.5	-8.4	30	4.4
800	31	1,924	.0	-10.5	31	7.6
750	31	2,438	-3.0	-13.4	31	9.8
700	31	2,981	-6.8	-16.8	31	11.6
650	31	3,555	-10.5	-20.1	30	13.7
600	31	4,167	-14.5	-23.4	30	15.3
550	31	4,821	-18.7	-26.8	30	17.3
500	31	5,524	-23.8	-32.6	29	18.6
450	31	6,286	-28.9	-37.1	29	20.2
400	31	7,119	-34.9	-43.0	29	22.5
350	31	8,040	-42.1	-48.0	29	24.1
300	31	9,063	-49.4		29	24.7
250	31	10,242	-55.0		29	25.3
200	31	11,657	-56.8		29	23.9
175	31	12,505	-55.8		29	21.6
150	31	13,488	-55.3		29	19.2
125	30	14,655	-56.4		29	16.0
100	30	16,063	-58.4		29	13.3
80	30	17,463	-59.3		29	10.8
70	30	18,299	-59.4		30	9.0
60	30	19,266	-58.8		30	6.1
50	30	20,411	-58.8		30	4.5
40	29	21,815	-58.6		32	4.1
30	28	23,628	-57.8		35	3.4
25	27	24,777	-57.8		36	3.8
20	25	26,190	-57.6		04	4.1
15	24	28,014	-55.9		03	3.0
10	13	30,606	-51.8			
7						

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	-7.2	-11.2	01	1.6
1000						
950	30	539	-6.2	-10.2	01	2.3
900	30	963	-5.8	-11.6	35	2.6
850	30	1,411	-5.7	-13.4	33	3.6
800	30	1,886	-6.5	-15.6	32	6.3
750	30	2,389	-8.4	-16.9	31	8.5
700	30	2,922	-10.7	-20.4	30	10.1
650	30	3,489	-13.6	-22.7	30	12.2
600	30	4,094	-16.9	-26.1	30	13.8
550	30	4,742	-20.8	-29.9	30	16.0
500	30	5,440	-25.2	-33.9	30	17.7
450	30	6,198	-30.6	-39.2	30	18.3
400	30	7,023	-37.1	-43.3	30	20.0
350	30	7,937	-43.4		29	21.1
300	30	8,957	-49.8		29	21.8
250	30	10,135	-54.5		29	23.2
200	30	11,559	-54.9		29	21.0
175	30	12,417	-53.0		29	19.1
150	30	13,410	-53.9		29	16.9
125	30	14,579	-54.9		29	16.0
100	30	16,002	-55.6		29	13.3
80	30	17,419	-57.1		29	11.5
70	30	18,263	-57.3		29	9.3
60	30	19,238	-57.3		29	8.4
50	29	20,392	-57.0		29	6.3
40	28	21,804	-56.7		30	4.1
30	27	23,631	-56.2		33	3.9
25	26	24,787	-56.4		34	2.4
20	25	26,206	-56.1		01	2.7
15	23	28,039	-54.2		35	2.8
10	14	30,661	-50.7			
7						

• ST PAUL IS., ALASKA 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	-12.5	-14.2	04	2.9
1000	30	131	-12.0	-14.3	06	4.3
950	31	520	-11.3	-16.5	07	3.1
900	31	935	-10.8	-18.7	05	1.8
850	31	1,374	-11.8	-20.8	04	1.3
800	31	1,837	-13.8	-22.6	31	.6
750	31	2,325	-15.8	-25.9	30	1.4
700	31	2,843	-18.2	-27.8	29	3.2
650	31	3,393	-21.4	-30.6	30	3.5
600	31	3,979	-24.8	-33.8	29	3.9
550	31	4,607	-28.5	-37.2	29	5.2
500	31	5,285	-32.5	-41.6	28	6.3
450	31	6,021	-36.7	-42.8	29	7.6
400	31	6,829	-41.5	-45.6	28	8.4
350	31	7,728	-46.5		28	8.7
300	31	8,738	-50.9		28	10.6
250	31	9,920	-51.9		28	10.4
200	31	11,376	-48.8		27	8.9
175	31	12,254	-48.3		27	8.6
150	31	13,271	-48.1		26	8.4
125	31	14,471	-49.1		26	8.0
100	31	15,931	-50.3		26	6.9
80	30	17,381	-50.9		25	5.9
70	30	18,251	-51.0		25	5.5
60	30	19,254	-51.1		24	5.0
50	30	20,439	-51.6		25	3.6
40	30	21,886	-51.9		23	2.5
30	30	23,749	-52.4		24	1.1
25	28	24,926	-52.9		17	.2
20	26	26,365	-53.0		01	.3
15	20	28,235	-52.4		30	1.0
10	7	30,928	-49.3			
7	5	33,391	-47.5			

SALEM, ILL. 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	2.7	-.3	24	.4
1000						
950	31	537	3.3	-2.8	26	4.1
900	31	974	2.4	-5.2	28	7.7
850	31	1,436	1.6	-7.5	29	9.9
800	31	1,924	.0	-11.2	29	11.0
750	31	2,439	-2.3	-14.4	29	12.8
700	31	2,983	-5.4	-18.1	29	14.2
650	31	3,561	-8.9	-20.7	29	15.9
600	31	4,177	-12.9	-24.8	29	17.3
550	31	4,835	-17.0	-29.4	29	19.1
500	31	5,545	-21.6	-35.0	29	21.2
450	31	6,314	-26.6	-40.1	28	23.1
400	31	7,155	-32.6	-45.3	28	22.8
350	30	8,081	-39.6	-48.7	28	24.2
300	30	9,115	-47.3		28	26.7
250	30	10,301	-54.6		27	28.1
200	30	11,719	-56.9		27	27.1
175	30	12,567	-56.1		27	26.0
150	30	13,547	-56.6		28	24.9
125	30	14,702	-57.7		28	19.2
100	30	16,103	-59.7		27	15.7
80	30	17,496	-60.2		27	9.5
70	30	18,328	-60.7		28	8.7
60	30	19,289	-60.0		29	6.6
50	30	20,431	-58.7		29	4.3
40	29	21,836	-58.0		29	4.4
30	28	23,652	-57.3		28	2.4
25	28	24,807	-56.5		28	3.1
20	27	26,227	-55.3		26	4.9
15	26	28,076	-52.2		26	5.7
10	20	30,715	-49.1		27	8.8
7	5	33,074	-45.3			

SALEM, OREG. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	6.0	4.1	18	2.5
1000	31	154	7.5	5.1	19	2.8
950	31	576	6.2	2.7	21	5.0
900	31	1,018	4.0	-.8	22	7.2
850	31	1,481	1.6	-4.9	23	9.0
800	31	1,967	-.9	-9.7	24	10.7
750	31	2,481	-3.3	-14.0	25	11.6
700	31	3,024	-6.1	-17.6	26	12.9
650	31	3,601	-9.0	-20.3	26	14.4
600	31	4,217	-12.7	-25.5	26	15.9
550	31	4,876	-16.6	-28.9	26	17.7
500	31	5,585	-21.5	-32.5	27	20.3
450	31	6,353	-27.1	-35.0	27	22.2
400	31	7,192	-33.1	-38.3	27	23.3
350	31	8,121	-39.8	-40.6	27	26.2
300	31	9,154	-47.4		27	27.4
250	31	10,340	-54.6		27	25.7
200	31	11,751	-59.0		27	24.2
175	31	12,589	-58.9		27	21.5
150	31	13,560	-57.4		27	17.1
125	31	14,711	-58.3		27	14.3
100	31	16,112	-59.3		28	11.3
80	30	17,507	-59.2		29	5.8
70	29	18,346	-59.1		30	4.1
60	28	19,313	-59.1		31	3.4
50	27	20,459	-57.9		36	1.5
40	27	21,864	-58.0		03	2.9
30	24	23,681	-57.1		06	4.8
25	23	24,837	-56.8		06	4.7
20	19	26,248	-56.7		06	4.1
15	16	28,067	-56.5		06	4.2
10	6	30,642	-53.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH 8[illegible]2 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	4.0	-2.8	16	1.8
1000						
950						
900						
850	31	1,499	6.6	-6.5	19	1.5
800	31	1,994	3.9	-8.6	24	2.6
750	31	2,515	.0	-10.6	27	5.0
700	31	3,064	-4.0	-14.8	29	8.1
650	31	3,644	-7.9	-18.1	29	10.0
600	31	4,262	-11.6	-22.4	29	11.7
550	31	4,924	-15.8	-26.8	29	13.9
500	31	5,635	-20.8	-31.7	29	16.3
450	31	6,406	-26.4	-36.0	29	18.9
400	31	7,247	-32.2	-41.2	29	21.0
350	31	8,179	-39.2	-45.9	29	22.4
300	31	9,215	-46.8		29	23.9
250	31	10,403	-54.4		30	25.5
200	31	11,814	-59.4		29	26.0
175	31	12,649	-59.0		29	21.9
150	31	13,618	-58.5		29	17.2
125	29	14,765	-59.6		28	15.6
100	29	16,157	-60.8		28	11.6
80	28	17,543	-61.6		29	9.0
70	28	18,373	-60.9		30	5.5
60	28	19,331	-60.7		30	4.0
50	28	20,458	-59.5		33	1.7
40	28	21,868	-58.6		35	.7
30	27	23,682	-57.3		02	1.9
25	27	24,835	-57.1		04	2.2
20	26	26,247	-56.9		05	2.6
15	23	28,067	-55.3		05	2.3
10	18	30,686	-52.0		31	2.0
7						
5						
4						

SAN DIEGO, CALIF. 10[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	11.2	8.9	06	.8
1000						
950	31	562	12.1	4.9	35	.7
900	31	1,017	15.0	-5.2	35	1.2
850	31	1,530	14.2	-9.6	32	2.5
800	31	2,009	11.2	-12.0	31	2.9
750	31	2,544	7.9	-14.7	31	3.6
700	31	3,108	4.1	-18.0	31	4.4
650	31	3,706	.1	-21.6	31	5.8
600	31	4,342	-4.3	-24.7	31	6.5
550	31	5,020	-9.6	-28.5	31	7.1
500	31	5,748	-15.5	-32.8	31	7.5
450	31	6,534	-21.5	-37.3	30	8.0
400	31	7,391	-28.3	-42.3	31	8.6
350	31	8,337	-35.7	-49.1	31	9.8
300	31	9,387	-44.2		30	9.9
250	31	10,584	-53.7		30	11.5
200	31	11,938	-62.0		30	14.2
175	31	12,813	-62.4		29	13.7
150	31	13,766	-62.1		28	16.6
125	31	14,890	-63.7		28	16.3
100	31	16,252	-65.7		27	12.5
80	31	17,605	-66.2		28	9.0
70	31	18,416	-65.6		29	5.7
60	31	19,354	-65.3		29	3.3
50	31	20,472	-62.1		32	1.6
40	30	21,864	-59.2		02	1.5
30	30	23,675	-57.5		03	1.3
25	29	24,830	-56.5		04	1.4
20	29	26,252	-54.6		29	1.0
15	29	28,106	-52.2		27	4.5
10	28	30,756	-47.2		27	13.8

SAN JUAN, P. R. 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	23.0	18.1	15	1.2
1000	31	133	22.1	18.1	10	2.5
950	31	578	19.2	15.8	09	4.6
900	31	1,042	16.3	11.4	09	4.6
850	31	1,526	13.2	7.0	10	3.7
800	31	2,034	10.7	3.0	09	2.9
750	31	2,570	8.2	-2.7	07	.7
700	31	3,137	5.2	-8.8	29	.9
650	31	3,739	1.9	-14.7	28	2.0
600	31	4,381	-1.0	-21.7	29	4.1
550	31	5,070	-4.7	-25.2	28	5.7
500	31	5,813	-9.5	-30.4	28	8.7
450	31	6,619	-14.9	-34.1	29	12.2
400	31	7,500	-20.5	-40.4	28	17.6
350	30	8,480	-26.7	-44.8	28	23.5
300	30	9,573	-33.8	-50.4	28	29.9
250	30	10,826	-43.5		27	32.5
200	29	12,291	-54.7		27	32.4
175	28	13,133	-60.5		27	30.1
150	28	14,080	-66.5		28	26.8
125	28	15,168	-72.2		28	21.5
100	28	16,465	-77.0		29	14.7
80	28	17,740	-78.1		29	9.1
70	28	18,508	-75.6		29	6.8
60	28	19,411	-71.0		29	3.6
50	27	20,505	-64.9		31	2.6
40	27	21,883	-60.0		03	2.4
30	25	23,697	-55.1		08	4.2
25	25	24,871	-51.6		09	3.4
20	24	26,334	-48.5		12	3.0
15	23	28,238	-46.2		16	2.2
10	12	30,929	-41.8			
7	5	33,318	-38.8			

*** SAULT STE MARIE, MICH. 987 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-9.9	-14.2	05	1.7
1000						
950	31	518	-9.4	-15.1	05	3.0
900	31	936	-9.6	-14.5	03	2.2
850	31	1,378	-9.6	-14.6	35	3.2
800	31	1,846	-9.8	-17.3	33	4.1
750	31	2,344	-10.7	-18.7	31	5.4
700	31	2,873	-12.6	-22.0	31	7.0
650	31	3,436	-15.4	-24.7	29	8.8
600	31	4,036	-18.9	-27.2	29	9.6
550	31	4,679	-23.1	-30.4	29	11.1
500	31	5,371	-27.6	-35.7	28	13.3
450	31	6,121	-32.6	-40.8	28	14.6
400	31	6,941	-38.3	-43.9	28	16.6
350	31	7,851	-43.9		28	20.3
300	31	8,870	-49.6		28	22.4
250	31	10,053	-53.3		27	24.0
200	31	11,492	-51.9		28	21.9
175	31	12,358	-51.8		28	19.6
150	31	13,358	-51.7		28	18.9
125	31	14,541	-52.2		28	16.2
100	30	15,983	-53.8		28	14.9
80	30	17,412	-55.0		28	13.2
70	30	18,265	-55.4		29	12.5
60	30	19,248	-55.4		29	10.5
50	30	20,410	-55.4		29	9.1
40	30	21,835	-55.2		29	6.8
30	29	23,674	-55.3		30	4.5
25	28	24,842	-54.2		30	2.9
20	26	26,281	-54.0		28	1.2
15	21	28,139	-52.7		27	3.0
10	16	30,780	-50.1		21	1.3
7	10	33,119	-47.5			
5	6	35,321	-47.2			
4	5	36,806	-44.8			

*** SHEMYA, ALASKA 1003 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	.0	-2.9	10	2.0
1000						
950	31	470	-3.9	-5.8	13	4.0
900	31	894	-7.1	-8.5	15	4.1
850	31	1,338	-9.7	-12.7	17	4.0
800	31	1,804	-11.7	-16.8	18	3.7
750	31	2,297	-13.8	-22.7	18	4.4
700	31	2,818	-16.5	-25.3	19	4.9
650	31	3,373	-19.2	-28.0	20	5.2
600	31	3,964	-22.6	-31.9	20	4.8
550	31	4,598	-26.4	-35.6	21	5.9
500	31	5,281	-30.6	-39.5	22	7.0
450	31	6,022	-35.4	-42.4	22	5.1
400	31	6,833	-40.9	-44.6	23	5.8
350	31	7,733	-46.4		24	7.0
300	31	8,742	-51.4		25	8.1
250	31	9,920	-53.1		25	9.0
200	30	11,368	-50.1		25	9.2
175	30	12,241	-49.9		24	8.7
150	30	13,249	-49.8		24	7.6
125	30	14,441	-50.4		24	7.2
100	30	15,893	-51.4		24	5.9
80	29	17,338	-52.4		23	5.3
70	29	18,202	-52.2		23	5.1
60	29	19,200	-52.4		22	3.7
50	29	20,378	-52.4		21	3.5
40	28	21,818	-52.8		21	2.9
30	27	23,676	-53.0		16	1.6
25	26	24,849	-53.4		14	1.5
20	24	26,270	-54.2		11	2.5
15	18	28,134	-53.7		10	2.5
10	10	30,750	-52.9			
7	7	33,092	-49.4			

*** SHREVEPORT, LA. 1006 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	10.2	7.7	15	.7
1000						
950	31	558	11.4	3.0	21	3.1
900	31	1,010	10.3	-1.4	26	4.2
850	31	1,485	9.6	-7.0	28	6.5
800	31	1,987	7.7	-10.7	28	8.1
750	31	2,515	4.6	-12.7	28	9.7
700	31	3,074	1.1	-16.5	28	11.5
650	31	3,666	-2.7	-19.5	28	13.0
600	31	4,295	-6.9	-23.8	28	14.3
550	31	4,968	-11.6	-27.2	27	15.3
500	31	5,692	-16.4	-32.0	27	17.2
450	31	6,475	-22.0	-37.3	27	19.5
400	31	7,331	-28.4	-43.7	27	21.3
350	31	8,276	-36.1	-49.9	27	22.7
300	31	9,325	-44.4		27	25.7
250	31	10,523	-52.8		27	29.2
200	30	11,937	-58.6		27	32.0
175	29	12,774	-59.1		27	32.8
150	29	13,738	-60.2		27	33.7
125	29	14,868	-62.9		27	27.8
100	27	16,230	-65.1		27	21.4
80	23	17,580	-66.5		27	15.9
70	21	18,394	-65.6		26	12.2
60	20	19,335	-63.9		28	6.5
50	20	20,461	-61.1		28	3.2
40	18	21,854	-58.9		27	3.5
30	18	23,668	-57.2		31	1.2
25	18	24,824	-56.3		27	2.5
20	18	26,246	-54.7		26	4.3
15	16	28,101	-50.3		26	5.6
10	14	30,767	-47.0		27	10.5
7	8	33,149	-39.2			

SPOKANE, WASH. 931 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	720	2.0	-1.1	18	2.7
1000						
950						
900	31	994	3.2	-2.0	22	5.2
850	31	1,457	1.8	-6.8	24	7.4
800	31	1,944	-1.1	-8.7	25	8.6
750	31	2,455	-4.7	-11.6	25	9.2
700	31	2,995	-8.4	-16.7	26	10.4
650	31	3,566	-11.8	-20.2	27	11.3
600	31	4,175	-15.2	-23.5	27	13.1
550	31	4,827	-19.3	-27.5	27	15.3
500	31	5,530	-23.8	-33.4	27	17.8
450	31	6,292	-28.8	-37.7	28	19.1
400	31	7,125	-34.6	-41.7	28	21.7
350	31	8,048	-41.3	-46.6	28	24.8
300	31	9,075	-48.7		28	27.9
250	31	10,255	-55.4		29	30.8
200	31	11,669	-56.8		28	26.0
175	31	12,517	-55.9		28	21.0
150	31	13,501	-54.7		28	17.6
125	31	14,665	-55.8		28	15.5
100	30	16,086	-57.1		29	11.8
80	29	17,493	-57.8		29	9.0
70	29	18,337	-57.8		29	6.6
60	29	19,310	-57.6		29	5.2
50	29	20,463	-56.6		32	4.0
40	29	21,878	-56.7		34	2.8
30	29	23,704	-56.3		03	3.5
25	29	24,861	-56.5		04	3.6
20	29	26,278	-56.4		03	4.0
15	24	28,118	-56.2		06	6.1
10	7	30,696	-53.7			

*** SWAN ISLAND, W. I. 1012 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	24.7	20.3	09	4.1
1000	31	113	24.3	20.4	09	4.7
950	31	561	20.6	18.3	10	6.1
900	31	1,028	17.9	12.3	10	5.1
850	31	1,515	14.9	7.0	09	3.3
800	31	2,026	12.3	.9	07	2.4
750	31	2,565	9.9	-3.9	05	2.3
700	31	3,136	7.8	-9.3	01	1.6
650	31	3,744	5.1	-15.1	32	2.3
600	31	4,393	1.7	-18.4	31	3.3
550	31	5,088	-2.8	-22.2	30	5.1
500	31	5,836	-7.7	-25.9	30	8.4
450	31	6,648	-13.0	-30.6	29	11.2
400	31	7,533	-19.9	-35.7	28	13.8
350	31	8,512	-27.3	-41.6	28	16.5
300	30	9,604	-35.4	-48.4	27	21.4
250	30	10,849	-44.4		25	26.5
200	30	12,310	-54.8		25	28.8
175	30	13,154	-59.8		25	26.9
150	30	14,106	-65.1		26	22.3
125	29	15,197	-72.0		26	16.8
100	29	16,493	-77.3		27	9.8
80	29	17,766	-78.4		28	6.1
70	29	18,533	-75.8		29	3.8
60	28	19,432	-71.8		29	3.2
50	28	20,523	-65.7		30	2.0
40	28	21,904	-59.1		35	1.5
30	28	23,730	-54.1		07	2.5
25	27	24,908	-50.9		07	3.1
20	25	26,368	-48.2		08	2.6
15	20	28,278	-45.2		10	3.5
10	17	31,013	-40.3		13	5.5

TAMPA, FLA. 1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	14.9	12.4	09	1.1
1000	31	141	17.1	12.0	10	1.4
950	31	578	15.2	7.8	20	1.1
900	31	1,035	13.4	2.2	25	3.5
850	31	1,514	11.5	-4.4	26	5.1
800	31	2,019	9.4	-8.4	27	6.2
750	31	2,551	6.4	-12.0	27	7.6
700	31	3,113	2.9	-16.3	28	8.6
650	31	3,709	-.6	-18.8	28	10.6
600	31	4,344	-4.5	-21.6	28	11.9
550	31	5,023	-9.2	-25.5	28	13.0
500	30	5,753	-14.4	-31.2	28	14.6
450	30	6,544	-20.0	-37.1	28	16.9
400	30	7,406	-26.5	-43.1	28	19.3
350	30	8,360	-33.3	-49.4	28	22.5
300	30	9,421	-41.2	-54.0	28	25.2
250	30	10,635	-50.1		28	29.3
200	30	12,071	-55.3		27	36.4
175	30	12,920	-57.5		27	35.2
150	30	13,886	-61.0		27	34.3
125	29	15,010	-66.1		27	31.1
100	29	16,346	-70.5		27	24.1
80	28	17,671	-71.4		28	17.4
70	28	18,461	-70.4		27	11.6
60	26	19,387	-66.3		29	3.9
50	26	20,500	-62.9		31	2.9
40	26	21,889	-58.9		06	3.2
30	25	23,711	-55.8		04	2.8
25	25	24,876	-54.2		06	1.8
20	25	26,313	-52.5		31	.1
15	24	28,185	-49.3		27	4.0
10	19	30,881	-43.9		27	13.6
7	5	33,313	-38.4			

TOPEKA, KANS. 983 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	268	3.6	-1.0	36	1.9
1000						
950	31	540	3.1	-2.0	29	1.8
900	31	979	3.8	-4.2	28	5.1
850	31	1,444	3.6	-6.6	29	7.4
800	31	1,935	2.1	-8.8	29	9.4
750	31	2,454	-.7	-11.7	29	10.7
700	31	3,002	-3.9	-15.9	29	12.7
650	31	3,582	-7.8	-19.5	30	14.2
600	31	4,200	-11.7	-23.8	29	15.5
550	31	4,861	-16.2	-28.0	29	17.1
500	31	5,572	-21.2	-33.1	29	18.8
450	31	6,341	-26.8	-38.2	29	20.5
400	31	7,180	-33.1	-42.8	29	23.2
350	31	8,108	-39.9	-48.1	29	23.7
300	31	9,142	-47.4		29	24.7
250	31	10,329	-54.1		28	27.6
200	31	11,743	-58.0		28	25.0
175	31	12,586	-57.3		28	24.9
150	31	13,564	-56.4		28	21.5
125	31	14,716	-58.4		28	18.6
100	31	16,116	-59.7		28	13.7
80	31	17,507	-60.9		29	9.0
70	31	18,338	-60.8		29	7.0
60	31	19,297	-60.4		29	5.8
50	30	20,437	-59.5		30	4.1
40	30	21,839	-58.2		31	2.6
30	30	23,652	-57.9		36	1.9
25	30	24,803	-57.4		35	1.8
20	30	26,219	-55.6		31	1.5
15	29	28,064	-53.4		28	3.7
10	18	30,687	-50.9		27	6.9

+ TRUK, CAROLINE IS. 10[illegible]0 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.3	24.2	06	3.9
1000	31	94	27.4	21.0	07	4.4
950	31	547	23.9	18.9	08	6.7
900	31	1,019	21.0	15.2	09	7.2
850	31	1,512	18.0	10.6	09	6.7
800	31	2,030	15.9	6.9	09	6.9
750	31	2,577	13.2	3.1	09	6.4
700	31	3,154	10.1	-.8	10	5.6
650	31	3,767	6.8	-5.0	10	5.6
600	31	4,421	3.1	-8.8	10	6.7
550	31	5,121	-.7	-13.5	09	6.4
500	31	5,876	-4.8	-18.8	09	6.3
450	31	6,698	-9.4	-25.0	09	7.1
400	31	7,599	-14.7	-31.1	09	7.4
350	31	8,600	-21.5	-38.2	09	7.1
300	31	9,715	-30.0	-45.7	10	5.6
250	31	10,986	-40.4	-54.2	11	5.8
200	30	12,465	-53.0		13	8.1
175	30	13,312	-60.0		13	9.1
150	30	14,257	-67.7		13	9.3
125	30	15,333	-75.8		11	9.7
100	30	16,598	-81.8		10	9.6
80	30	17,857	-78.3		03	1.1
70	30	18,630	-73.0		28	4.8
60	30	19,544	-68.8		27	9.2
50	29	20,546	[illegible]		27	11.1
40	29	22,024	-60.9		27	10.7
30	29	23,829	-56.6		28	4.4
25	28	24,992	-54.3		09	2.2
20	27	26,436	-53.9		10	11.8
15	27	28,325	-47.3		09	20.9
10	23	31,040	[illegible]		09	18.8

*** TUCSON, ARIZ. 924 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	11.2	-4.6	16	3.0
1000						
950						
900	31	1,011	17.6	-3.8	19	1.4
850	31	1,497	15.4	-6.4	30	1.9
800	31	2,007	11.6	-8.8	31	3.1
750	31	2,542	7.3	-11.1	29	3.9
700	31	3,105	2.8	-14.1	27	4.5
650	31	3,700	-1.5	-16.8	27	4.9
600	31	4,331	-6.2	-22.0	28	5.9
550	31	5,006	-10.6	-27.3	29	7.1
500	31	5,732	-16.0	-32.0	29	8.4
450	31	6,517	-21.9	-37.0	29	9.4
400	31	7,372	-28.5	-42.4	29	10.8
350	31	8,318	-35.8	-49.3	28	10.6
300	31	9,367	-44.4		28	11.1
250	31	10,564	-53.4		29	12.1
200	31	11,975	-60.6		28	14.9
175	31	12,806	-60.6		27	18.8
150	31	13,764	-61.2		27	19.0
125	31	14,891	-63.6		27	18.3
100	31	16,251	-65.9		27	13.9
80	31	17,602	-66.7		28	9.1
70	30	18,411	-66.2		28	6.1
60	28	19,346	-65.3		27	4.1
50	28	20,465	-61.7		29	2.3
40	27	21,855	-59.5		33	1.2
30	27	23,662	-57.9		02	1.3
25	27	24,815	-56.8		32	1.2
20	24	26,238	-54.6		29	1.9
15	21	28,088	-53.1		28	4.6
10	[illegible]	30,768	-45.1		27	14.6
7	17	33,190	-39.3			

*** VANDENBERG AFB, CALIF. 1006 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	9.8	8.1	34	1.9
1000	31	150	10.3	7.9	36	2.5
950	31	579	12.8	2.9	02	6.5
900	31	1,034	13.0	-1.4	01	6.5
850	31	1,512	11.4	-5.0	36	6.1
800	31	2,017	9.6	-8.9	34	6.1
750	31	2,550	6.9	-12.0	33	6.6
700	31	3,112	3.2	-14.0	32	7.2
650	31	3,709	-.6	-17.8	31	7.8
600	31	4,343	-4.9	-21.3	30	8.3
550	31	5,021	-9.8	-25.9	30	9.0
500	31	5,748	-15.6	-29.6	30	9.6
450	31	6,534	-21.5	-34.2	30	10.3
400	31	7,390	-28.3	-39.5	30	11.5
350	31	8,336	-35.9	-46.3	30	12.2
300	31	9,385	-44.6		30	12.9
250	31	10,581	-54.0		30	13.9
200	31	11,982	-62.5		30	14.8
175	31	12,804	-63.2		29	15.0
150	31	13,753	-62.6		29	15.3
125	31	14,876	-63.8		29	13.6
100	31	16,238	-65.5		29	11.4
80	31	17,594	-65.6		29	7.7
70	31	18,407	-65.2		30	5.0
60	31	19,348	-64.1		31	3.5
50	31	20,470	-62.0		36	1.9
40	31	21,857	-60.2		05	1.2
30	31	23,662	-58.1		02	1.9
25	31	24,813	-57.4		07	1.5
20	30	26,228	-56.0		04	.6
15	27	28,069	-53.8		29	4.0
10	24	30,695	-49.5		27	9.1
7	17	33,033	-45.5			

VICTORIA, TEXAS 1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	15.3	12.8	06	.9
1000	31	119	16.6	12.9	11	1.4
950	31	556	15.5	9.5	17	3.7
900	31	1,015	15.2	2.9	20	3.9
850	31	1,498	13.5	-1.8	23	4.0
800	31	2,006	10.9	-6.3	26	5.0
750	31	2,541	7.7	-10.7	27	5.9
700	31	3,105	3.7	-13.8	28	6.8
650	31	3,702	-.3	-18.4	28	8.4
600	31	4,338	-4.5	-22.7	28	10.0
550	31	5,016	-9.3	-26.6	27	11.2
500	31	5,745	-14.8	-32.3	27	12.5
450	31	6,534	-20.5	-37.7	27	13.8
400	31	7,395	-27.1	-42.8	27	15.7
350	31	8,346	-34.6	-48.7	27	19.5
300	31	9,402	-42.6		27	23.8
250	31	10,610	-51.3		27	29.1
200	31	12,036	-58.3		26	34.7
175	31	12,874	-59.0		26	35.4
150	31	13,837	-61.5		26	32.4
125	30	14,958	-65.5		26	29.3
100	30	16,303	-69.0		27	21.7
80	29	17,632	-69.9		27	12.6
70	29	18,427	-69.2		27	9.0
60	27	19,355	-66.8		27	5.8
50	27	20,468	-62.3		29	2.6
40	27	21,857	-59.4		02	.9
30	26	23,670	-56.5		03	.2
25	26	24,829	-55.8		27	1.7
20	26	26,256	-53.4		26	3.8
15	25	28,121	-50.0		27	7.1
10	16	30,810	-44.3			

*** WAKE IS., PACIFIC AREA 1014 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	23.9	19.2	06	4.4
1000	31	127	22.7	17.0	06	5.0
950	31	572	19.1	15.6	07	4.5
900	31	1,035	16.2	12.3	06	2.4
850	31	1,520	13.6	7.9	03	.4
800	31	2,029	11.5	2.8	27	2.1
750	31	2,567	10.0	-5.9	27	4.0
700	31	3,139	8.1	-11.2	27	5.3
650	31	3,747	4.9	-14.6	27	6.9
600	31	4,395	1.1	-19.0	27	8.2
550	31	5,090	-2.7	-22.0	27	8.8
500	31	5,838	-7.4	-26.0	27	9.9
450	31	6,651	-12.5	-30.3	27	10.8
400	31	7,540	-18.4	-35.0	27	13.0
350	31	8,528	-24.5	-40.6	27	16.6
300	31	9,630	-32.4	-48.1	28	19.7
250	31	10,891	-41.8		28	21.8
200	30	12,366	-53.5		28	22.4
175	30	13,212	-59.9		28	22.3
150	29	14,156	-67.1		27	20.5
125	27	15,238	-74.5		27	18.7
100	22	16,506	-80.7		27	15.1
80	20	17,755	-80.0		27	8.5
70	19	18,518	-76.9		26	5.6
60	19	19,417	-71.2		26	4.3
50	19	20,514	-64.8		25	1.8
40	19	21,886	-61.6		11	.5
30	19	23,697	-55.2		05	1.4
25	19	24,867	-53.0		04	1.0
20	19	26,317	-49.6		01	.8
15	19	28,218	-46.3		28	2.7
10	11	30,961	-40.9			
7	5	33,414	-36.2			

See reference note at end of table.

RAWINSONDE DATA

Average monthly values

*** WALLOPS IS., VA. NASA — 1015 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	4.2	.3	34	.6
1000	29	132	4.2	-.9	26	1.0
950	30	543	3.8	-1.9	26	5.5
900	30	981	2.3	-4.4	27	8.9
850	30	1,442	.5	-7.7	27	10.8
800	30	1,927	-1.4	-8.8	26	11.5
750	30	2,439	-3.7	-11.0	26	12.6
700	30	2,982	-6.3	-13.6	26	14.7
650	30	3,559	-8.8	-17.4	26	16.4
600	30	4,176	-12.0	-21.9	27	18.9
550	30	4,837	-16.2	-25.4	27	21.4
500	30	5,547	-20.9	-30.1	27	22.7
450	30	6,318	-26.3	-35.4	27	24.0
400	30	7,158	-32.6	-40.3	27	26.1
350	30	8,088	-39.7	-46.0	27	28.1
300	30	9,122	-47.4		27	30.3
250	30	10,309	-54.2		27	31.1
200	29	11,730	-57.6		27	31.3
175	28	12,570	-55.9		27	29.3
150	28	13,550	-56.4		27	26.2
125	28	14,700	-59.1		27	22.4
100	28	16,096	-59.7		27	18.1
80	28	17,488	-60.2		27	11.8
70	28	18,323	-59.8		27	9.3
60	28	19,286	-59.8		27	7.2
50	28	20,430	-58.1		27	5.0
40	28	21,837	-57.4		27	3.6
30	28	23,662	-56.2		27	3.8
25	27	24,821	-55.5		27	3.2
20	25	26,249	-54.6		26	3.0
15	23	28,096	-52.8		25	3.7
10	22	30,744	-48.0		26	9.3
7	19	33,119	-42.3		26	13.8
5	7	35,425	-37.5			

WASHINGTON DULLES INT. AP — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	2.0	-3.3	30	1.3
1000						
950	31	538	1.5	-4.6	28	3.8
900	31	972	.2	-7.0	28	6.8
850	31	1,430	-1.1	-8.1	28	9.3
800	31	1,912	-3.0	-11.2	28	10.5
750	31	2,472	-5.0	-13.5	28	12.4
700	31	2,962	-7.4	-17.8	27	13.5
650	31	3,537	-9.5	-22.8	27	15.6
600	31	4,152	-12.8	-24.7	27	17.3
550	31	4,810	-17.0	-27.8	27	19.4
500	31	5,519	-21.7	-32.4	27	21.1
450	31	6,288	-26.8	-38.6	27	23.5
400	31	7,127	-33.1	-44.0	27	26.0
350	31	8,054	-40.3	-47.2	27	27.9
300	30	9,078	-47.4		27	29.9
250	30	10,267	-53.1		27	32.1
200	30	11,692	-55.9		27	29.0
175	30	12,545	-54.4		27	27.8
150	30	13,532	-55.0		27	25.3
125	30	14,692	-57.0		27	22.3
100	30	16,099	-58.5		27	17.3
80	30	17,500	-59.1		27	12.4
70	30	18,338	-58.8		27	10.2
60	29	19,302	-58.5		27	7.8
50	29	20,452	-57.4		27	6.1
40	29	21,864	-57.0		27	5.0
30	29	23,690	-56.0		27	4.9
25	28	24,852	-55.2		26	4.7
20	27	26,287	-54.1		26	4.1
15	23	28,143	-52.4		27	4.4
10	16	30,781	-47.7		25	9.1
7	7	33,145	-44.8			
5						

WAYCROSS, GA. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	44	10.2	7.6	27	.8
1000	29	141	12.5	6.9	26	1.0
950	31	565	12.1	3.1	26	3.2
900	31	1,017	10.2	.1	26	4.8
850	31	1,491	8.7	-3.5	26	7.0
800	31	1,990	6.5	-9.6	27	8.8
750	31	2,517	3.9	-12.2	27	9.9
700	31	3,074	.5	-16.1	27	11.7
650	31	3,665	-2.9	-19.8	27	13.4
600	31	4,295	-6.8	-24.9	27	15.2
550	31	4,968	-11.2	-29.1	27	16.8
500	31	5,692	-16.5	-31.5	27	18.2
450	31	6,476	-21.8	-37.3	27	19.8
400	31	7,332	-28.3	-44.6	27	22.1
350	31	8,279	-35.5	-49.3	27	23.9
300	31	9,331	-43.6		27	27.0
250	31	10,535	-51.7		28	31.1
200	31	11,961	-56.8		27	33.5
175	31	12,805	-58.2		27	35.6
150	31	13,771	-60.0		27	35.4
125	31	14,901	-63.4		27	30.8
100	31	16,259	-67.0		27	23.9
80	31	17,601	-67.8		27	16.6
70	31	18,408	-65.6		27	11.7
60	31	19,349	-64.2		28	7.1
50	31	20,473	-61.0		28	3.6
40	31	21,867	-58.8		33	1.6
30	31	23,687	-56.2		03	1.4
25	31	24,849	-54.9		03	.9
20	28	26,274	-53.4		26	1.2
15	27	28,135	-50.9		27	4.3
10	21	30,799	-45.9		26	12.8
7	13	33,181	-41.0			
5						

WINNEMUCCA, NEV. — 871 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,312	-.2	-5.3	21	1.0
1000						
950						
900						
850	29	1,511	6.7	-4.4	22	1.8
800	29	2,006	4.0	-7.2	25	3.8
750	29	2,527	.2	-10.0	26	5.3
700	29	3,077	-3.3	-15.1	27	7.3
650	29	3,659	-6.7	-18.9	28	8.8
600	29	4,280	-10.8	-21.9	28	10.8
550	29	4,943	-15.3	-27.1	28	12.6
500	29	5,655	-20.5	-32.6	29	13.4
450	29	6,428	-25.5	-36.6	29	14.2
400	29	7,271	-31.8	-40.2	29	16.0
350	29	8,204	-38.8	-44.0	29	17.7
300	29	9,242	-46.6		29	20.9
250	29	10,429	-55.2		29	21.4
200	29	11,832	-61.0		29	19.9
175	28	12,661	-60.7		28	17.4
150	28	13,623	-59.6		28	16.3
125	27	14,763	-60.3		28	13.7
100	26	16,146	-61.1		29	9.3
80	24	17,529	-61.3		29	6.7
70	24	18,358	-61.1		30	5.3
60	24	19,316	-60.9		32	3.5
50	24	20,453	-59.7		35	1.6
40	22	21,859	-58.8		36	2.0
30	22	23,671	-57.7		04	2.7
25	22	24,824	-57.2		05	2.4
20	21	26,237	-57.1		02	1.9
15	19	28,064	-55.2		01	2.8
10						
7						
5						

WINSLOW, ARIZ. — 85[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,487	2.5	-10.9	24	1.3
1000						
950						
900						
850	21	1,523	5.5	-10.1	21	.5
800	31	2,002	9.4	-8.7	29	3.0
750	31	2,534	5.8	-11.4	29	4.9
700	31	3,094	1.3	-14.2	28	5.7
650	31	3,686	-2.8	-17.9	28	7.2
600	31	4,314	-7.4	-22.0	29	8.0
550	31	4,986	-12.2	-26.1	29	9.7
500	31	5,707	-17.4	-31.3	29	11.5
450	31	6,487	-23.4	-36.6	29	11.6
400	31	7,338	-30.1	-42.1	29	12.3
350	31	8,277	-37.3	-47.4	29	13.2
300	31	9,321	-45.3		29	15.3
250	31	10,515	-54.1		29	18.1
200	31	11,920	-61.4		28	18.1
175	31	12,749	-61.1		28	18.2
150	31	13,708	-61.0		28	17.5
125	31	14,836	-62.8		28	16.2
100	31	16,204	-64.7		28	13.5
80	31	17,565	-65.0		28	10.0
70	31	18,380	-64.7		29	6.3
60	31	19,323	-64.1		28	3.9
50	31	20,447	-61.0		31	2.3
40	30	21,838	-59.6		36	1.1
30	29	23,644	-58.0		05	1.4
25	28	24,795	-57.5		05	1.7
20	27	26,208	-56.4		33	1.2
15	24	28,051	-53.8		31	1.9
10						
7						
5						

YAKUTAT, ALASKA — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	-4.8	-7.4	11	2.0
1000						
950	30	459	-3.8	-8.8	13	4.2
900	30	884	-6.4	-10.7	15	3.9
850	30	1,329	-8.9	-13.2	17	4.4
800	30	1,797	-11.1	-16.1	18	3.8
750	30	2,291	-13.8	-20.1	20	4.7
700	30	2,812	-16.7	-23.2	21	6.1
650	30	3,365	-19.9	-25.2	22	7.3
600	30	3,955	-23.4	-28.6	22	8.6
550	30	4,597	-27.3	-32.7	22	10.4
500	30	5,267	-32.0	-37.1	23	12.6
450	30	6,003	-36.9	-39.7	23	13.8
400	30	6,809	-42.1	-41.7	23	15.7
350	30	7,705	-47.5		24	17.2
300	30	8,711	-51.4		24	17.3
250	30	9,895	-50.3		25	16.8
200	30	11,361	-48.0		26	14.1
175	30	12,242	-48.3		26	13.6
150	30	13,257	-48.3		27	13.8
125	30	14,455	-49.7		27	13.5
100	29	15,916	-50.5		27	12.5
80	28	17,376	-51.0		28	10.7
70	28	18,244	-51.5		28	9.6
60	28	19,244	-52.1		28	8.7
50	28	20,425	-52.1		29	8.3
40	27	21,867	-52.6		29	9.0
30	27	23,724	-52.8		30	7.9
25	25	24,905	-53.3		31	6.8
20	23	26,343	-54.0		31	6.3
15	21	28,208	-53.8		34	6.8
10	11	30,833	-52.3			
7						

+ YAP, CAROLINE IS. — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	27.3	24.1	10	3.2
1000	31	88	26.1	21.9	09	3.7
950	31	539	22.9	19.1	07	6.4
900	31	1,010	20.2	15.0	08	6.3
850	31	1,502	17.7	11.0	09	5.2
800	31	2,019	15.3	7.0	09	4.8
750	31	2,564	12.6	4.0	09	4.6
700	31	3,141	9.5	.5	09	3.8
650	31	3,753	6.2	-3.4	09	3.4
600	31	4,405	2.5	-7.1	09	3.6
550	31	5,104	-1.2	-12.6	10	4.5
500	31	5,858	-5.6	-18.0	10	4.8
450	31	6,678	-10.0	-24.2	10	5.3
400	31	7,577	-15.6	-29.9	11	5.7
350	31	8,574	-22.5	-37.2	11	5.1
300	31	9,684	-30.9	-45.2	11	5.5
250	31	10,951	-41.2		12	6.8
200	31	12,426	-53.8		11	8.3
175	31	13,270	-60.8		12	9.1
150	31	14,211	-68.7		12	10.4
125	31	15,283	-76.2		11	10.7
100	31	16,549	-81.5		10	7.9
80	31	17,804	-78.8		08	1.6
70	31	18,574	-74.1		29	3.8
60	31	19,484	-69.5		28	7.3
50	30	20,583	-65.2		27	9.4
40	30	21,954	-61.8		28	8.3
30	30	23,753	-57.9		26	2.4
25	29	24,914	-54.1		11	3.2
20	28	26,357	-51.2		09	10.3
15	27	28,240	-48.3		09	19.0
10	25	30,947	-41.7		09	24.0
7	18	33,388	-35.9			

YUCCA FLAT, NEV. — 882 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,198	4.3	-9.2	32	.9
1000						
950						
900						
850	28	1,503	12.4	-6.1	34	2.6
800	28	2,009	9.4	-8.3	32	2.2
750	28	2,541	5.7	-10.4	29	3.5
700	28	3,101	1.8	-13.7	28	5.2
650	28	3,694	-2.1	-17.3	28	6.7
600	28	4,325	-6.4	-21.2	29	8.5
550	28	4,999	-10.9	-25.2	29	9.9
500	28	5,724	-16.5	-30.1	29	10.9
450	28	6,507	-22.3	-35.2	29	12.9
400	28	7,361	-29.1	-39.5	29	13.8
350	28	8,304	-36.4	-45.8	29	14.4
300	28	9,351	-44.8		29	14.8
250	28	10,546	-54.2		29	16.8
200	27	11,944	-62.5		29	17.2
175	27	12,765	-63.5		29	18.4
150	27	13,717	-61.3		29	16.2
125	27	14,848	-62.1		28	14.7
100	27	16,221	-64.2		28	11.6
80	27	17,586	-64.2		29	9.2
70	27	18,404	-63.8		29	5.2
60	27	19,352	-62.9		31	3.8
50	27	20,480	-60.7		32	1.8
40	26	21,870	-59.5		01	1.3
30	26	23,681	-57.4		05	2.1
25	26	24,836	-56.7		07	1.9
20	26	26,253	-56.0		04	2.0
15	21	28,095	-54.0		28	1.6
10	15	30,731	-50.9			
7						

[illegible] floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance								
	A M				*	P M			
	78 7°	75 7°	70 7°	60 0°		60 0°	70 7°	75 7°	78 7°
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
1	0.79	0.97	1.05	1.20	1.43	1.24	0.99	0.83	0.69
2	.96	1.07	1.17	1.30	1.40	----	----	----	----
3	.84	.87	(.95)	(1.16)	D(1.29)	D(1.03)	D(.83)	(.66)	(.58)
4	----	----	----	(1.10)	----	----	(1.07)	----	----
5	(.73)	1.01	1.13	1.25	1.40	1.24	1.07	.97	.86
6	.91	1.04	1.13	1.31	1.44	1.25	1.08	.95	.87
7	----	----	1.19	1.33	1.41	1.28	1.15	1.01	.91
8	----	.98	1.12	1.28	1.41	1.23	1.09	.94	.83
9	.83	.93	1.07	1.22	1.33	1.22	1.09	.93	.81
10	.79	.82	1.04	1.22	1.33	1.16	.93	.75	.61
11	.74	.87	1.04	1.21	1.33	(1.10)	(.84)	----	----
12	.90	.99	1.13	1.26	1.39	1.27	1.11	.99	.89
13	.92	.99	1.13	(1.23)	1.40	1.28	1.11	.98	.87
14	.72	.84	.98	1.12	----	----	----	----	----
15	.95	1.06	1.16	1.28	1.45	----	----	----	----
16	1.03	1.12	1.23	1.35	1.44	1.32	1.18	1.11	1.02
17	.99	1.08	1.17	1.31	----	----	----	----	(.90)
18	.82	.92	1.03	1.19	1.35	1.24	1.11	.99	.88
19	.91	1.01	----	----	1.39	----	----	----	----
20	.93	1.01	1.11	1.28	1.43	D(1.16)	----	----	----
21	.97	1.08	1.18	1.31	1.40	1.29	1.13	.99	.92
22	----	(.90)	----	----	(1.29)	----	----	----	----
23	----	----	----	----	(1.29)	----	(.93)	----	----
24	.89	1.03	1.13	1.24	1.44	1.30	1.20	1.09	1.00
25	.93	1.03	1.17	1.32	1.42	----	----	----	----
26	.83	.97	----	----	----	----	----	----	----
27	.85	.98	(1.07)	----	----	----	----	----	----
28	.93	1.01	1.12	1.27	----	1.25	----	----	----
30	.74	.88	1.03	1.21	----	1.24	1.06	.94	.84
31	94	1.03	1.13	1.26	1.41	1.24	1.09	.93	.80
Averages	0.88	0.98	1.11	1.26	1.40	1.25	1.09	0.96	0.85

TUCSON, ARIZ.

Date	Sun's zenith distance								
	A M				*	P. M.			
	78 7°	75 7°	70 7°	60 0°		60 0°	70 7°	75 7°	78 7°
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
1	0.45	0.61	0.78	1.06	1.35	1.11	0.97	0.70	0.57
2	0.85	----	----	----	----	----	----	1.02	.93
3	----	----	----	----	----	1.25	1.09	.97	.85
4	.73	.86	1.00	1.18	1.38	----	----	.85	----
5	.79	.90	1.03	1.20	1.33	1.22	.95	.79	.67
6	.70	.82	.95	1.15	1.29	1.09	.90	.79	.68
7	.72	.83	.98	1.14	1.37	1.23	1.08	.93	.83
8	.81	.91	1.02	1.22	1.40	1.16	.96	.83	.72
9	.70	.82	.96	1.16	1.33	1.05	.83	.68	----
10	.59	.71	.86	1.08	1.31	----	----	----	----
11	----	----	----	----	----	----	.83	.70	.59
12	.70	.84	.98	1.18	1.36	1.14	.96	.82	.73
13	.74	.86	.99	1.19	1.29	1.07	.85	.73	.60
14	.56	----	----	----	----	----	----	----	----
15	.71	.80	.96	1.15	1.37	1.16	1.03	.80	.80
16	.85	.93	1.08	1.25	1.44	1.28	1.06	.92	.80
17	.81	.90	1.05	1.19	1.38	1.22	1.05	.93	.82
18	.84	.94	1.08	1.25	1.39	1.15	.94	.80	.70
19	.61	.75	.90	1.09	1.37	1.17	.98	.79	.65
20	.66	.78	.93	1.14	1.39	1.21	1.09	.94	.83
21	.77	.90	1.05	1.18	1.39	----	----	----	----
23	----	----	1.04	1.22	1.37	----	1.07	.94	.84
24	.75	.90	1.03	1.21	1.41	1.18	1.05	.94	.83
25	.74	.88	1.01	1.17	----	----	----	----	----
26	.82	.94	1.07	1.21	1.43	1.26	1.11	----	----
27	----	----	----	----	----	1.17	.91	.77	.61
28	.61	.73	.88	1.12	1.47	1.27	1.05	.91	.80
29	.52	.65	.88	1.15	1.40	1.20	1.03	.84	.71
30	.72	.84	1.01	1.21	1.44	1.25	1.06	.92	.79
31	.90	1.00	1.14	1.29	1.47	1.18	1.01	----	.85
Averages	0.72	0.84	0.99	1.18	1.38	1.18	0.99	0.85	0.75

OMAHA, NEBR.

Date	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
2	HS0.80	----	----	----	----	----	----	----	----
4	.84	0.97	HS1.10	HS1.24	1.34	----	----	----	----
[illegible]	.82	.92	HS1.07	HS1.25	1.33	HS0.86	----	----	----
7	.82	.92	1.08	1.13	1.34	----	----	----	----
8	.90	.98	----	----	1.34	HS .88	----	----	----
11	----	.77	.99	1.17	----	----	----	----	0.40
18	----	----	----	----	----	----	----	0.81	.73
19	----	.72	.92	HM1.11	HM1.24	HI .62	HI0.28	----	----
22	----	.97	1.10	1.24	1.36	1.21	1.06	.94	.84
23	----	90	1.02	1.18	----	1.18	----	----	----
29	----	.83	.99	1.18	----	.85	.60	----	----
Averages	0.84	0.89	1.03	1.19	1.16	0.93	0.65	0.88	0.66

MADISON, WIS.

Date	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
7	----	----	----	----	1.31	1.19	----	----	----
8	S 0.82	S 0.92	S 1.06	----	----	S 1.24	S 1.11	S 1.05	S 0.89
9	----	----	----	S 1.18	(1.30)	(1.20)	----	----	----
10	S .84	----	----	S 1.21	----	----	----	----	----
11	----	M .63	M .77	M .97	M 1.08	(.84)	----	----	----
14	----	S .81	----	----	S 1.35	S 1.27	----	----	----
23	----	----	S 1.14	S 1.32	S 1.47	S 1.33	S 1.14	----	----
24	----	(1.04)	(1.15)	(1.30)	----	----	----	----	----
30	S .78	S .88	S 1.02	S 1.23	S 1.37	----	----	----	----
Averages	0.81	0.86	1.03	1.20	1.31	1.18	1.13	1.05	0.89

( )	Clouds Present
*	Valves corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze

HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. MARCH 1972

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	493	504	483	476	502	506	520	506	510	509	508	542	553	412	476	567	568	570	571	574	578	518	522	612	513	400	366	549	430	656	643	521
AMES IOWA	123	462	187	---	505	383	475*	512	---	---	462*	109*	414*	431*	---	---	376*	484*	487*	---	---	266	588	292	267	86	53	271	415	298	243	341
ANNETTE ALASKA	71	162	127	140	158	243	183	90	56	65	64	47	37	298	66	186	165	68	82	336	267	117	156	299	373	355	425	388	227	87	314	182
APALACHICOLA FLORIDA	383	264	444	490	369	544	---	150	514	528	507	510	519	515	479	353	561	541	554	559	326	567	573	563	409	562	510	221	298	105	233	438
ARGONNE NAT. LAB.	17	285	354	330	442	166	249	432	386	424	377	304	42	457	101	174	332	442	283	376	104	135	514	405	465	200	300	224	164	585	331	303
ASTORIA OREGON	8	52	187	75	55	358	---	---	---	---	---	---	---	---	---	---	260	38	209	364	80	99	316	---	346	352	246	335	468	485	127	---
ATLANTA GEORGIA	232	165	143	428	494	466	420	434	496	478	474	479	467	486	486	217	346	6	529	---	239	561	550	332	140	497	204	389	428	496	56	371
BARROW ALASKA	68	71	114	124	119	171	189	163	139	187	---	126	102	238	---	---	126	238	232	194	229*	289	194	300	---	315	---	---	279	303	328	193
BETHEL ALASKA	232	240	239	228	255	258	279	290	294	292	303	317	322	306	---	335	356	375	372	380	402	412	358	274	---	309	423	424	---	469	275	322
BISMARCK N.DAK.	427	407	371	467	398	309	422	444	300	461	414	137	---	157*	---	---	164	479	104	---	---	392	392	132	90	144	469	571	587	425	---	346
BLUE HILL MASS.	320	70	34	243	91	373	250	52	424	435	338	45	346	79	85	346	52	311	490	481	434	53	350	75	422	451	239	410	305	92	53	250
BOISE IDAHO	111	47	268	242	124	191	454	460	447	392	334	185	243	489	483	469	489	61	282	531	298	427	469	238	486	387	592	515	551	563	562	367
BROOKINGS SOUTH DAK.	308	275	317	184	317	353	324	410	366	384	395	91	426	356	343	333	91	151	218	94	257	285	471	265	247	44	242	355	336	377	188	284
BROWNSVILLE TEXAS	467	557	560	549	57	335	354	---	209	395	334	---	287	446	593	545	539	616	446	432	553	389	480	423	352	562	601	559	319	---	580	448
BURLINGTON VERMONT	108	261	146	401	149	451	163	264	420	323	376	125	379	208	267	225	65	163	541	319	425	73	209	159	332	361	460	312	483	10	426	278
CAPE HATTERAS N.C.	407	293	267	253	95	519	490	418	534	477	512	481	476	387	518	448	401	517	403	545	501*	236	409	387	361	601	[illegible]	357	472	125	78	395
CARIBOU MAINE	---	111	119	367	154	303	308	88	395	325	399	195	395	421	292	306	64	82	441	456	461	156	142	225	281	306	343	220	326	497	316	283
CHARLESTON S.C.	397	414	408	395	371	513	395	304	526	487	494	477	457	386	520	281	422	518	409	518	416	543	563	539	106	591	496	119	203	293	62	407
CLEVELAND OHIO	158	57	299	123	---	336	215	206	254	326	289	93	88	48	66	55	38	115	485	328	237	42	141	307	365	532	543	476	128	245	455	235
COLUMBIA MISSOURI	78	467	317	430	501	429	418	510	387	483	471	204	103	441	73	293	457	543	534	465	105	571	587	121	143	214	88	55	287	600	206	341
DAVIS CALIFORNIA	390	400	449	435	483	486	483	472	320	438	486	254	499	478	459	512	513	541	485	546	491	517	546	458	528	610	611	570	610	590	[illegible]	482
DODGE CITY KANSAS	302	485	253	431	542	517	542	517	571	580	563	542	576	569	586	576	545	590	605	313	636	622	333	574	621	590	613	145	---	419	528	510
EL CENTRO CALIF. NPF	457	464	435	446	469	467	478	477	490	483	488	493	423	477	511	525	533	525	517	550	528	522	544	554	548	535	562	574	569	593	588	511
EL PASO TEXAS	499	522	516	524	530	528	533	547*	543	545	539	552	551	526	582	598	606	590	279	594	570	560	579	587	448	593	534	631	648	630	660	553
ELY NEVADA	385	213	295	273	460	394	462	469	480	418	396	390	338	502	499	516	503	484	483	530	439	509	510	544	488	507	591	488	411	589	572	456
EPPLEY NEWPORT R.I.	325	85	52	155	---	405	292	44	366	425	418	39	252	71	64	344	63	300	457	470	339	78	298	97	404	492	331	478	382	172	55	258
FAIRBANKS ALASKA	171	189	188	150*	193	179	206	205	217	231	236	246	231	222	242	173	300	237	205	249	259	---	353	216	202	292	277	263	347	357	392	241
FLAMING GORGE UTAH	467	315	316	457	458	450	541	490	497	426	282	522	307	471	517	526	493	416	145	580	585	417	179	577	507	416	547	535	472	444	548	448
GLOUCESTER POINT VA	431	376	66	270	161	503	479	131	449	513	506	440	347	190	421	424	68	516	441	467	370	312	278	527	335	592	266	538	354	57	109	353
FORT WORTH TEXAS	376	469	445	255	469	402	440	325	485	468	388	190	280	462	279	507	506*	528	517	275*	493	531	495	360*	543	437	514	430	575	210	574	427
FRESNO CALIFORNIA	432	419	311	401	442	440	450	461	361	447	488	263	490	478	497	497	511	539	514	510	501	369	548	521	521	578	570	565	576	572	406	473
GLASGOW MONTANA	329	255	389	412	262	394	419	336	347	370	343	426	413	359	433	275	436	418	312	400	402	435	290	219	225	162	360	511	540	408	526	368
GRAND JUNCTION COLO.	399	258	250	149	432	409	440	475	478	442	402	466	360	272	483	515	434	506	487	476	527	461	403	571	535	490	390	558	560	566	542	443
GREAT FALLS MONTANA	336	297	432	405	214	305	401	240	343	415	227	348	279	386	457	339	443	260	385	428	321	448	221	483	---	254	569	544	516	476	540	377
GREENSBORO N.C.	403	349	367	176	445	495	458	348	504	519	484	474	472	311	502	227	247	401	515	513	308	519	225	562	106	582	180	223	104	273	76	366
INDIANAPOLIS INDIANA	77	66	409	117	436	276	103	421	348	474	432	162	70	186	130	196	174	441	501	425	243	80	288	519	445	372	89	373	54	586	490	290
ITHACA NEW YORK	287	266	159	338	253	374	204	300	339	383	297	78	166	82	321	235	90	269	481	438	278	74	147	206	374	564	392	502	526	129	506	292
LAKE CHARLES LA.	313	422	515	222	441	375	295	296	445	516	465	500	484	423	198	557	547	471	564	300	313	573	548	422	578	248	262	453	521	101	578	418
LAKELAND FLORIDA	394	444	405	460	134	552	475	451	537	544	440	430	414	457	509	303	564	551	468	509	390	473	579	578	529	559	582	407	460	270	175	453
LANDER WYOMING	401	349	223	440	394	267	447	436	398	357	427	405	383	409	468	465	478	375	227	286	487	464	158	495	450	534	495	513	420	450	554	408
LARAMIE WYOMING	355	283	357	282	351	280	444	462	492	482	406	483	314	205	467	424	436	518	307	114	466	436	183	542	555	342	441	320	326	366	327	379
LAS VEGAS NEVADA	462	424	442	453	467	469	480	476	480	465	438	469	234	502	515	528	533	523	535	524	524	539	543	---	---	---	---	---	---	---	---	479
LITTLE ROCK ARKANSAS	181	220	263	49	382	391	47	416	409	394	353	285	277	404	303	418	266	336	484	454	380	544	319	300	374	76	401	137	321	444	538	328
LOS ANGELES CALIF.	465	462	457	444	348	97	54	345	384	480	332	157	108	294	315	408	114	391	304	282	494	481	528	553	573	359	613	579	577	593	593	393
LOS ANGELES CALIF. U	410	427	432	425	418	366	76	354	382	447	359	315	202	351	428	484	381	329	353	328	454	480	458	515	515	314	556	529	515	560	567	410
MADISON WISCONSIN	68	442	---	---	479	232	459	483	482	449	418	246	156	480	67	79	448	472	292	358	116	216	552	493	507	143	342	237	295	623	470	348
MANHATTAN KANSAS	125	451	216	486	478	423	478	481	478	483	467	75	230	266	489	519	472	527	519	120	498	506	544	80	286	506	453	237	593	447	344	396
MATANUSKA ALASKA	233	249	237	233	253	254	270	---	---	---	270	137	272	267	226	---	346	170	200	261	312	275	365	---	199	---	---	183	429	451	449	273
MEDFORD OREGON	65	60	209	185	351	317	---	354	237	225	313	182	294	382	407	451	451	388	359	457	230	151	471	283	304	336	444	450	508	523	245	321
MIAMI FLORIDA	435	466	387	327	---	129	343	355	308	475	330	491	538	550	508	521	540	374	253	496	449	505	556	555	503	550	545	524	512	554	254	444
MIDLAND TEXAS	397	532	511	523	521	533	518	533	535	543	517	538	456	557	547	585	597	576	466	592	593	553	435	555	509	633	---	620	594	149	650	529
NEW YORK CENTRAL PRK	338	255	18	304	179	501	324	44	469	259	384	41	282	10	96	319	32	182	507	456	298	9	235	296	543	590	568	582	483	---	---	297
NASHVILLE TENNESSEE	117	28	230	95	476	465	110	489	488	437	458	427	83	482	296	270	259	103	506	508	106	545	538	218	97	453	141	434	227	473	530	325
NORTH OMAHA NEBRASKA	152	351	190	477	473	404	463	495	471	467	468	158	346	307	486	355	148	278	511	148	382	554	540	103	270	453	198	437	608	292	277	363
OAK RIDGE TENNESSEE	108	38	333	174	483	465	271	484	483	410	458	436	363	485	397	248	149	69	348	488	238	522	532	423	89	517	66	358	357	363	227	335

SOLAR RADIATION TOTALS-Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	---	435	273	463	457	466	435	474	489	483	476	267	483	466	248	490	492	478	504	273	528	518	247	76	540	492	506	68	542	417	527	420
PALMER AAFS ALASKA	192	201	200	202	211	218	230	235	246	184	238	116	226	217	202	261	286	174	184	215	256	209	284	121	198	290	96	200	359	362	385	226
PHOENIX ARIZONA	460	412	446	444	455	456	457	460	464	467	469	488	479	352	496	520	521	519	517	514	497	460	522	541	548	491	445	575	562	569	571	490
PORTLAND MAINE	297	67	51	356	94	362	136	54	419	425	393	43	372	371	142	226	54	249	376	476	450	35	376	151	48	349	491	247	247	126	66	243
RAPID CITY S.DAK.	302	300	207	321	342	355	416	375	377	408	360	217	353	127	364	179	450	434	287	271	463	466	382	438	404	190	480	432	326	392	418	350
RENO NEVADA	213	274	202	365	418	---	330	382	310	361	417	146	431	409	405	439	456	477	390	443	319	381	489	274	526	494	529	447	526	523	341	390
RICHLAND 25 NW WASH.	47	207	239	199	302	394	400	256	168	219	373	115	359	263	287	436	461	308	368	427	331	196	488	465	324	536	502	525	536	476	439	343
RIVERSIDE CALIFORNIA	508	506	465	521	516	487	339	399	483	510	500	515	269	495	506	568	544	289	528	395	538	371	568	597	587	452	571	636	631	659	649	503
RUSTON LOUISIANA	336	90	---	77	505	463	151	204	512	501	---	---	172	459	416	470	539	552	553	340	414	573	545	188	581	104	377	344	400	---	---	380
SAINT CLOUD MINN.	308	443	164	428	449	305	378	470	462	419	420	357	480	442	106	423	404	364	406	307	196	388	520	430	344	95	162	425	576	588	244	371
SALT LAKE CITY	385	151	169	152	393	172	461	464	463	358	459	452	322	469	498	498	492	374	354	525	506	458	288	531	522	497	614	539	396	574	593	423
SAN ANTONIO TEXAS	277	431	425	399	277	123	298	111	241	164	223	159	249	443	323	505	512	504	476	229	498	501	203	295	498	166	445	569	613	527	635	365
SANTA MARIA CALIF.	457	446	433	458	443	351	258	227	449	485	476	363	440	492	510	464	361	525	534	404	441	491	523	555	543	578	578	583	568	569	528	469
SAULT STE MARIE MICH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SEATTLE TACOMA WASH.	78	67	242	158	36	340	323	272	74	152	144	74	312	245	173	355	418	129	289	456	73*	39	386	419	330	301	169	387	492	433	275	247
SEATTLE WASH. U	93	73	201	169	54	299	287	269	73	167	182	80	317	242	120	274	371	186	259	385	115	87	334	379	389	243	140	368	437	409	228	233
SPOKANE WASHINGTON	106	109	331	289	194	397	363	167	266	243	158	83	208	183	270	359	412	164	179	307	247	263	395	167	408	364	189	227	350	393	417	265
STERLING VIRGINIA	402	319	92	---	380	504	432	309	475	455	472	307	373	39	199	311	235	385	410	352	402	235	279	389	394	598	403	587	334	301	226	353
TAMPA FLORIDA	474	486	507	505	95	556	506	516	548	552	482	414	454	548	545	309	583	569	542	495	572	518	614	605	550	600	580	414	494	294	242	489
TUCSON ARIZONA	496	459	492	489	490	492	502	504	507	441	476	536	528	353	549	556	561	561	554	563	526	363	543	590	381	580	407	619	616	615	626	515
WAKE ISLAND PACIFIC	576	385	5[illegible]5	600	595	598	598	545	444	613	526	352	519	604	632	497	355	608	516	510	557	525	654	440	559	499	601	580	605	631	412	540

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-42	-26	5	-17	-46	-50	-42	-57	-26	5	19	28	-73	-108	-45	-107	-112	-44	36	-60	-62	[illegible]	[illegible]	59	48	-18	11	102	[illegible]	[illegible]	[illegible]	58

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument and its [illegible] have not been checked by NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	.18	11.02	7.51	15.95	14.52	12.29	13.41	14.22	11.88	11.58	12.39	4.16	12.29	12.70	5.89	5.58	12.19	14.02	13.71	10.26	4.67	9.95	16.66	10.05	8.83	3.65	2.54	[illegible]	–	[illegible]	[illegible]	[illegible]

These data are from an E - A Eppley total ultra violet sensor and Speedomax H (Leeds Northrup Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA.

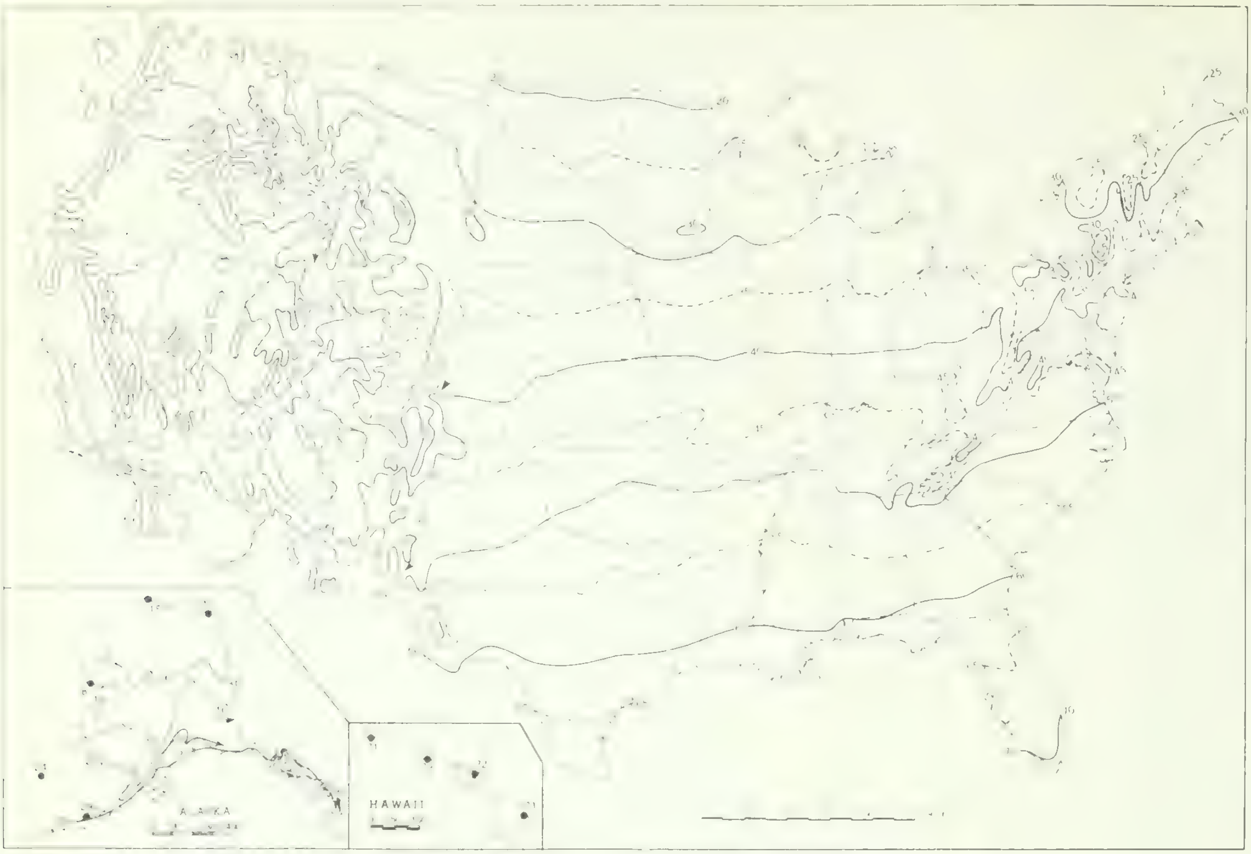
Units: Milli atmo cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	[illegible]
														Data will be delayed																		

[illegible] the total amount of ozone in the atmosphere [illegible] in the vertical [illegible] ground level to the top of the atmosphere in the vicinity of the station. The amount of [illegible] standard temperature [illegible]

[illegible]

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), March



B. Temperature Departure from 30 - Year Mean (°F 1931-60), March 1972.

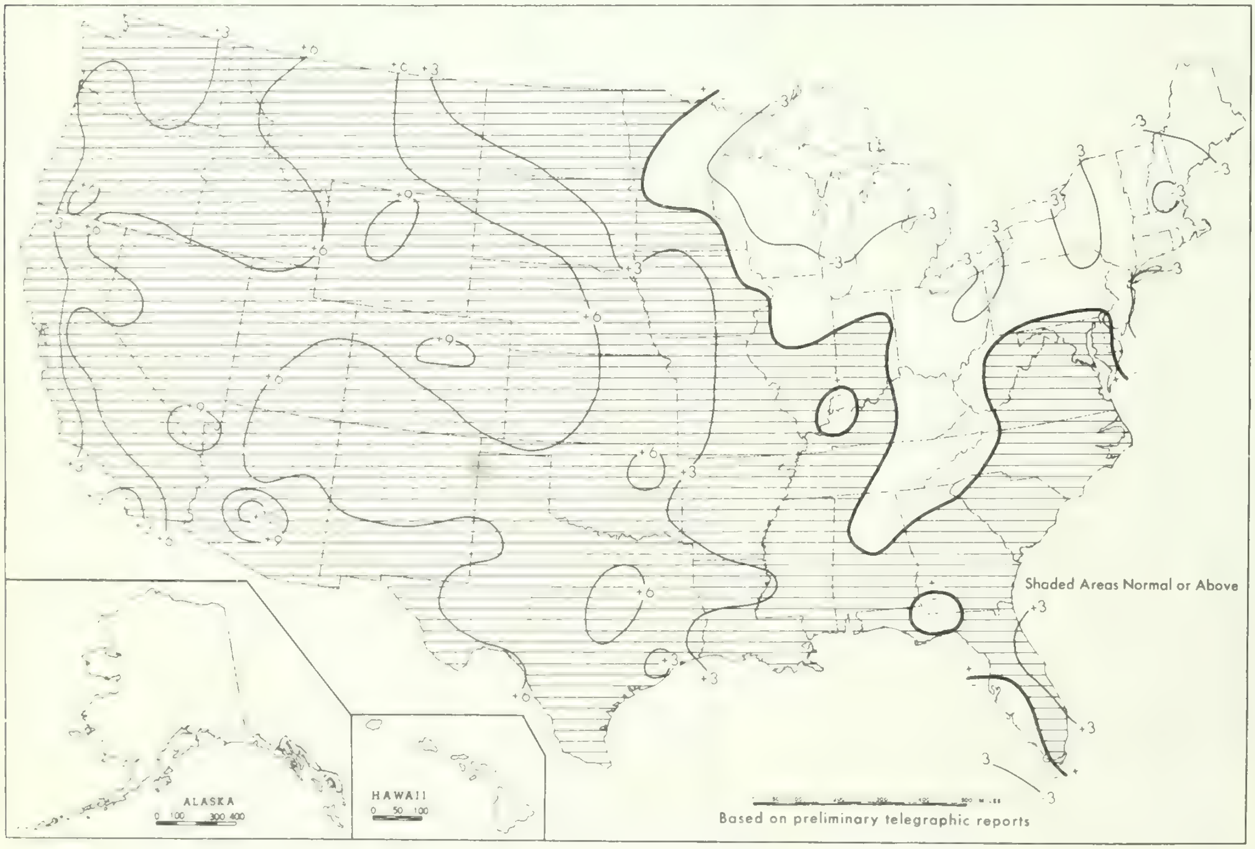
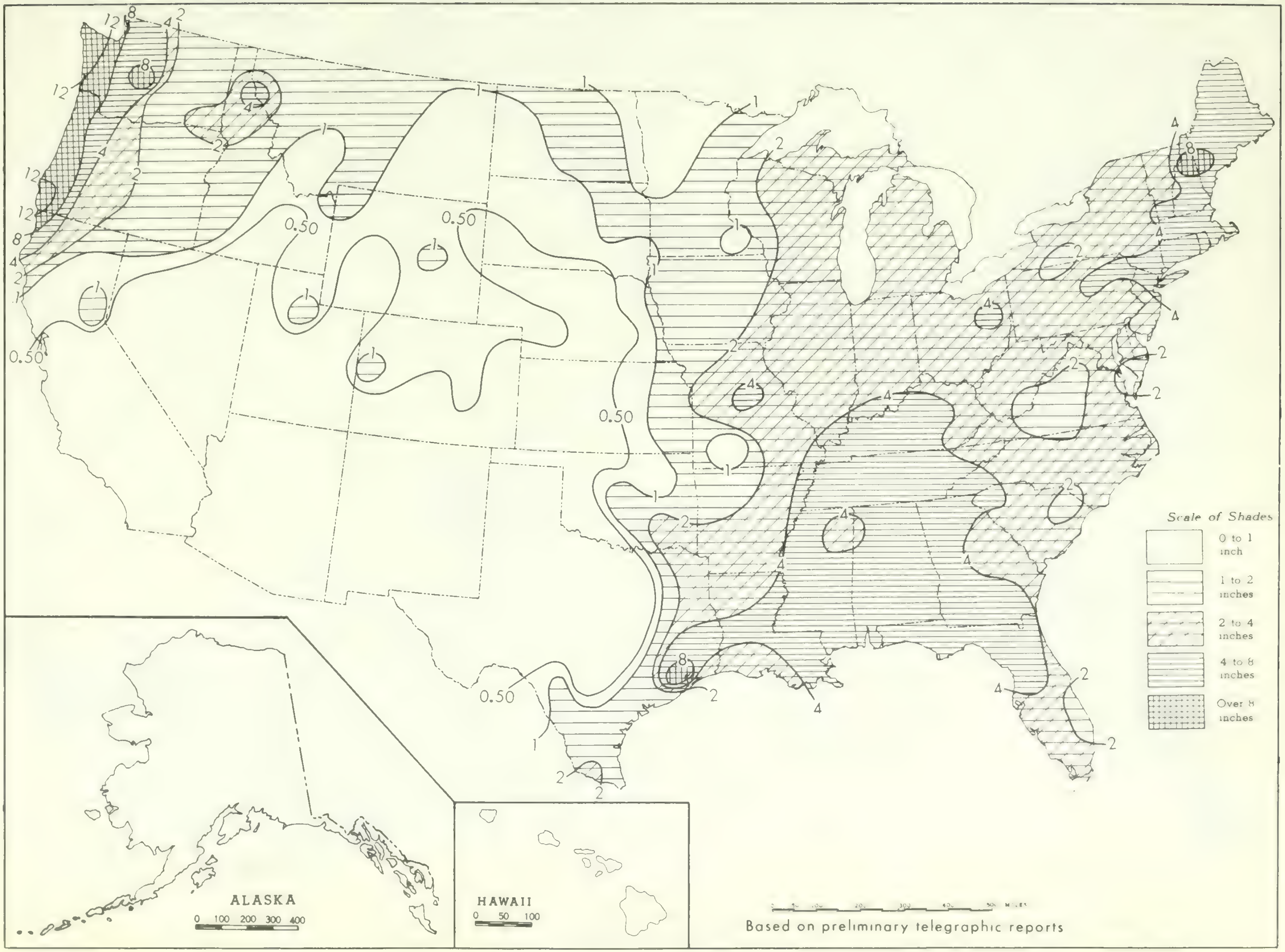
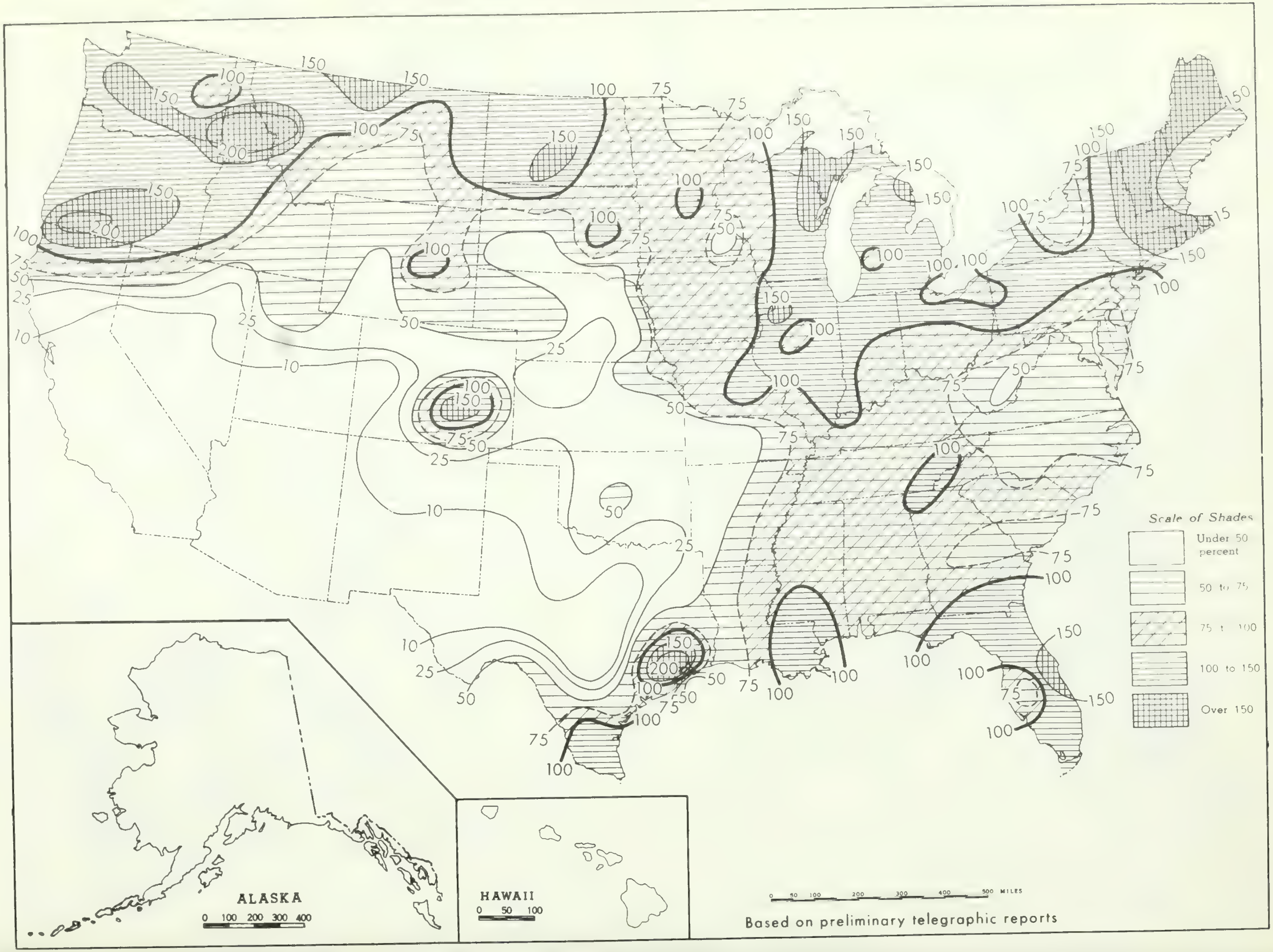

+3
+6
+9
-3
3
Shaded Areas Normal or Above
ALASKA
0 100 300 400
HAWAII
0 50 100
Based on preliminary telegraphic reports

Chart II. Total Precipitation (Inches), March 1972.



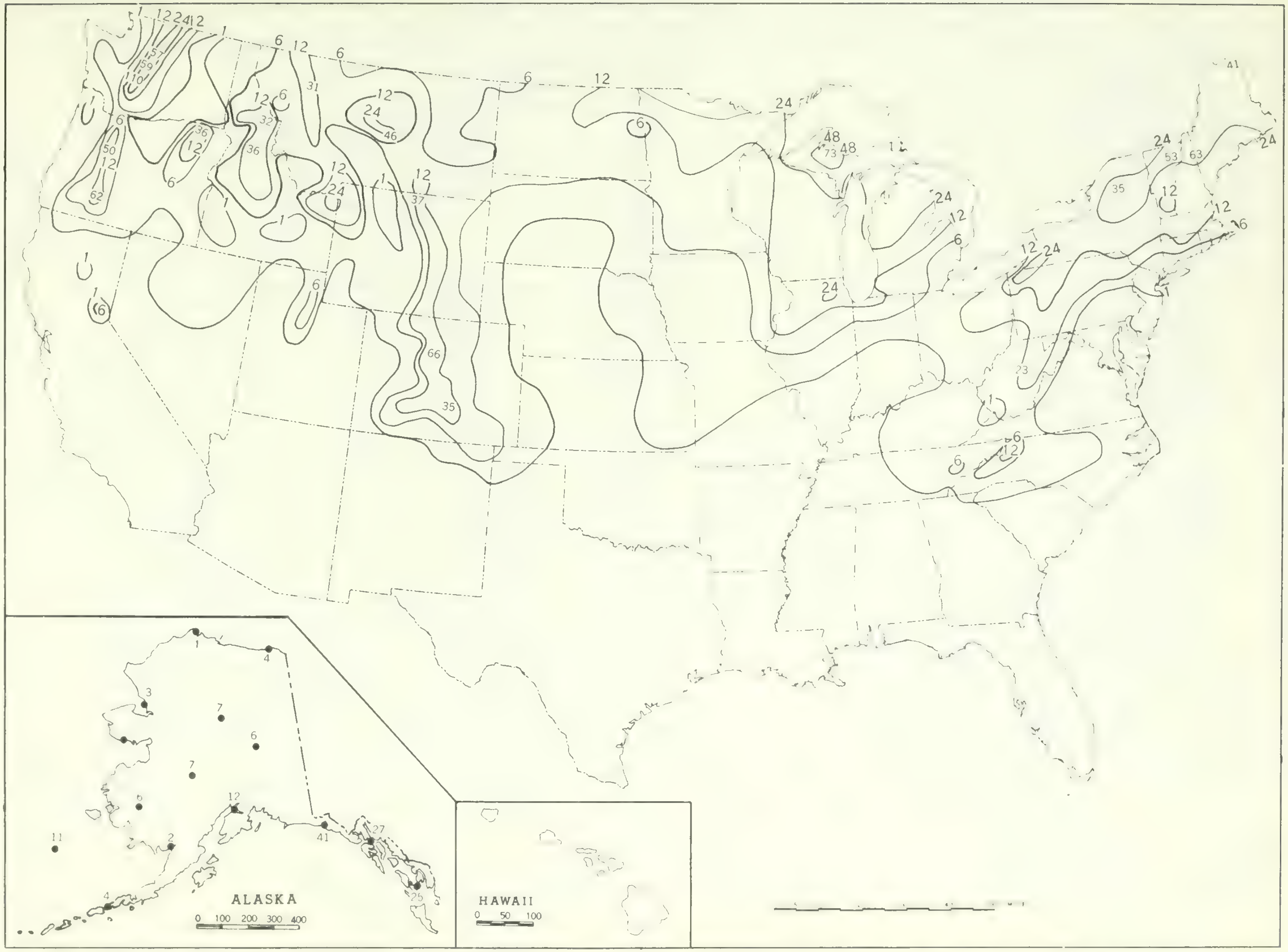
Based on preliminary telegraphic reports

Chart III. Percentage of Normal Precipitation, March 1972.



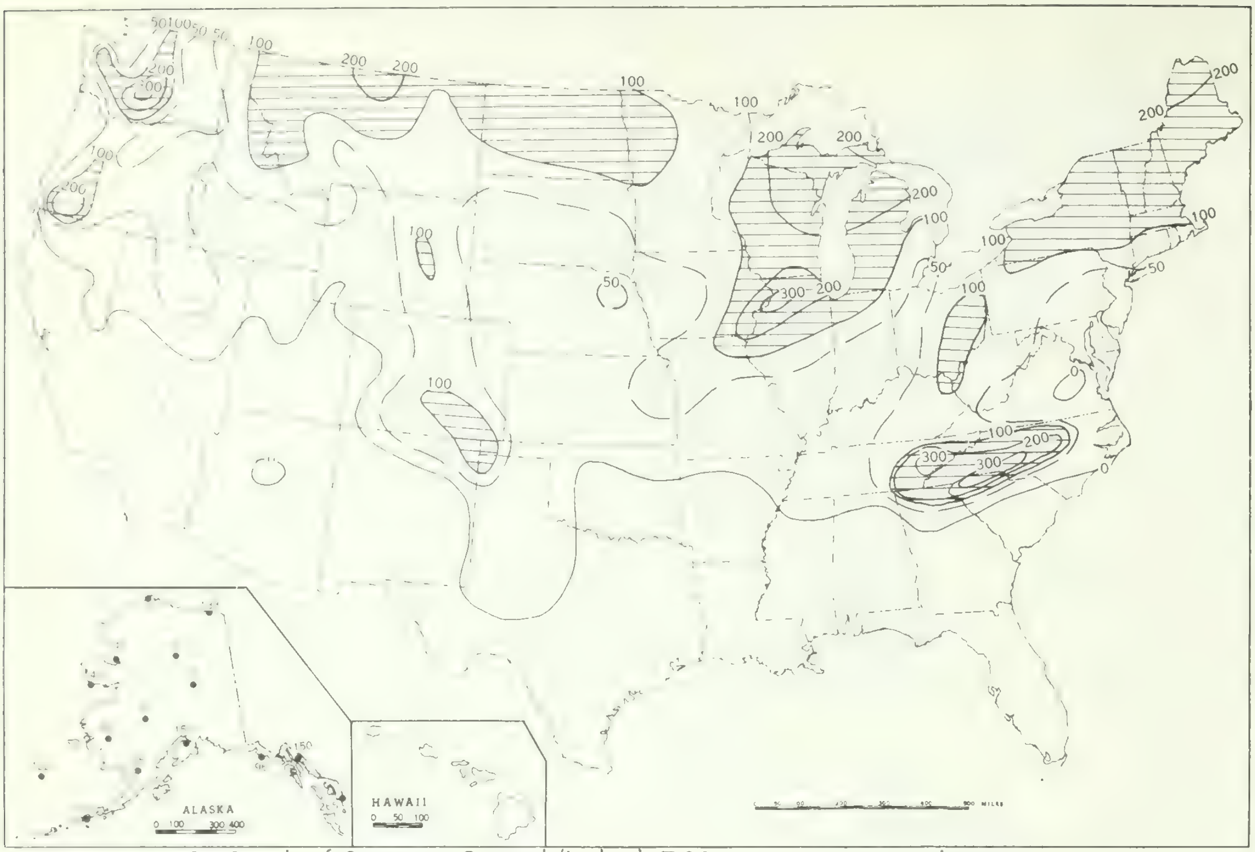
Based on preliminary telegraphic reports

Chart IV. Total Snowfall (Inches), March 1972.

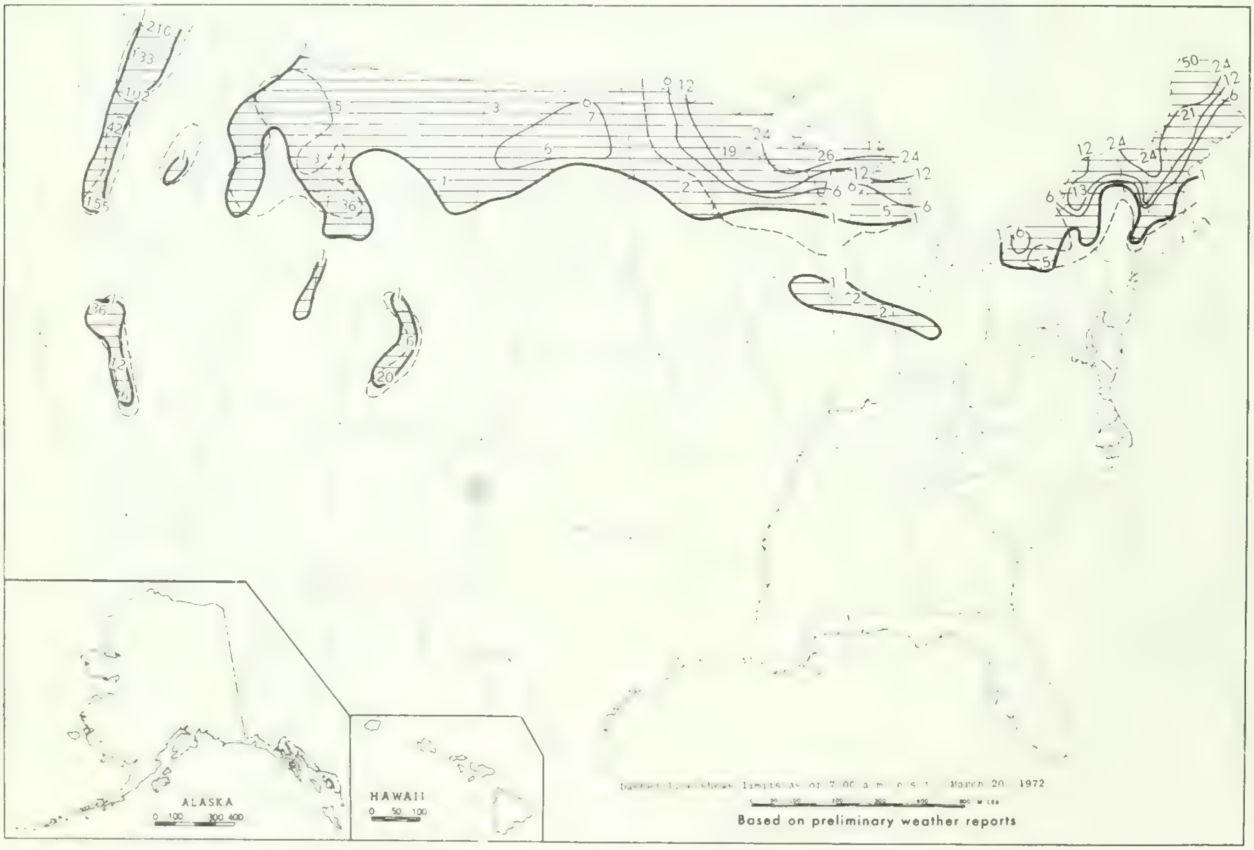


This is the total of unmelted snowfall recorded during the month at **National Weather Service** and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the Far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, March 1972.

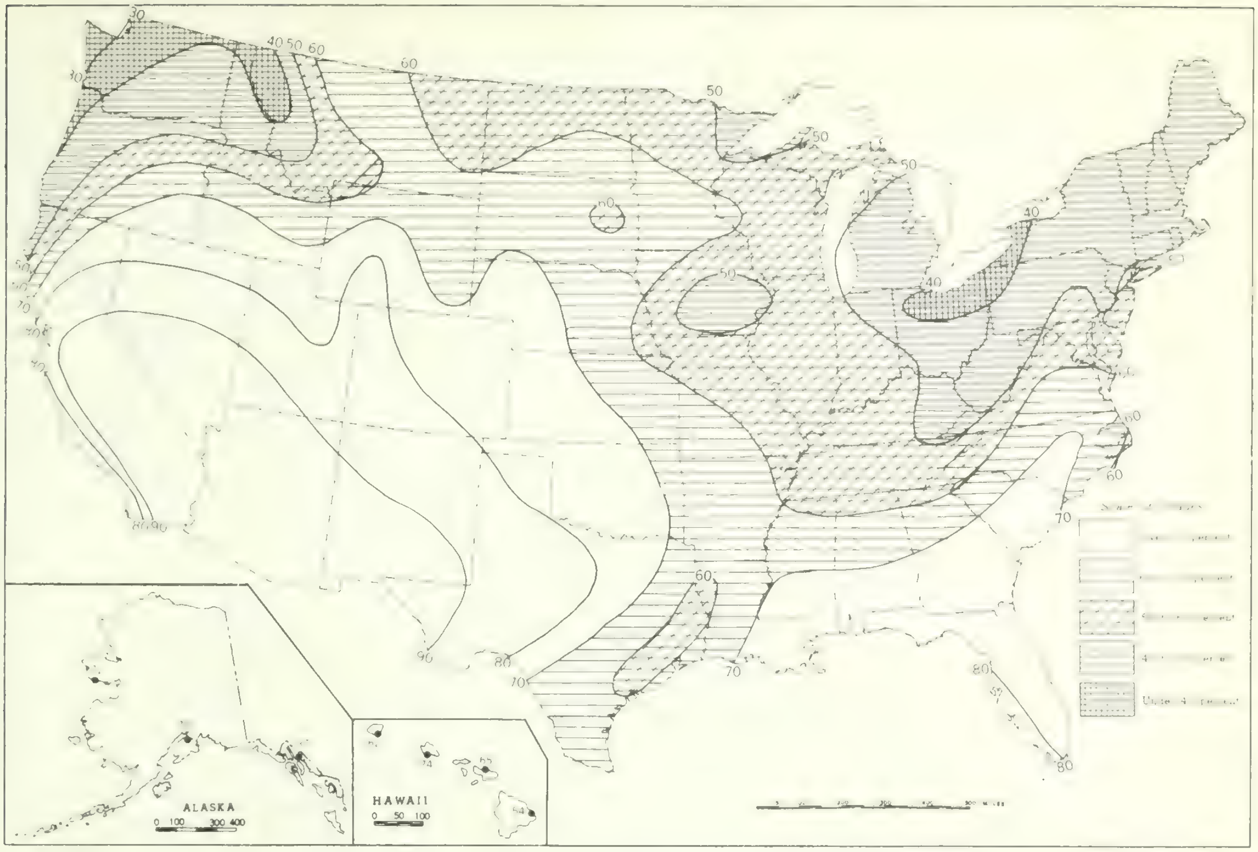


B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., March 27, 1972

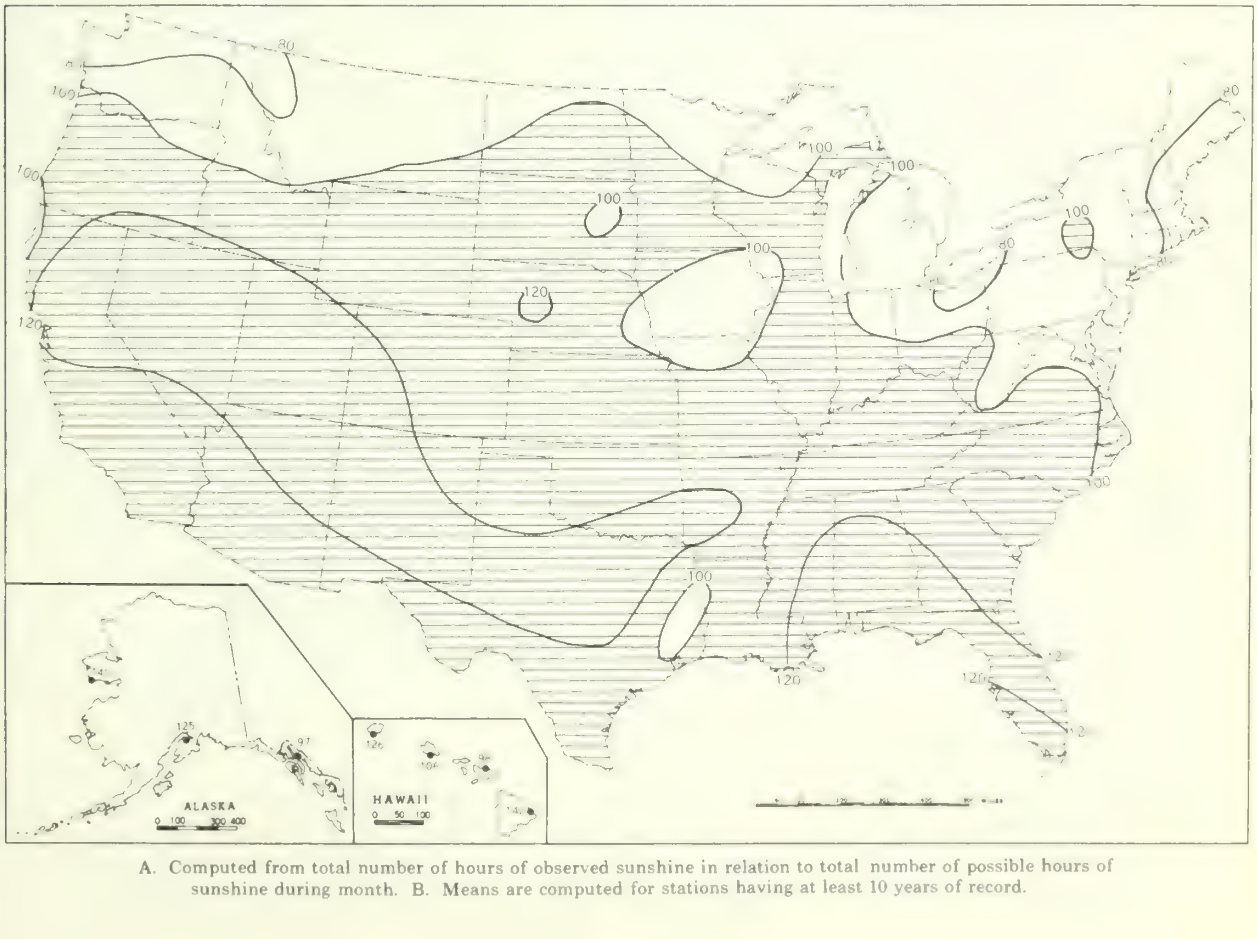

210
133
102
42
155
36
12
5
3
3
36
1
6
7
6
1
1
0
12
24
19
26
24
12
12
6
6
2
5
1
1
1
2
2
6
20
50
24
12
6
21
12
24
24
13
6
1
6
5
ALASKA
0 100 300 400
HAWAII
0 50 100
Dashed line shows limits as of 7:00 a.m. e.s.t. March 20, 1972
0 50 100 200 300 400 500 MILES
Based on preliminary weather reports

A. Amount of mean monthly snowfall is computed for **National Weather Service** stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. e.s.t., of the Monday nearest the end of the month.
It is based on reports from **National Weather Service** and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, March 1972.

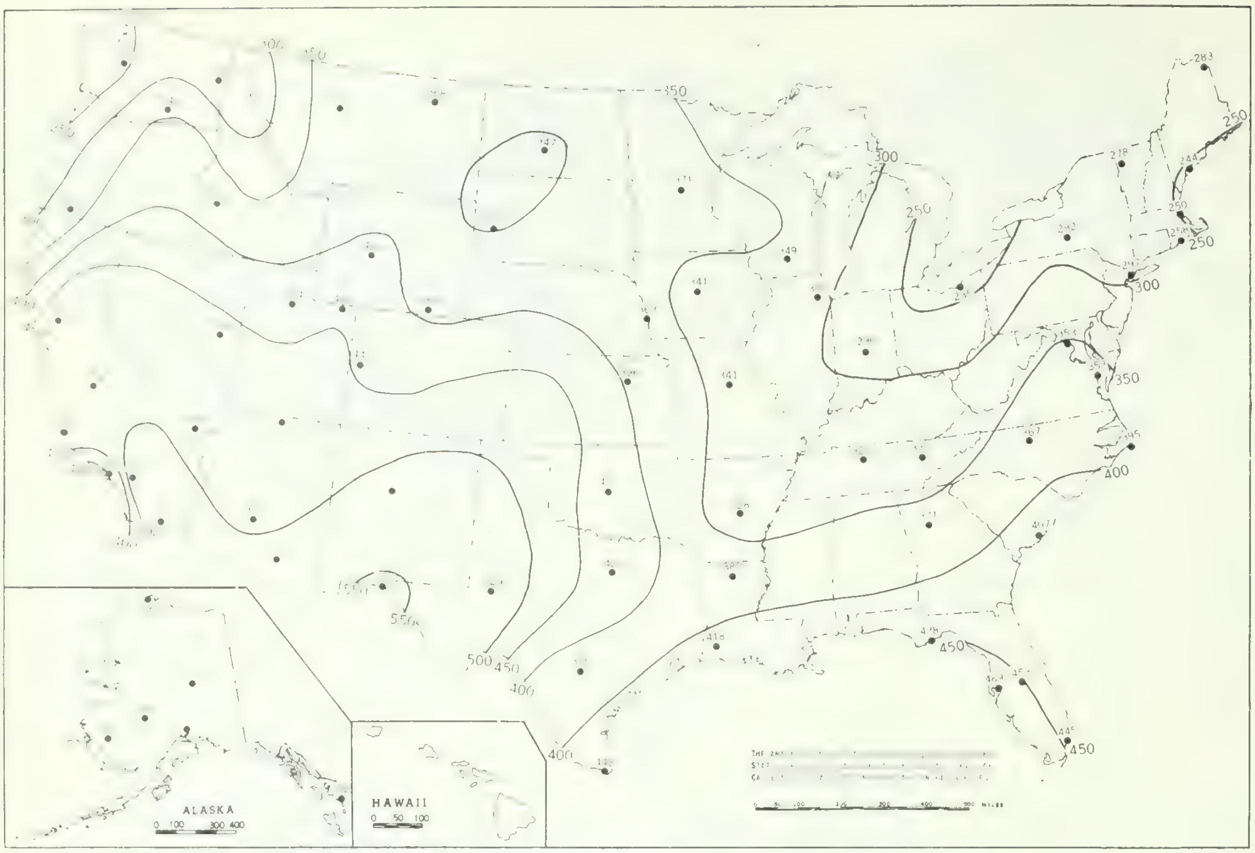


B. Percentage of Mean Monthly Sunshine, March 1972.

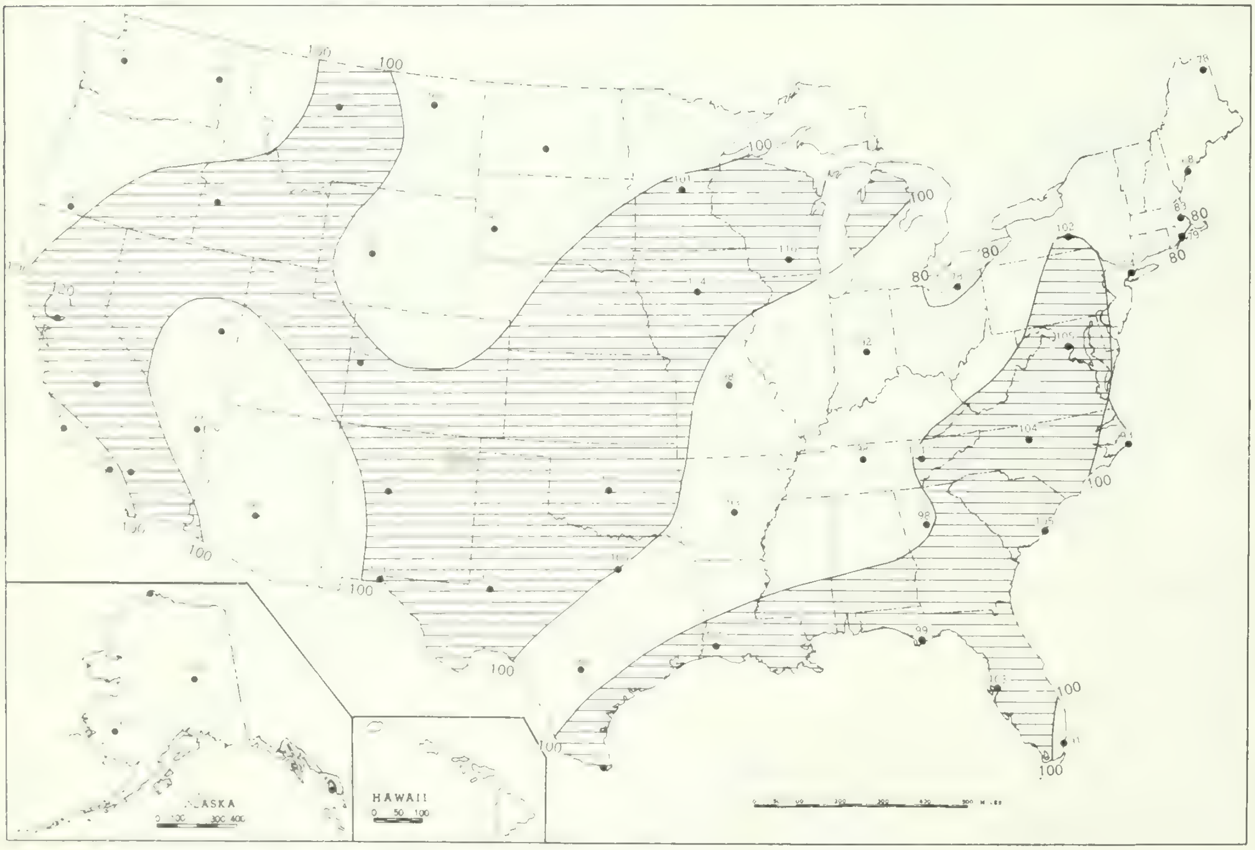


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, March 1972.

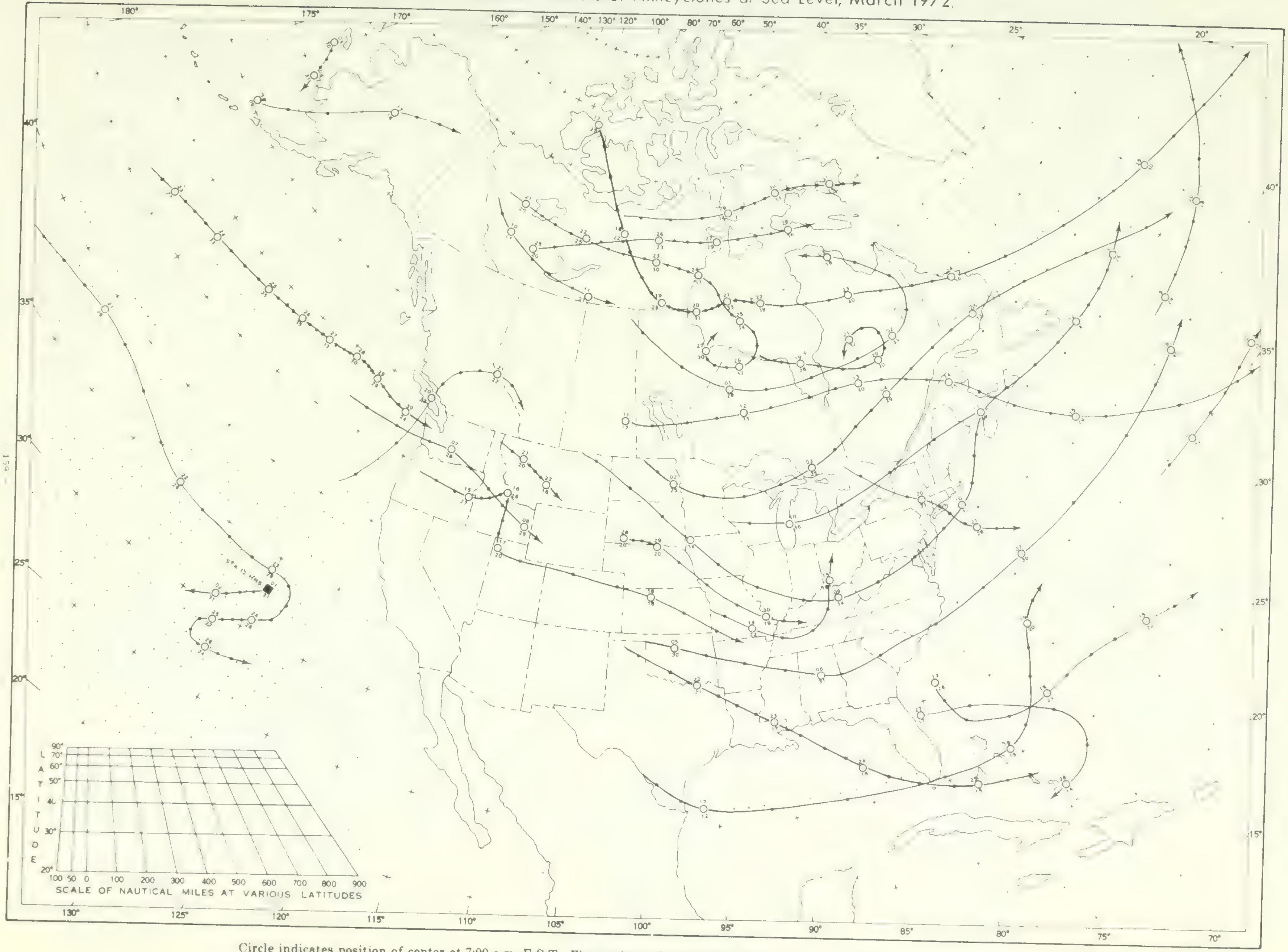


B. Percentage of Mean Daily Solar Radiation, March 1972.



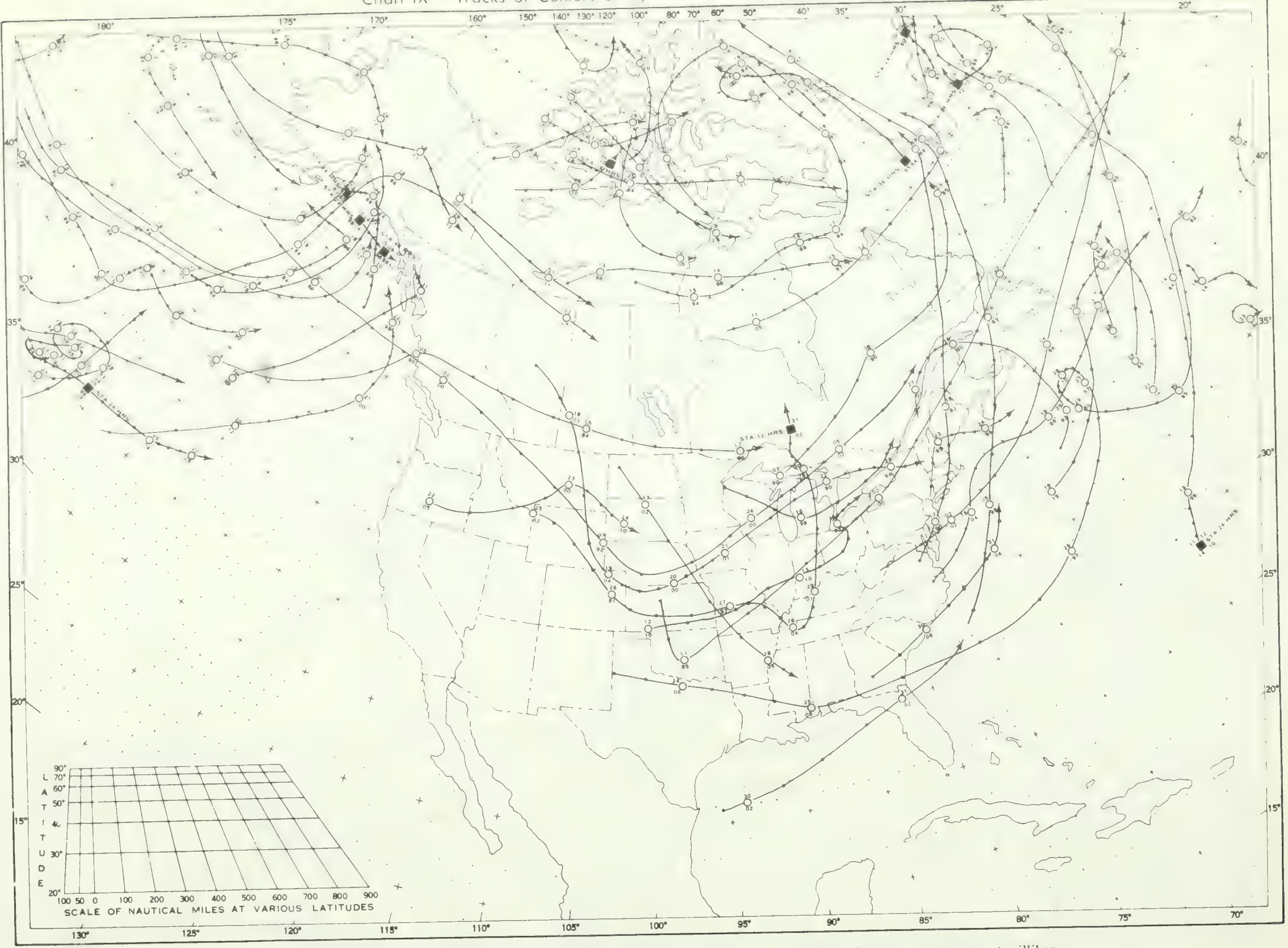
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, March 1972.



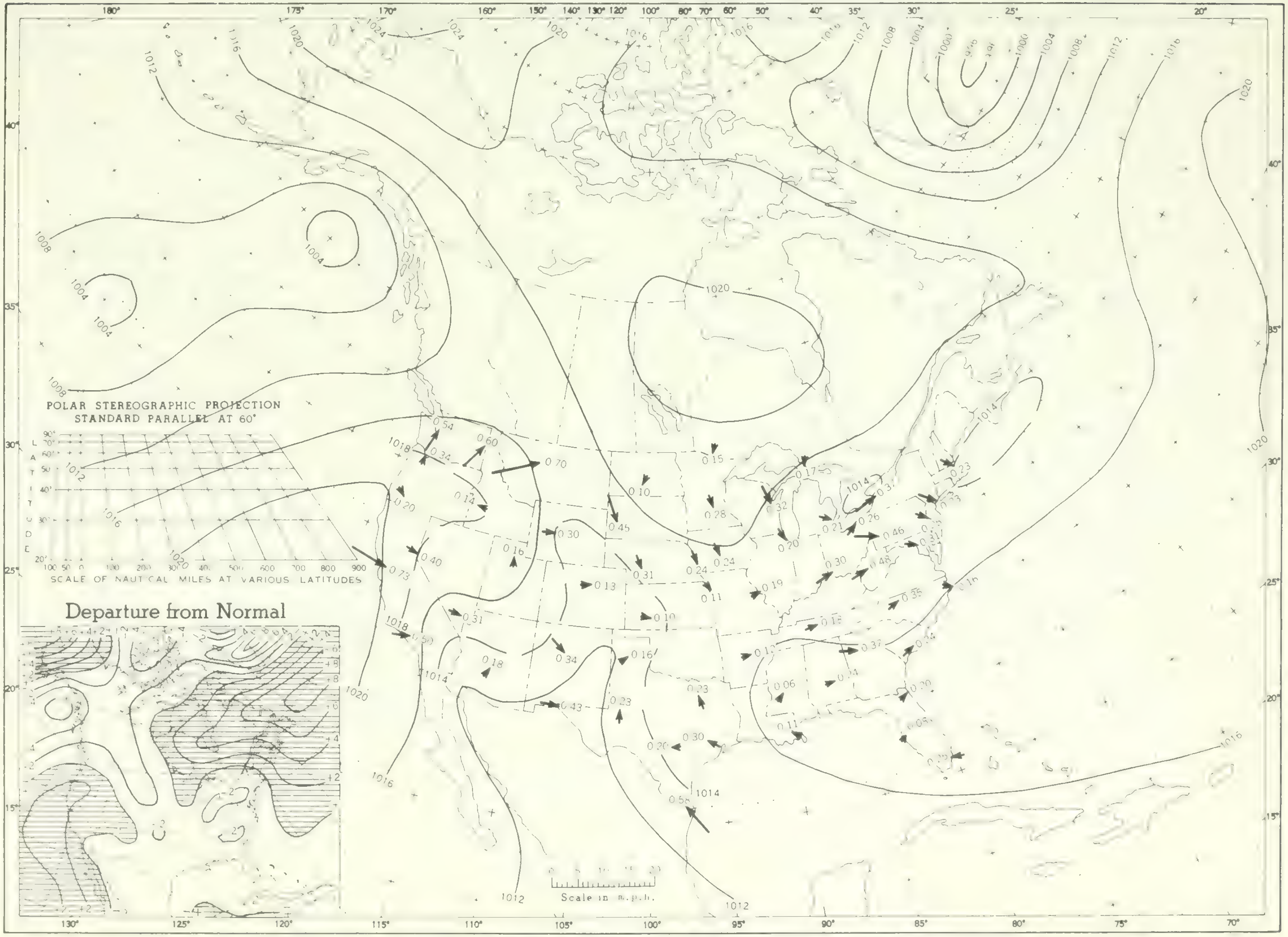
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, March 1972



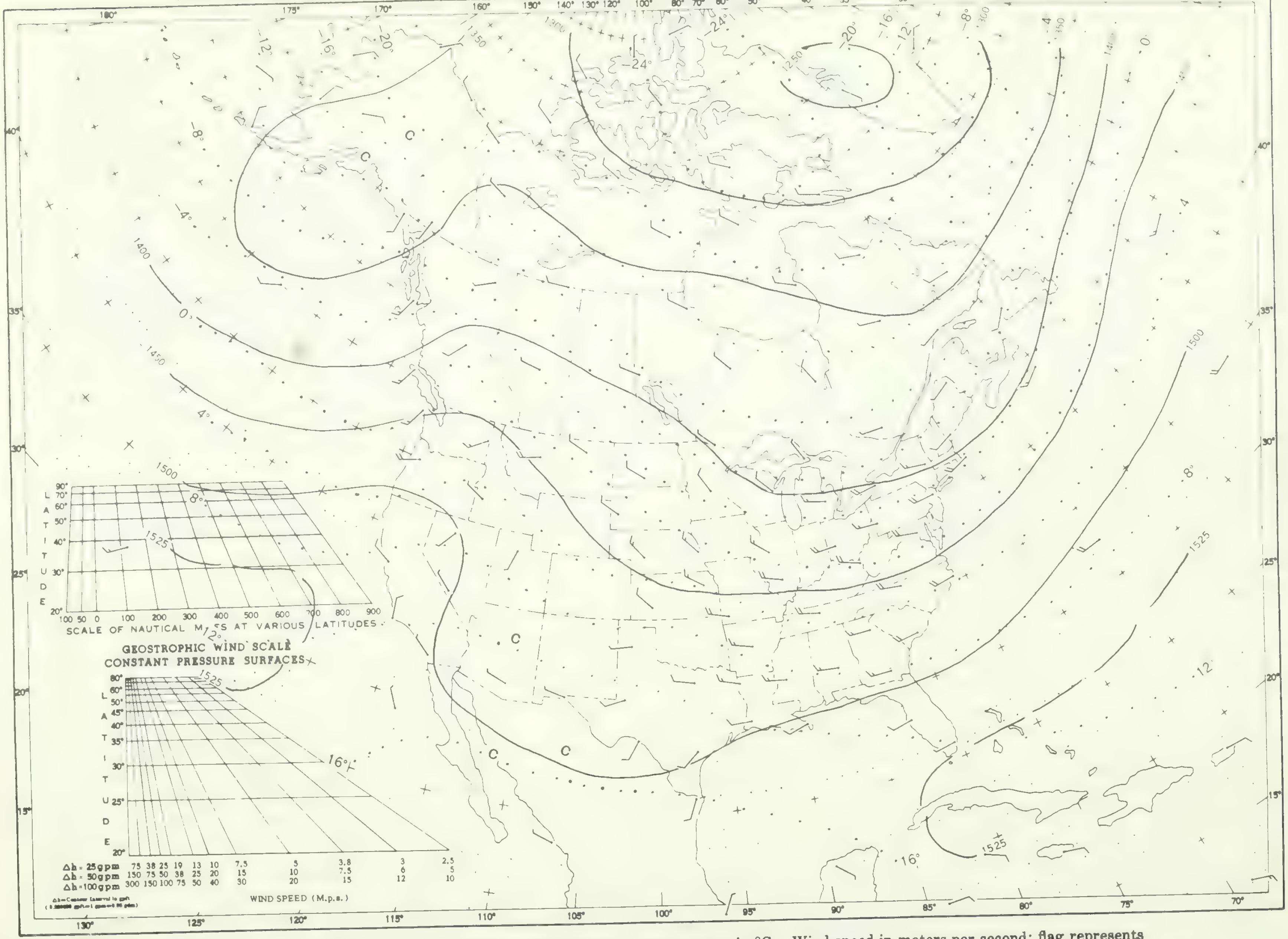
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, March 1972. Inset Departure of Average Pressure (mb) from Normal, March 1972



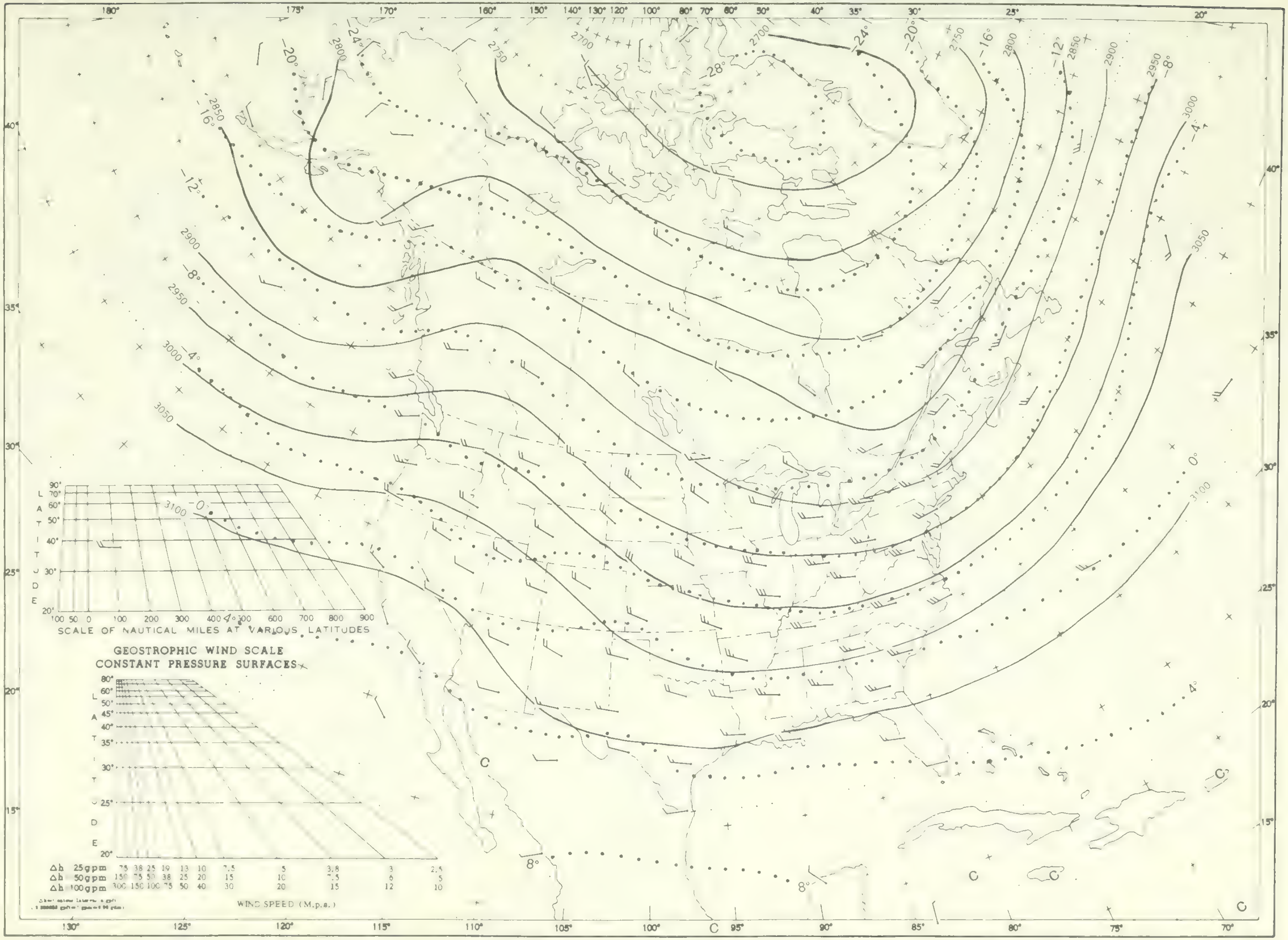
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 350-mb Surface, 1200 G.m.t., March 1972. Average Height and Temperature, and Resultant Winds



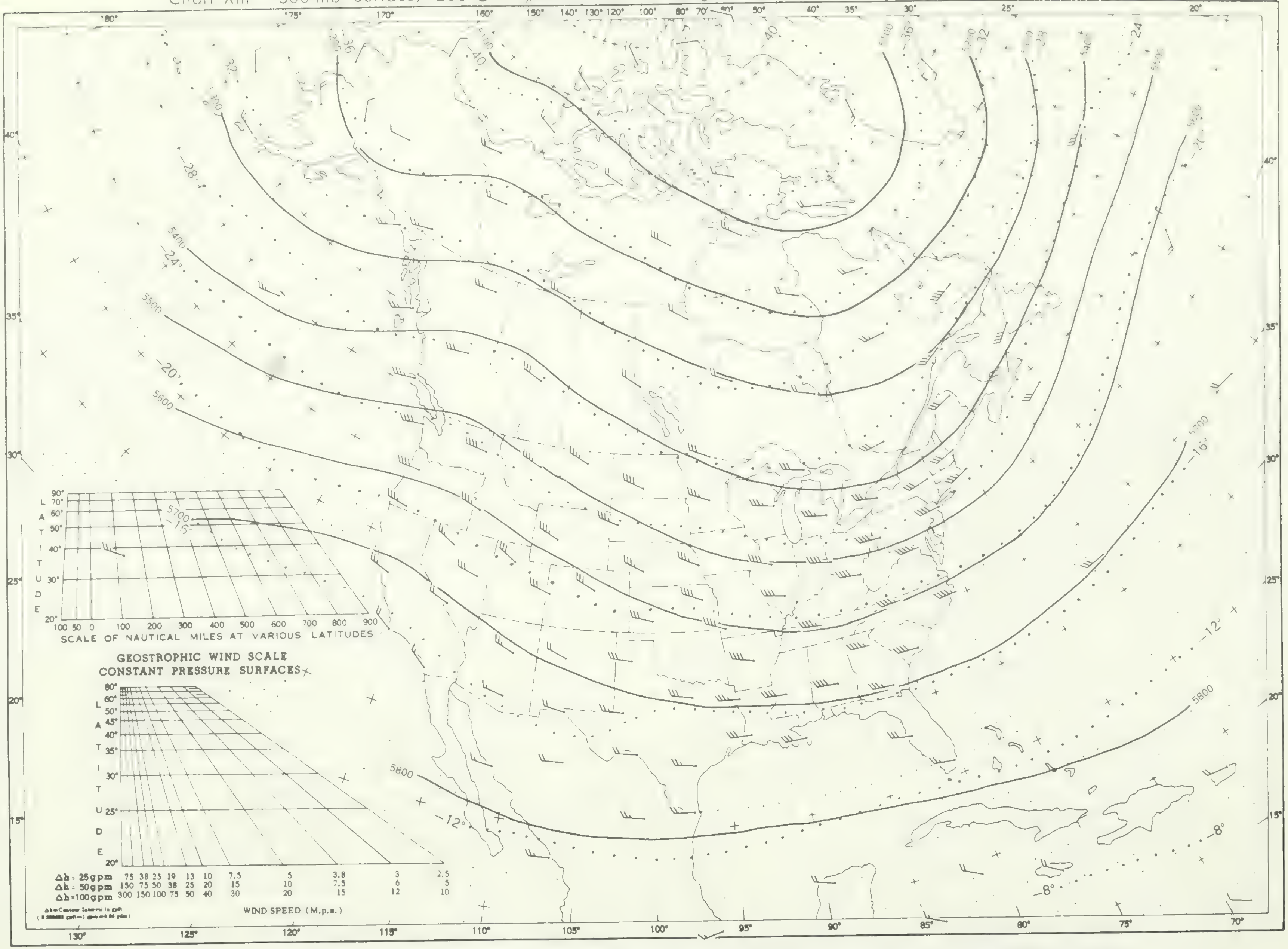
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700-mb Surface, 1200 G.m.t., March 1972. Average Height and Temperature, and Resultant Winds



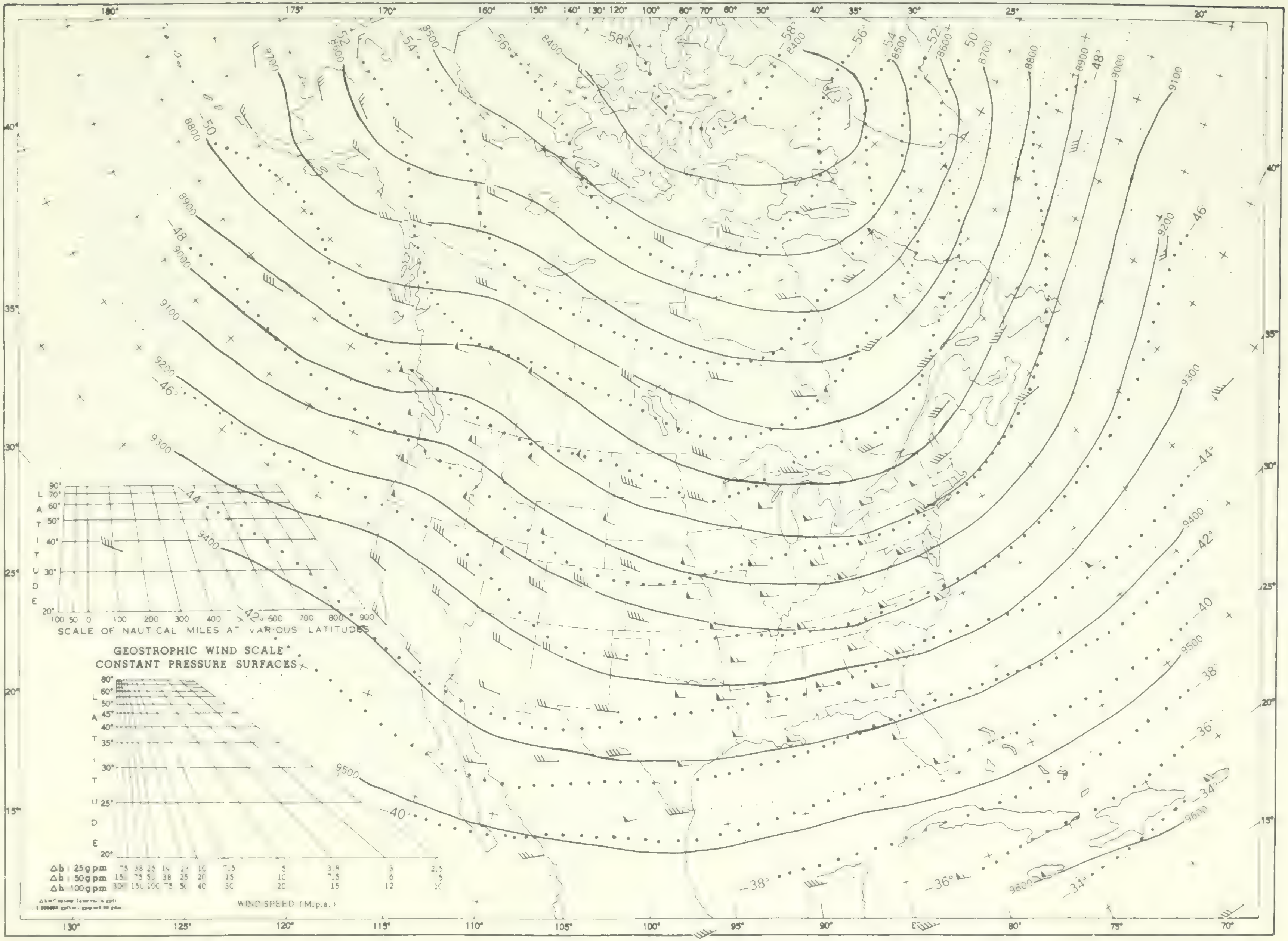
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500 mb Surface, 1200 G.m.t. March 1972 Average Height and Temperature, and Resultant Winds



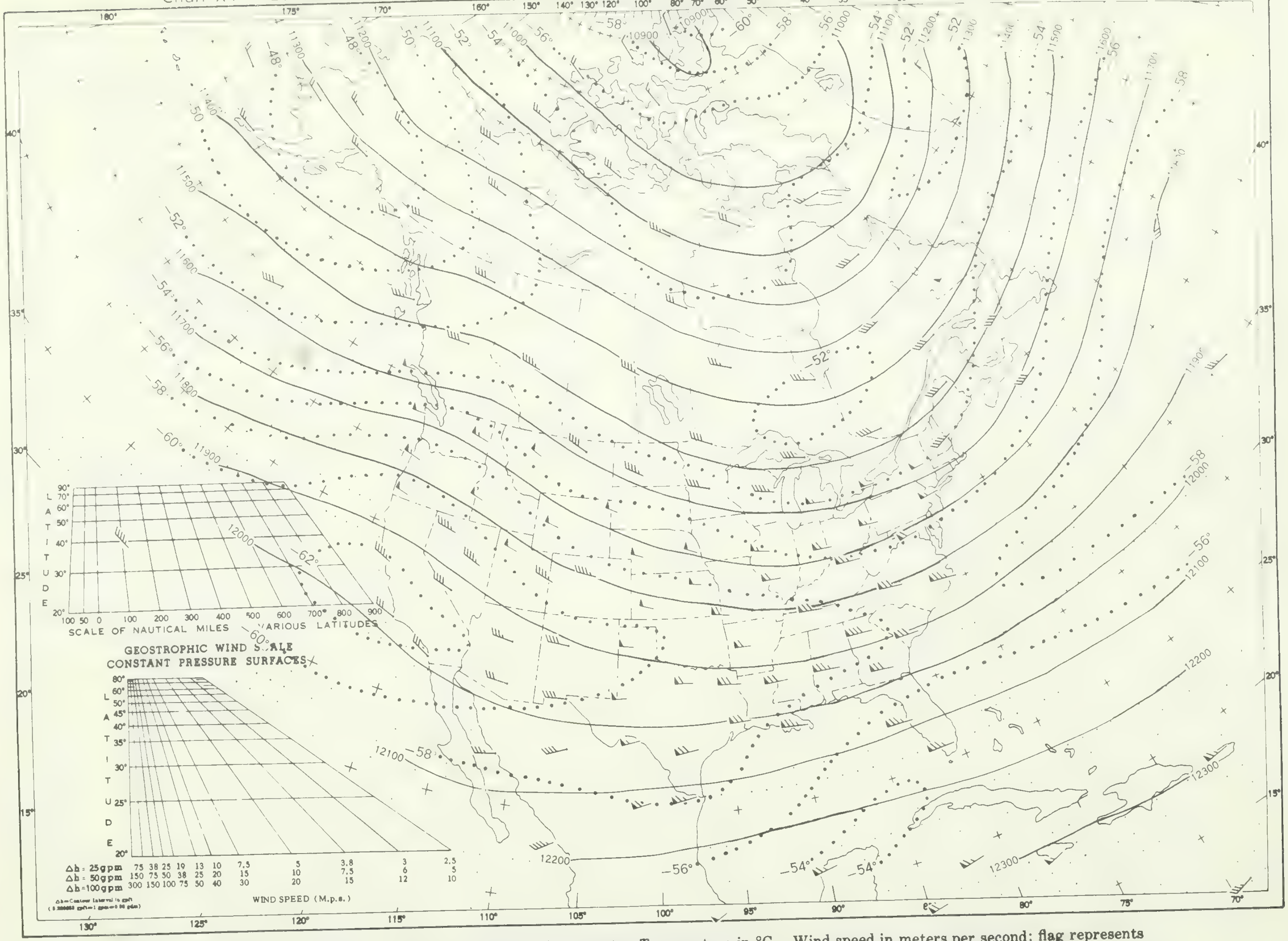
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XIV 300-mb Surface, 1200 G.m.t. March 1972. Average Height and Temperature, and Resultant Winds



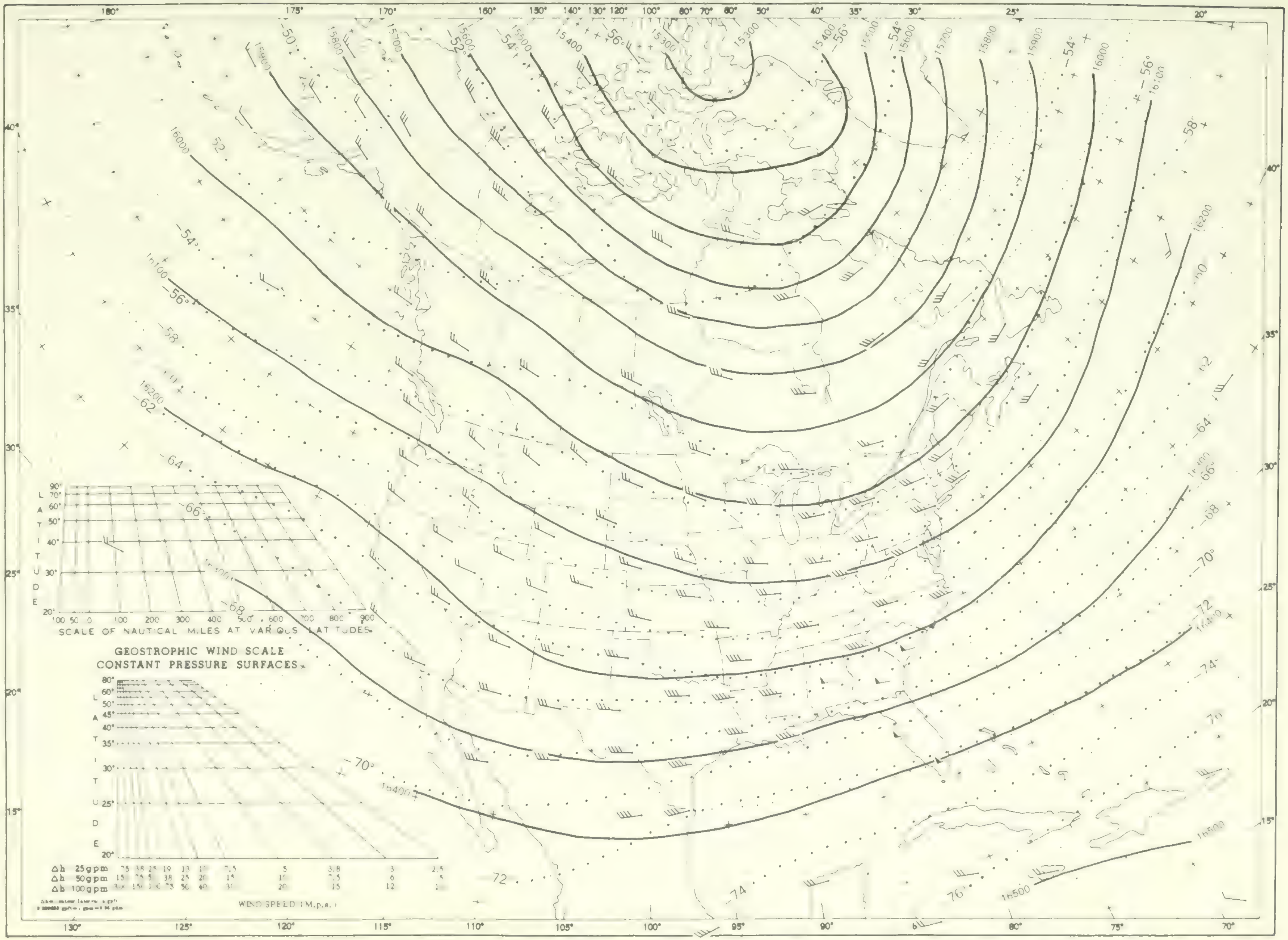
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200 mb Surface, 1200 G.m.t., March 1972. Average Height and Temperature, and Resultant Winds


10900
11000
11100
11200
11300
11400
11500
11600
11700
11800
11900
12000
12100
12200
12300
-48°
-50°
-52°
-54°
-56°
-58°
-60°
-62°
SCALE OF NAUTICAL MILES VARIOUS LATITUDES
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
LATITUDE
Δh = 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh = 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh = 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

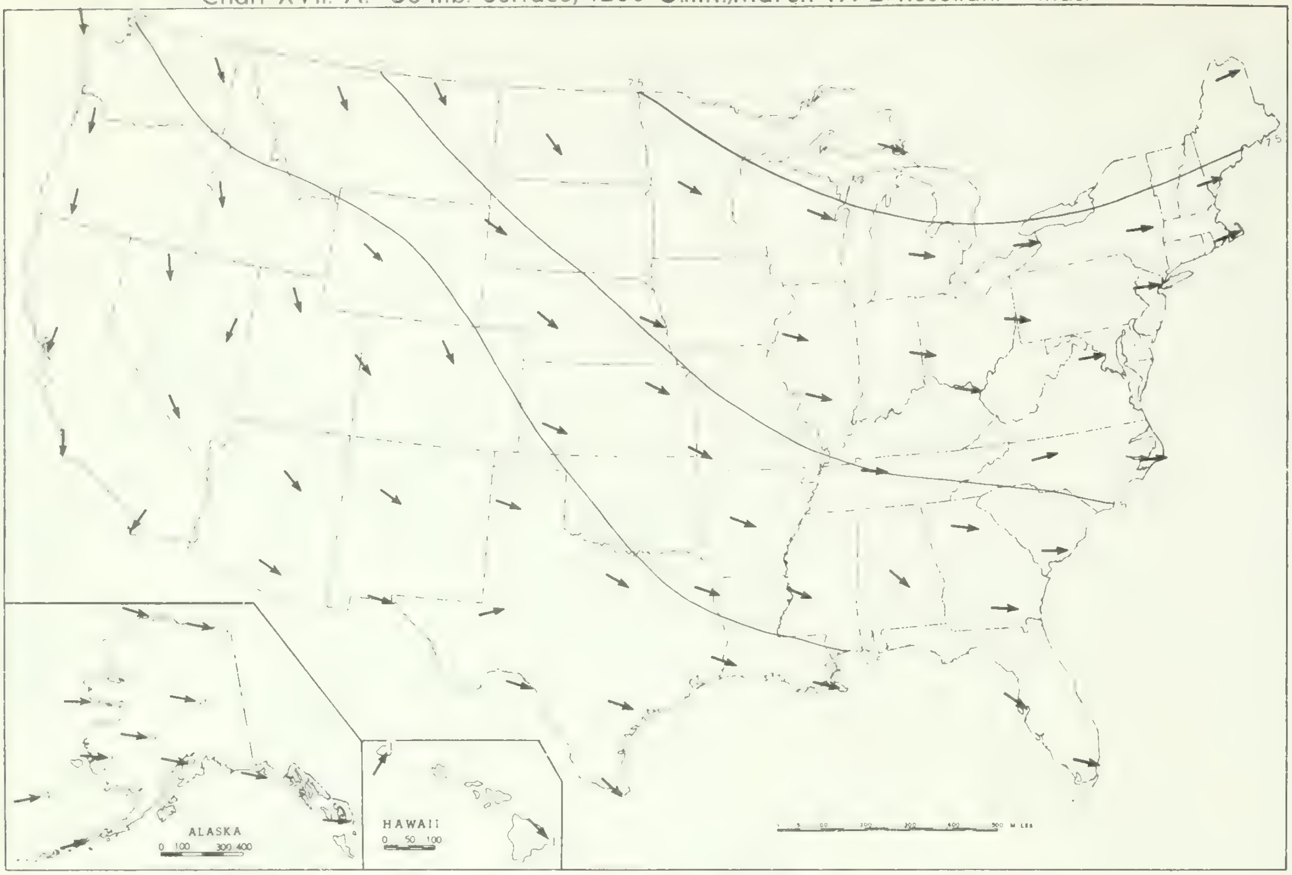
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XVI 100 mb Surface, 1200 G.m.t., March 1972. Average Height and Temperature, and Resultant Winds

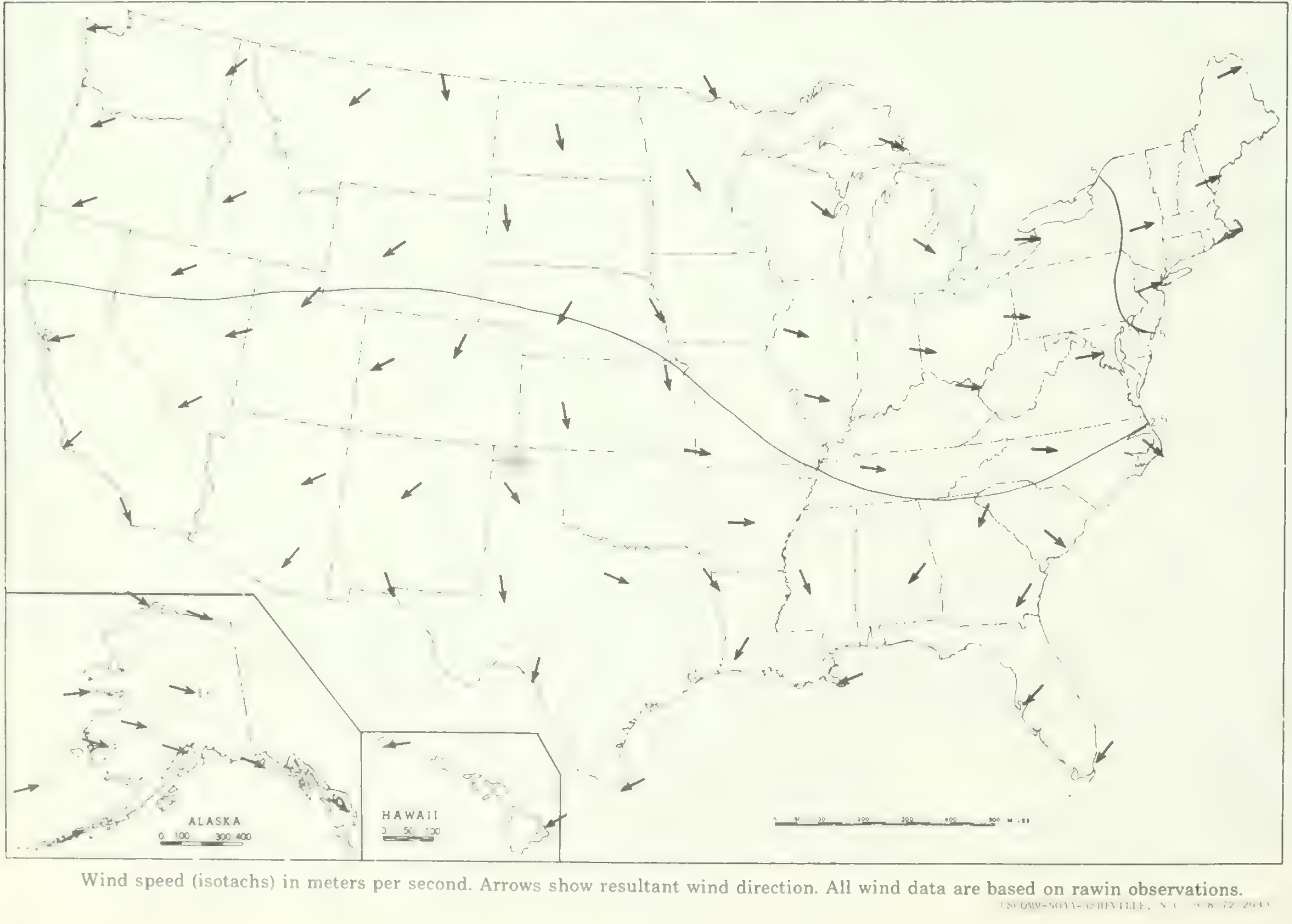


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., March 1972. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., March 1972 Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

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National Oceanic and Atmospheric Administration
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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

Volume 23 No. 4

APRIL 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. April temperatures averaged below normal over most northern States and above normal over the South.

2. April was especially stormy over the northern and central Great Plains and from Missouri across the Ohio River Valley to Pennsylvania.

3. No rain fell in much of the Southwest, continuing the dry trend in that area.

TEMPERATURE (° F.)--Temperatures in April aver- ged near or above normal over the western edge of the Great Plains from Montana to Texas, over the central and southern Rocky Mountains, and across the South from entral and southern California to Florida. The Pacific orthwest averaged cooler than normal. It was also ooler than normal in the Great Lakes Region and along he Atlantic Coast from New England to Georgia. Tem- eratures were quite changeable. In general, the West as warm and the East cool in the first week. The re- erse was true in the second and third weeks. Cool wea- her prevailed over most of the nation in the last week f April.

An arctic high plunged southward across mid-America arly in April. By the 4th, the temperatures were 32° r lower as far south as Oklahoma City, Okla. Hibbing, inn., registered 5° on that date. The cold air spread astward. By the following morning, Chattanooga, Tenn., nd Birmingham, Ala., were recording 32°. Quick arming on the back side of the high pushed afternoon emperatures in southeastern Nebraska from the forties n the 3d to the nineties by the 6th. Early in the second eek of April, a large mass of arctic air brought un- easonal cold from the Dakotas to Maine and southward s far as the Carolinas. Waterloo, Iowa, recorded 9° on he 8th, the coldest April temperature of record at aterloo. Raleigh, N. C., set a new April temperature ecord when the mercury plunged to 23° on the 9th. ape Hatteras, N. C., recorded 26° on the 10th, the oldest temperature of record for so late in the season. warming trend in mid-America pushed the afternoon emperatures into the eighties and nineties. Grand sland, Nebr., registered 82° on the 12th and numerous tations in Oklahoma recorded 100° or higher. A large nd powerful storm moved from the Great Basin across he Rocky Mountains to the central Great Plains shortly efore midmonth. Winnemucca, Nev., registered 10° n the 13th and Flagstaff, Ariz., 5° on the 14th. In ontrast, the mercury at Kansas City, Mo., climbed o 92° on the afternoon of the 14th. The northern Great lains remained seasonally cool at midmonth. While inter temperatures prevailed over the northern border tates, balmy weather occurred across the South.

Cold air from Canada continued to pour into the ountry in the last week of April. On the 25th, the ther- ometer at Duluth, Minn., dropped to 12°, the coldest emperature of record for so late in the season.

A low moved across the Colorado Rockies to the estern Great Plains. Southerly winds preceded the torm, while northerly winds followed. On the 27th, Burlington, Vt., registered 22°, the coldest temperature of record for so late in the season. Another storm developed over the central Rocky Mountains in the last few days of April.

PRECIPITATION--The long spell of dry weather over the Southwest which had prevailed since late December 1967 continued through April 1972. Much of the area received no rain in the 4-month period, January to April 1972.

Rains fell along the northern Pacific Coast on many days in April. Snow fell in the nearby hills and mountains. Cold airmasses, moving into the Great Plains, produced snow flurries and, moving farther south, set off thunderstorms, some of which were accompanied by hail and damaging winds. A few tornadoes occurred. Strong winds kicked up clouds of dust and sand in the thirsty Southwest.

Winter tarried. Snow flurries occurred from the central Great Plains to the Upper Mississippi River Valley and the Great Lakes Region early in April. Thundershowers occurred along the leading edge of a cold airmass and along a quasi-stationary front that stretched from Oklahoma to the Southeast. Some of the thunderstorms produced large hail. A number of tornadoes occurred in Illinois on the 6th, Several inches of snow fell in western New York on the afternoon of the 6th. Showers fell in the second week along a quasi-stationary front that, on the 11th, stretched from Utah to Maryland. The showers were scattered from Utah to Kansas, but were more general from Missouri to the Lower Ohio River Valley. Snow whitened the northern Great Plains and the higher elevations in Washington. Strong winds kicked up clouds of sand and dust in parts of the Southwest. Blizzards raged in Montana, Wyoming, Colorado, and the northern portions of Nevada and Utah. Heavy showers fell from the Missouri Bootheel to the Ohio River Valley on the 15th. Flash flooding occurred many places in southern Illinois, Kentucky, and nearby parts of neighboring States.

About midmonth, a storm dumped several inches of snow on the central Rocky Mountains and the western edge of the Great Plains in South Dakota and the Nebraska Panhandle.

The snow made highway travel difficult. Young livestock required more care and attention because of the continued wintry weather. Near the end of the third week of April, a quasi-stationary front stretched from the Texas Panhandle to Pennsylvania. A band of wet and windy weather occurred along the front. Thunderstorms popped up from Nebraska and the Texas Panhandle to the western portions of Kentucky and Tennessee. Rains fell from the Ohio River Valley to southern New England and snow whitened much of Vermont, New Hampshire, and northern Maine. Cyclogenesis occurred in Kansas near the end of the third week of April. The storm moved northeastward to the Great Lakes and into Canada. It produced generous rains over the eastern third of the nation. Tornadoes occurred in Arkansas, Illinois, Kentucky, and Tennessee. A 5-inch snow at Minneapolis, Minn., prevented the playing of a major league baseball game. Five inches of new snow at Marquette, Mich., increased the snow depth to 21 inches.

A slow-moving storm crossed the central Rocky Mountains to the western Great Plains about the middle of the last week of April. It dumped heavy snow on Denver, Colo., on the 26th. By evening 12 inches of snow covered Denver. This storm dissipated over the Great Plains, but another storm developed in the central Rocky Mountains and moved to the nearby Great Plains. It dumped several inches of snow in the mountains and set off some severe thunderstorms and a few tornadoes in the central Great Plains. Hail exceeding 2 inches in diameter pelted parts of Butler and Anderson Counties, Kansas.

Thus ended a stormy April.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In
Alabama	4 Stations	92	16+	New Market 2	22	[illegible]	Hamilton 3 S	6.36	Coffee Springs 2 NW	.30
Alaska	2 Stations	57	29+	Arctic Village	-43	01	Ketchikan	16.32	3 Stations	.00
Arizona	2 Stations	100	6+	Heber Ranger Station	2	14	Williams	1.45	134 Stations	.00
Arkansas	Subiaco	95	13	3 Stations	21	4+	Burdette	7.35	Taylor	.47
California	Blythe	100	5	White Mountain 2	- 9	14	Gasquet Ranger Station	9.46	30 Stations	.00
Colorado	5 Stations	90	12+	Wolf Creek Pass 1 E	-10	15	Independence Pass 5 SW	6.61	3 Stations	.00
Connecticut	Hartford WSO AP	87	19	2 Stations	15	8	Bridgeport WSO AP	5.64	Wigwam Reservoir	2.33
Delaware	Newark University Farm	84	19	Middletown 1 WSW	21	8	Newark University Farm	5.13	Georgetown 5 SW	3.44
Florida	La Belle	98	16	Fountain 3 SSE	33	2	West Palm Beach WSO AP	12.62	Weeki Wachee	T
Georgia	2 Stations	95	15+	2 Stations	24	9	Beaverdale	4.11	Bainbridge	.12
Hawaii	Keawakapu Beach 260.2,Maui	88	9	Haleakala Summit 338.4,Maui	21	27	Kipa 89.2, Hawaii	43.08	2 Stations	00
Idaho	Bruneau	84	28	Dixie	- 4	17	Fenn Ranger Station	5.16	2 Stations	T
Illinois	Waterloo 1 WSW	87	13	Barrington 1 SE	6	8	Centralia 2 SW	12.17	Utica Starved Rock Dam	2.93
Indiana	Paoli Radio WVAK	84	14	LaGrange Sewage Plant	8	8	Evans Landing Dam 43	12.86	La Porte	2.58
Iowa	3 Stations	91	6	Fayette	1	8	Sigourney	6.99	Waukon	1.35
Kansas	Independence	101	12	2 Stations	11	1	Emporia FAA Airport	6.70	Syracuse 2 W	.00
Kentucky	Pikeville	88	18	Falmouth 5 WNW	17	9	Valley View Lock 9	13.84	Scottsville 2 SW	3.11
Louisiana	4 Stations	91	15+	Ashland 2 S	32	1	Marion	6.89	Haynesville 2 WSW	.80
Maine	Sanford 2 NNW	74	30	Clayton Lake 2	- 9	8	Farmington	4.37	Fort Kent	.84
Maryland	4 Stations	88	19	3 Stations	12	9	Oakland 1 SE	6.68	Salisbury FAA Airport	2.24
Massachusetts	Chester 2	88	19	Chester 2	13	5	Hyannis	5.68	Knightsville Dam	2.99
Michigan	Bloomingdale	79	19	Chatham Exp Farm	-18	5	Three Rivers	5.13	Sebewaing Mich Sgr Co	.97
Minnesota	Springfield 1 NW	81	17	2 Stations	- 3	8	Vesta	4.04	High Landing 2 NW	.20
Mississippi	Aberdeen	94	15	Tupelo 2 WNW	26	2	Byhalia	7.88	Merrill	.79
Missouri	Joplin FAA Airport	96	12	Cole Camp 9 SE	14	4	De Soto	9.80	Burlington Junction	1.75
Montana	Brady Aznoe	82	28	Del Bonita	- 7	3	Libby 32 SSE	2.93	Wise River 3 WNW	.01
Nebraska	4 Stations	92	7+	Harrison	7	3	Wahoo	6.25	Benkelman	.75
Nevada	Sunrise Manr Las Vegas	95	23	2 Stations	5	18+	Mount Rose-Sky Tavern	2.14	5 Stations	.00
New Hampshire	Concord WSO AP	77	30	First Conn Lake	-10	8	Mount Washington	9.73	Gilmanton 2 E	1.77
New Jersey	2 Stations	87	19	Pemberton 3 E	18	8	Mays Landing 1 W	5.05	High Point Park	2.34
New Mexico	Jal	101	12+	2 Stations	7	15+	Black Lake	1.02	114 Stations	.00
New York	2 Stations	87	19	Stillwater Reservoir	-12	7	Forestport	5.74	Watertown FAA Airport	1.01
North Carolina	Whiteville	95	15	Banner Elk	12	9	Waterville 2	6.39	Cape Hatteras WSO	.72
North Dakota	Hannah 2 N	76	29	Dickinson FAA Airport	1	4	New Salem 6 WNW	2.72	Belcourt Indian Res	.11
Ohio	Ironton	87	18	Lancaster 2 NW	8	8	St. Marys 3 W	8.44	Toledo Blade	3.08
Oklahoma	Mangum Research Sta	106	12	Beaver 1 SW	17	1	Wichita Mt Wl Ref	7.55	Boise City 2 E	.20
Oregon	2 Stations	85	27	Crater Lake NP HQ	2	18	Tillamook 13 ENE	12.57	Boardman	.02
Pennsylvania	Perkasie	87	19	Austinburg 2 W	6	7	Confluence 1 NW	7.59	Bethlehem	2.00
Puerto Rico	5 Stations	93	18+	Adjuntas Substation	52	18	Aceituna	12.41	Aguirre Central	.21
Rhode Island	Providence WSO AP	84	19	North Scituate 4 W	19	8	Kingston	4.91	2 Stations	3.71
South Carolina	6 Stations	93	16+	Caesars Head 1 NE	23	9	Hogback Mountain	3.49	2 Stations	T
South Dakota	Pickstown	88	6	Deerfield 4 NW	-10	1	Arlington	6.95	Britton	.63
Tennessee	Gatlinburg 2 SW	89	14	Mountain City No 2	14	9	Tazewell	7.59	Monsanto	1.97
Texas	3 Stations	106	15+	Perryton 5 NNE	19	2+	Brenham	8.34	36 Stations	.00
Utah	Hanksville	87	29	Soldier Summit	1	26	Alta	7.68	3 Stations	.00
Vermont	3 Stations	75	30+	2 Stations	- 2	8+	Mays Mill	5.92	South Newbury	1.79
Virginia	Wakefield 1 NW	91	16	Big Meadows	9	9	Grundy	7.16	Buena Vista	.99
Washington	Concrete	82	27	Rainier Paradise RS	3	9	Spruce	18.14	Sunnyside	.03
West Virginia	Williamson	88	19	Canaan Valley	5	9	Alpena 1 NW	9.03	Moorefield 2 SSE	2.96
Wisconsin	5 Stations	79	18	Long Lake Dam	- 8	5	Kenosha	5.49	Spooner Exp Farm	.60
Wyoming	Worland FAA AP	80	29	Burgess Junction	-11	4	Bondurant 3 NW	4.46	Deaver	.06

+ And also on an earlier date or dates.

NOTE. Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.9	1017.3	76	50	63.1	.0	87	15	30	2	0	2	47	58	2.56	-1.91	0.79	5	5	0.0	0	3.2	21	36	SW	16	8	14	8	5.2	82
HUNTSVILLE	624	993.6	1016.6	73	50	61.7	.1	86	15+	32	2	0	1	48	63	4.02	0.03	2.03	8	5	0.0	0	2.1	20	29	19	21	7	10	13	6.0	
MOBILE	211	1009.1	1017.1	80	59	69.4	1.8	87	21+	39	9	0	0	59	72	1.81	-4.55	0.85	3	3	0.0	0	3.6	15	23	13	28	6	13	11	5.6	
MONTGOMERY	183	1010.2	1017.4	79	53	65.7	1.6	91	15	35	2	1	0	53	65	1.45	-3.44	1.00	4	2	0.0	0	2.7	21	29	S	7	10	13	7	4.9	68
ALASKA												B																				
ANCHORAGE	114	1002.4	1007.6	34	20	26.8	-10.1	42	29	3	1	0	29	18	69	0.73	0.31	0.34	6	0	12.6	16	1.3	32	24	13	17+	9	7	14	5.8	68
ANNETTE	110	1007.1	1011.2	44	32	38.0	-5.4	52	12	26	2	0	18	31	80	8.78	-0.34	2.78	21	0	14.0	4	4.1	14	28	16	18	0	9	21	8.6	
BARROW	31	1016.3	1017.0	3	-12	-4.4	-4.6	18	30	-30	2	0	30			0.01	-0.10	0.01	1	0	0.7	8	7.6	8	28	8	24	17	6	7	3.8	
BARTER ISLAND	39	1014.9	1016.8	3	-12	-4.6	-5.5	20	29	-30	1	0	30	-10	74	0.07	-0.10	0.04	3	0	0.7		2.0	10	45	8	24	9	8	13	5.8	
BETHEL	125	1004.4	1010.3	24	5	14.4	-11.5	36	28+	-13	15	0	30	12	87	0.62	0.04	0.18	12	0	9.4	12	4.6	26	38	32	17	4	6	20	7.6	
BIG DELTA	1268			31	7	18.9		46	30+	-22	1	0	30			0.29		0.13	6	0	5.9	11			32	20	12	6	11	13	6.3	
COLD BAY	96	1010.5	1014.3	35	24	29.5	-3.8	44	16	12	6+	0	27	26	87	3.09	1.63	1.34	24	0	9.9	3	10.6	28	53	26	11	0	0	30	9.7	
FAIRBANKS	436	992.2	1009.8	32	10	20.8	-8.6	46	30	-12	1	0	30	9	59	0.20	-0.05	0.05	9	0	4.3	24	1.8	35	23	21	18+	7	6	17	6.6	
GULKANA	1572			34	3	18.4		45	30	-16	16	0	30			0.27		0.12	5	0	4.0	46	0.6	21	32	18	12	10	9	11	5.7	
HOMER	67			36	18	27.1		44	29+	6	1	0	30			1.20	-0.10	0.70	9	0	17.4	23			25	19	17+	11	4	15	6.3	
JUNEAU	12	1008.5	1009.2	42	28	34.6	-3.4	51	30	17	9+	0	26	24	69	3.62	0.75	1.17	17	0	10.3	9	4.6	11	30	12	24	5	2	23	8.0	43
KING SALMON	49	1007.1	1009.1	30	14	22.1	-10.7	42	28	-4	15+	0	28	15	72	1.37	0.73	0.30	17	0	8.7	2	3.1	22	39	15	11	3	11	16	7.5	
KOTZEBUE	10	1010.8	1011.4	16	-2	7.3	-5.9	34	30	-15	14	0	30	1	74	0.67	0.36	0.36	6	0	11.0	49	5.2	9	45	30	4	10	9	11	5.5	
MC GRATH	344	996.3	1009.2	31	4	17.7	-9.9	43	30	-24	1	0	29	11	72	1.19	0.72	0.35	10	0	30.0	49	0.9	30	22	32	26	8	4	18	6.5	
NOME	13	1008.8	1009.8	21	3	11.9	-9.3	34	30	-18	14	0	30	5	69	0.43	-0.37	0.20	10	0	8.9	17	4.8	5	32	11	8	10	7	13	5.9	52
ST. PAUL ISLAND	22	1012.5	1013.4	31	19	25.0	-3.4	38	28	2	22+	0	30	24	91	1.83	0.87	0.30	19	0	15.6	12	7.0	30	43	36	11	2	9	19	7.9	
SHEMYA	122	1013.5	1017.2	39	34	36.1	.6	41	30+	29	23+	0	11	32	87	3.48	1.42	0.87	17	0	2.3	T	9.1	25	62	23	22+	0	6	24	9.0	
SUMMIT	2401	919.1	1010.2	24	3	13.5		36	25	-8	16+	0	30	6	71	0.23		0.10	7	0	8.2	33	6.6	6	28	7	7+	7	11	12	6.1	
TALKEETNA	345			36	6	21.1	-12.7	46	28	-13	7+	0	30			1.40	0.65	0.63	9	0	28.1	50			21	2	27					
UNALAKLEET	15			22	5	13.1		39	30	-13	7+	0	30			0.28		0.11	8	0	3.3	25			36	8	8	9	7	14	6.1	
YAKUTAT	28	1006.4	1007.6	37	21	28.8	-8.2	43	30	5	20	0	29	26	83	5.48	-1.75	1.14	20	0	45.5	87	3.4	10	23	11	24	5	3	22	7.7	
ARIZONA																																
FLAGSTAFF	7006	785.6	1014.7	58	22	39.8	-3.5	68	5	5	14	0	28	14	39	0.72	-0.46	0.54	3	0	1.5	1	5.8	22	29	SW	13+	16	7	7	3.8	91
PHOENIX	1117	972.6	1011.2	87	56	71.4	4.2	94	5	47	15	13	0	24	18	T	-0.32	T	0	0	0.0	0	2.0	20	36Y	WSW	13	17	5	8	3.4	94
TUCSON	2584	924.1	1011.3	83	49	65.8	-.1	92	5	37	15	3	0	21	20	0.00	-0.27	0.00	0	0	0.0	0	2.5	23	35	SW	17	15	5	10	4.0	90
WINSLOW	4895	849.6	1012.7	73	35	54.2	-1.4	85	10+	22	14	0	11	13	23	0.02	-0.43	0.02	1	0	0.2	0	6.4	23	52	22	13	18	4	8	3.6	
YUMA	194	1004.4	1011.6	88	57	72.2	1.6	97	5	45	20	14	0			T	-0.09	T	0	0	0.0	0	4.2	29	30	W	13+	20	7	3	2.7	93
ARKANSAS																																
FORT SMITH	447	997.6	1014.2	76	48	61.7	.0	92	12	27	1	2	2	48	64	2.62	-1.62	1.35	11	9	0.0	0	1.7	14	41	SW	13	9	9	12	5.8	62
LITTLE ROCK	257	1005.4	1015.1	75	50	62.5	.1	89	13+	32	2	0	1	50	66	1.81	-3.12	0.90	5	5	0.0	0	3.0	19	40	NW	21	11	3	16	6.2	69
CALIFORNIA																																
BAKERSFIELD	475	998.6	1016.3	76	51	63.4	.4	94	27	41	14	1	0	39	43	0.08	-0.73	0.07	2	0	0.0	0	5.7	34	29	32	5	20	6	4	3.0	
BISHOP	4108	871.7		73	35	53.7	-1.4	83	28	22	19	0	10			T	-0.46	T	0		0.0	0						17	7	6	4.2	
BLUE CANYON	5280			51	34	42.5	-3.1	67	26	17	13	0	11			6.76	1.94	2.08	7		37.8	20			26	26	12+	11	7	12	5.2	
EUREKA U	43			55	43	49.1	-1.3	75	4	36	13	0	0			2.27	-0.40	0.66	11		0.0	0			40	N	17	11	6	13	5.6	74
FRESNO	328	1004.7	1016.5	76	46	61.1	-.2	93	27	36	14	1	0	39	49	0.27	-0.86	0.24	2	0	0.0	0	4.6	30	28	NW	13	18	6	6	3.7	88
LONG BEACH	25	1014.6	1016.0	74	53	63.0	3.0	86	27	44	20	0	0	48	64	0.18	-0.59	0.18	1	1	0.0	0	2.7	25	25	32	13	16	6	8	4.2	
LOS ANGELES	97	1011.9	1015.5	69	54	61.5	2.1	80	26	47	20	0	0	51	74	T	-1.05	T	0	1	0.0	0	5.2	25	38Y	W	13	18	4	8	3.8	
LOS ANGELES U	270			74	54	63.9	2.1	91	26	46	20	1	0			0.03	-1.14	0.03	1		0.0	0			22	NW	13	18	5	7	3.6	87
MT SHASTA R	3544	892.3	1017.4	55	33	43.9	-3.6	70	27	24	22+	0	17	30	63	2.62	-0.15	1.30	8		2.5	1	1.1	33								
OAKLAND	6	1018.3	1018.5	64	49	56.6	.0	74	27+	43	13	0	0	45	69	0.96	-0.42	0.34	5	0	0.0	0	6.3	28	29	35	18	13	8	9	4.6	
RED BLUFF	342	1004.1	1016.6	70	45	57.7	-2.7	85	27	32	13	0	1	35	50	0.58	-1.25	0.25	5	0	0.0	0	1.9	32	37	SE	12+	13	8	9	4.3	88
SACRAMENTO	17	1016.3	1017.0	72	45	58.6	.2	87	27	36	13	0	0	39	55	1.39	-0.01	0.47	6	1	0.0	0	2.8	26	34	N	18	11	11	8	4.5	84
SANDBERG R	4517	862.2		60	39	49.8	-1.0	74	30	26	13	0	6			0.04	-0.93	0.03	2		0.3	T			52	36	25	14	6	10	4.3	
SAN DIEGO	13	1014.9	1016.0	69	56	62.3	.8	76	5	48	20	0	0	50	67	0.02	-0.77	0.02	1	0	0.0	0	4.6	29	25	N	19	15	7	8	4.3	80
SAN FRANCISCO	8	1018.0	1018.6	64	47	55.4	-.3	79	27	39	13	0	0	43	68	1.20	-0.10	0.52	6	0	0.0	0	8.5	28	32	29	28	12	8	10	4.9	
SAN FRANCISCO U	52			62	49	55.5	-.2	75	26	45	13	0	0			1.07	-0.37	0.45	5		0.0	0			33	W	27					85
SANTA MARIA	236			69	42	55.5	-.1	83	26	31	20	0	1			0.19	-1.00	0.18	2		0.0	0						21	2	7	3.5	
STOCKTON	22	1016.9	1017.8	73	46	59.7	.0	91	27	38	20	1	0	39	53	0.57	-0.57	0.21	5	0	0.0	0	6.5	30	31	34	18	11	11	8	4.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
ALAMOSA	7536	768.7		61	24	42.7	.9	74	10	12	1	0	25			T	-0.69	T	0		T	T						13	9	8	5.1	
COLORADO SPRINGS	6145	807.3	1011.0	62	36	49.1	3.5	79	10	23	1	0	7	25	47	0.42	-0.89	0.32	4	4	3.3	T	1.5	2	44	33	26+	6	14	10	5.8	
DENVER	5283	832.4	1009.8	63	34	48.5	2.1	80	11+	24	4	0	12	29	57	3.52	1.41	3.04	10	5	17.2	12	1.9	32	38	NW	6	6	10	14	6.6	58
GRAND JUNCTION	4843	848.6	1010.2	68	38	53.3	1.0	82	24	28	27+	0	5	19	30	0.11	-0.64	0.03	6	0	T	0	2.4	22	36	SW	18	9	9	12	5.9	63
PUEBLO	4684	851.3	1009.5	69	37	52.9	2.2	85	10+	24	1	0	6	30	50	0.68	-0.50	0.43	5	3	T	T	0.9	33	50	NW	26	9	7	14	6.1	83
CONNECTICUT																																
BRIDGEPORT	7	1015.2	1015.9	55	37	46.1	-1.9	73	19	26	8	0	5	30	59	5.64	1.84	1.72	11	0	0.1	T	3.6	32	32	30	9	7	10	13	5.9	
HARTFORD	169	1008.8	1015.6	56	33	44.3	-4.2	87	19	24	8+	0	17	28	58	4.61	0.88	1.40	13	0	2.7	1	3.6	31	31	NW	17	6	11	13	6.4	61
DELAWARE																																
WILMINGTON	74	1013.9	1016.9	61	39	50.0	-2.1	83	19	26	8	0	6	36	62	4.47	1.14	1.19	12	4	0.1	T	2.3	32	21	7	20+	5	13	12	6.7	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1004.7	1016.5	64	38	51.3		85	19	24	9+	0	10	39	68	4.40		1.20	11	4	0.4	T	1.0	28	25	30	4	8	7	15	6.5	
WASHINGTON NATIONAL	10	1013.9	1016.4	65	43	54.1	-1.6	85	19	28	9	0	3	39	59	3.99	0.84	1.42	11	4	0.6	1	1.1	30	30	NW	4	9	6	15	6.0	55
FLORIDA																																
APALACHICOLA U	13			77	63	69.8	2.3	82	22+	51	1	0	0			0.48	-3.82	0.47	2	1	0.0	0			24	SW	23	12	13	5	4.6	92
DAYTONA BEACH	31	1016.9	1018.4	80	61	70.8	1.9	92	16+	46	3	3	0	59	70	1.41	-1.56	0.94	6	3	0.0	0	0.9	8	20	36	26+	11	8	11	5.2	
FORT MYERS	15	1017.6	1017.8	85	63	74.0	1.2	93	19	50	3	2	0	62	71	0.27	-2.37	0.25	2	0	0.0	0	0.4	5	24	9	28+	16	9	5	3.8	
JACKSONVILLE	26	1017.3	1018.3	80	57	68.7	.0	90	21+	44	3	3	0	57	71	2.98	-0.57	0.96	7	4	0.0	0	1.3	22	29	NW	22	10	11	9	5.1	73
KEY WEST	4	1016.6	1017.2	82	74	77.9	2.1	85	23+	66	3	0	0	65	67	0.76	-1.72	0.62	6	2	0.0	0	7.2	10	25	NE	27+	21	3	6	3.4	85
LAKELAND U	214			82	63	72.2	.7	89	21+	53	3	0	0			0.42	-3.09	0.22	5		0.0	0						15	9	6	4.1	77
MIAMI	7	1017.3	1017.4	82	68	75.0	.8	89	17	57	3	0	0	63	68	2.67	-1.21	2.31	7	4	0.0	0	4.0	9	23	8	29	16	9	5	4.3	
ORLANDO	108	1013.9	1018.2	84	62	72.7	1.5	93	22+	50	3	7	0	59	66	1.39	-2.03	0.93	4	2	0.0	0	0.2	27	23	25	23+	9	13	8	5.2	
PENSCOLA	112	1013.2	1017.5	77	60	68.8	.9	85	24+	43	2	0	0	58	70	2.04	-3.21	0.88	4	3	0.0	0	2.9	18	21	14	28+	5	16	9	5.9	
TALLAHASSEE	55	1015.6	1017.8	83	54	68.2	.7	92	14	37	2	5	0	56	69	0.55	-4.09	0.26	4	2	0.0	0	1.9	21	25	22	7	7	17	6	5.3	
TAMPA	19	1018.0	1018.1	82	61	71.4	.0	88	21+	46	3	0	0	59	68	0.38	-2.46	0.33	3	2	0.0	0	0.4	17	21	5	9+	16	7	7	4.2	82
WEST PALM BEACH	15	1016.6	1017.3	83	65	74.1	.2	93	17	53	3	2	0	62	68	12.62	8.28	6.20	7	6	0.0	0	3.6	10	26	8	28+	13	9	8	5.1	
GEORGIA																																
ATHENS	802	988.2	1017.1	75	49	61.8	.7	87	20+	32	9	0	1	47	63	1.55	-2.84	0.55	6	2	0.0	0	2.5	24	23	25	15	10	11	9	4.9	
ATLANTA	1010	980.4	1017.0	73	49	61.3	1.1	87	15	30	2	0	1	47	63	2.31	-2.16	0.92	7	3	0.0	0	3.4	25	38	NW	7	9	12	9	5.3	76
AUGUSTA	136	1012.2	1017.4	77	50	63.1	-.1	89	15	30	10	0	1	50	67	0.90	-2.66	0.47	4	1	0.0	0	2.2	22	28	22	16	8	15	7	5.2	
COLUMBUS	385	1003.4		79	53	65.9	2.2	91	15	36	2	1	0	50	61	1.07	-3.52	0.54	2	2	0.0	0	1.4	25	23	30	2	11	12	7	4.9	
MACON	354	1005.1	1018.1	79	51	65.0	-.6	91	15	34	10	1	0	51	66	0.53	-3.22	0.23	3	1	0.0	0	1.8	23	32	NW	8	9	12	9	5.3	78
ROME	637			76	46	60.8	1.0	88	15	28	2	0	3			1.93	-2.66	0.81	8		0.0	0										
SAVANNAH	46	1016.3	1018.1	79	54	66.7	1.0	92	15	35	10	2	0	54	69	1.20	-2.50	0.66	6	1	0.0	0	2.2	22	26	E	21+	9	12	9	5.6	73
HAWAII																																
HILO	27	1016.3	1017.5	79	66	72.7	1.1	85	14	60	28	0	0	66	85	17.79	5.87	6.07	30	2	0.0	0	1.2	13	20	E	14+	0	5	25	9.0	22
HONOLULU	7	1016.3	1016.8	81	69	75.0	.8	84	30+	62	1	0	0	63	70	5.15	3.84	4.21	11	4	0.0	0	12.3	6	33	NE	10	3	8	19	7.6	56
KAHULUI	48	1013.9	1016.3	83	65	73.6	.2	85	18+	57	1	0	0	64	74	0.30	-1.14	0.07	10	1	0.0	0	10.9	6	29	E	24+	4	8	18	7.7	62
LIHUE	103	1013.2	1018.1	78	70	74.0	1.5	81	30+	60	1	0	0	66	77	10.65	7.31	6.52	15	4	0.0	0	10.5	6	27	S	14	0	7	23	8.6	43
IDAHO																																
BOISE	2838	914.7	1015.3	58	35	46.7	-3.7	76	28	23	19+	0	12	27	48	0.62	-0.54	0.26	9	0	1.6	T	2.7	31	32	NW	28	5	9	16	6.7	64
LEWISTON	1413			58	36	47.1	-3.7	78	27	27	3	0	10			0.97	-0.17	0.31	13		1.1	T			47Y		21	2	8	20	7.6	
POCATELLO	4454	860.5	1014.2	55	31	43.0	-3.5	72	28	17	3	0	16	23	51	1.36	0.30	0.79	7	1	0.9	T	9.6	23	37	SW	29	6	10	14	6.4	65
ILLINOIS																																
CAIRO J	314			69	51	59.9	.5	82	19	28	8	0	2			6.79	2.72	3.19	9		0.0	0			35	SW	20+	9	9	12	5.9	62
CHICAGO O HARE	658	991.2	1015.9	54	36	44.8	-2.4	77	18	14	8	0	10	35	72	4.77	1.83	2.36	14	6	3.3	3	2.7	3	38	5	7	6	5	19	7.3	
CHICAGO MIDWAY	607	993.2	1016.2	56	38	46.9	-2.1	78	18	20	8	0	6	34	65	3.66	0.62	0.99	13	6	3.3	2	2.3	5	34	NE	7	5	8	17	7.2	54
MOLINE	582	994.2	1016.0	58	38	48.0	-2.0	79	18	21	8	0	11	37	70	5.19	2.02	1.71	12	7	2.6	1	2.8	9	34	NE	7+	5	5	20	7.6	39
PEORIA	652	991.2	1015.4	59	39	48.9	-1.9	79	18	19	8	0	10	37	68	4.38	0.41	1.08	12	8	0.9	1	2.5	12	32	NE	7	5	6	19	7.5	51

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
ROCKFORD	724	988.5	1015.8	54	35	44.5	-3.3	77	18	15	8	0	11	34	70	6.21	3.16	3.17	10	4	2.7	4	3.3	9	30	12	21	5	6	19	7.3	
SPRINGFIELD	588	992.9	1015.0	63	42	52.5	-.9	80	6	22	8	0	7	42	70	3.35	-0.24	1.29	11	3	T	T	2.9	14	34	NW	6	5	5	20	7.3	49
INDIANA																																
EVANSVILLE	381	1001.7	1015.7	67	46	56.4	-1.3	83	19	24	8	0	5	44	65	6.66	2.68	2.69	15	8	T	T	1.6	19	29	SW	22+	6	7	17	6.8	50
FORT WAYNE	791	986.8	1017.0	58	37	47.7	-1.6	76	18+	15	8	0	10	37	68	6.28	3.14	1.51	16	7	1.9	1	1.0	26	34	W	16	5	9	16	7.1	60
INDIANAPOLIS	792	986.8	1016.1	63	41	52.1	1.3	80	18	18	8	0	8	40	67	5.81	2.07	2.01	15	7	0.6	T	1.0	18	48	N	7	6	8	16	6.8	54
SOUTH BEND	773	987.8	1016.1	56	35	45.4	-2.1	76	18	11	8	0	10	35	71	3.23	-0.35	0.91	16	7	7.1	4	0.4	11	28	11	21	4	8	18	7.2	
IOWA																																
BURLINGTON	692			60	39	49.3	-1.5	80	18	17	8	0	9	38	66	4.01	0.57	1.24	11	8	T	T	2.6	11	32	36	16	4	7	19	7.4	
DES MOINES	938	980.0	1014.9	60	38	48.9	.2	87	6	20	8+	0	8	37	68	3.56	1.03	1.20	15	5	0.6	T	3.0	8	32	NW	23+	5	6	19	7.6	41
DUBUQUE	1056	976.3		53	35	43.7	-3.1	75	18	12	8	0	10			5.50	2.42	1.84	10		4.5	3						4	5	21	7.6	
SIOUX CITY	1095	974.3	1014.4	60	39	49.4	.5	89	6	23	4	0	8	35	62	3.44	1.19	1.40	14	5	0.8	1	4.1	7	40	SW	17	6	7	17	7.2	48
WATERLOO	868	983.4	1015.7	55	34	44.3	-3.0	76	18+	9	8	0	14	33	69	3.29	0.59	1.09	12	4	3.4	2	3.8	9	26	11	6	3	7	20	7.9	
KANSAS																																
CONCORDIA	1470	959.0	1012.1	64	40	52.1	-.7	84	6	19	1	0	7	40	68	4.29	2.17	1.20	12	5	T	T	2.0	11	42	S	17	6	8	16	7.1	59
DODGE CITY	2582	920.4	1010.8	69	41	55.1	1.5	90	12	21	1	1	3	31	45	2.06	0.22	1.29	6	3	T	0	0.7	19	49	N	3	9	5	16	6.3	65
GOODLAND	3654	883.8	1010.7	65	35	49.9	1.8	85	17	14	1	0	7	32	58	0.60	-0.99	0.35	4	3	T	T	0.7	2	48	14	25	8	5	17	6.3	
TOPEKA	877	981.4	1013.1	67	42	54.7	.3	87	18+	20	4	0	5	42	66	3.93	0.64	1.44	15	6	T	0	2.1	10	51	SW	30	8	5	17	7.1	47
WICHITA	1321	963.8	1011.6	69	42	55.3	-1.4	96	12	19	4	1	5	42	64	3.32	1.02	1.00	7	7	0.0	0	1.8	16	36	N	3	6	9	15	6.5	61
KENTUCKY																																
COVINGTON	869	984.1	1016.0	63	42	52.5	.3	80	13	20	8	0	7	38	61	5.89	2.67	1.45	15	9	0.5	T	2.0	23	28	27	16	5	9	16	7.0	
LEXINGTON	966	981.0	1016.8	65	43	53.7	-.7	79	18+	22	9	0	8	42	69	8.75	4.71	2.75	17	11	T	T	3.2	22	28	25	16+	5	9	16	6.8	
LOUISVILLE	477	998.3	1015.9	67	46	56.2	1.4	83	19	24	8	0	5	43	64	8.48	4.66	2.07	15	9	T	0	1.8	22	40	SW	16	8	9	13	6.3	54
LOUISIANA																																
ALEXANDRIA	92	1011.9	1016.1	79	55	67.1	1.3	88	15+	37	1	0	0	57	74	1.42	-4.28	0.79	5	3	0.0	0	4.0	17	25	19	7	10	12	8	5.0	
BATON ROUGE	64	1013.5	1016.4	81	58	69.9	1.7	89	20+	41	1	0	0	57	67	1.44	-3.33	0.80	4	3	0.0	0	4.0	15	23	17	15	11	13	6	4.8	
LAKE CHARLES	9	1014.6	1015.6	80	60	69.8	1.9	87	16	41	1	0	0	62	79	1.58	-2.79	0.75	5	2	0.0	0	5.1	14	25	10	28	10	9	11	5.5	
NEW ORLEANS	4	1015.6	1016.5	80	59	69.8	1.9	87	20+	40	1	0	0	61	74	1.64	-2.91	0.55	4	2	0.0	0	4.0	15	26	14	27	9	15	6	5.0	
SHREVEPORT	254	1005.8	1014.8	78	55	66.9	1.6	88	13	38	9	0	0	57	74	2.06	-2.51	0.54	7	7	0.0	0	4.7	16	26	15	27	8	7	15	5.9	54
MAINE																																
CARIBOU	624	989.5		44	26	34.7	-1.7	63	30	5	8	0	28			1.09	-1.54	0.51	13		9.4	19						5	13	12	6.5	
PORTLAND	43	1012.5	1014.8	49	32	40.6	-1.9	69	30	25	8+	0	18	27	63	2.53	-1.20	0.78	12	0	6.3	1	4.3	30	33	NW	21	6	10	14	6.6	57
MARYLAND																																
BALTIMORE	14[illegible]	1011.2	1016.8	63	41	51.6	-2.6	85	19	28	8+	0	5	37	61	5.30	1.70	1.54	11	4	0.3	T	2.1	31	33	W	20	8	8	14	6.3	58
MASSACHUSETTS																																
BLUE HILL OBS R	629			51	33	42.0	-3.7	78	19	20	8	0	15			3.72	-0.28	1.14	13		4.5	1			45	NW	21					50
BOSTON	15	1014.2	1015.2	52	38	44.9	-3.0	74	30	25	8	0	4	29	60	3.34	-0.43	0.87	11	0	0.4	T	3.5	32	32	NW	17	6	9	15	6.5	55
WORCESTER	986	978.3	1015.8	50	31	40.4	-4.2	77	19	17	8	0	18	25	59	4.29	0.36	1.04	15	0	7.2	2	5.6	31	25	30	19+	7	9	14	6.5	
MICHIGAN																																
ALPENA	689	991.9	1017.8	46	25	35.4	-3.7	69	28+	7	8	0	26	23	63	1.69	-0.94	0.64	14	1	3.3	6	1.7	5	27	E	22	10	7	13	6.0	56
DETROIT	619			54	36	44.9	-2.7	75	18	17	8	0	10	28	56	3.12	0.12	1.01	14	3	0.6		1.6	35	23	3	7					
DETROIT METRO	633	991.9	1016.3	55	34	44.6	-1.9	74	18	18	8	0	11	31	63	3.63	0.58	1.10	13	3	2.5	1	1.9	36	32	E	16	8	7	15	6.4	56
FLINT	771	988.2	1016.4	51	34	42.5	-2.8	74	18	17	8	0	14	29	61	3.82	1.16	1.81	15	4	1.5	T	1.0	35	26	28	13+	6	6	18	7.1	
GRAND RAPIDS	784	986.8	1016.5	53	32	42.3	-3.4	76	18	16	8	0	14	31	67	3.85	0.91	1.97	16	4	7.5	6	0.3	1	33	E	22+	5	9	16	7.0	62
HOUGHTON LAKE	1149	974.3	1017.2	47	26	36.6	-4.1	69	29+	5	5	0	22	25	66	1.40	-0.91	0.43	11	3	2.9	4	1.4	4	25	11	21	8	7	15	6.4	
LANSING	841	984.4	1016.8	52	31	41.6	-4.1	76	18	14	8	0	16	29	63	4.56	1.69	2.06	16	4	5.8	3	0.8	32	36	SE	22	7	8	15	6.6	47
MARQUETTE U	677			42	28	34.9	-4.4	66	27	9	7	0	20			2.62	-0.08	1.35	11		14.4	30			20	NW	16	6	6	18	7.0	50
MUSKEGON	625	993.6	1016.8	52	33	42.6	-2.6	69	18	17	9	0	15	29	62	2.09	-0.49	0.90	11	4	2.5	1	0.1	5	35	10	21	6	10	14	6.6	
SAULT STE MARIE	721	990.2	1017.6	42	26	33.9	-4.1	67	30	5	7	0	21	24	69	2.83	0.67	1.15	11	2	14.7	26	0.9	1	38	SE	22	7	9	14	6.2	65

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
DULUTH	1428	965.1	1017.9	42	25	33.3	-3.7	62	26	5	8	0	24	23	68	2.17	-0.19	0.86	11	1	20.4	19	4.2	8	40	E	12	5	9	16	6.9	47
INTERNATIONAL FALLS	1179	973.6	1017.8	47	27	36.9	-.5	72	29	3	5	0	21	22	58	0.89	-0.67	0.52	9	0	12.0	18	1.2	10	26	30	4	5	9	16	6.8	
MINNEAPOLIS	834	985.8	1016.7	51	33	41.9	-2.4	77	17	18	8	0	13	29	65	1.69	-0.16	0.73	14	2	8.0	3	3.1	8	34	SW	17	4	5	21	7.7	50
ROCHESTER	1297	967.8	1016.3	51	32	41.3	-2.7	73	17	9	8	0	14	33	75	1.66	-0.53	0.81	13	1	2.7	2	3.5	9	32	20	17	2	7	21	7.9	
ST CLOUD	1028			50	30	39.7	-3.1	78	17	15	8	0	18			1.59	-0.43	0.58	13		7.2	3						6	6	18	7.3	
MISSISSIPPI																																
JACKSON	310	1004.7	1016.7	80	53	66.4	1.5	90	15	34	2	1	0	56	73	2.44	-2.47	0.85	7	3	0.0	0	3.4	19	26	NW	16+	12	10	8	4.7	75
MERIDIAN	290	1006.1	1017.1	79	52	65.6	1.2	89	15	33	2	0	0	52	65	2.11	-3.22	0.63	6	4	0.0	0	2.3	18	24	18	3	11	11	8	5.2	
MISSOURI																																
COLUMBIA REGIONAL	887	982.1	1014.5	67	45	55.8	.8	90	12	26	4	1	6	43	67	4.44	1.14	2.10	12	9	T	T	3.9	15	29	N	16+	4	7	19	7.6	53
KANSAS CITY	742	986.1	1013.1	69	46	57.4	1.7	92	14+	29	8+	2	4	43	63	3.98	0.42	1.05	11	7	T	T	2.5	9	45	W	30	5	9	16	7.0	59
ST JOSEPH	811			68	43	55.4	1.8	90	18	24	4	1	4	43	72	3.51	0.36		9				1.8	10	35	13	30	3	13	14	7.0	
ST LOUIS	535	994.6	1014.9	68	44	56.1	1.2	88	13+	22	8	0	7	44	70	4.49	0.78	0.97	13	14	T	0	2.5	14	31	NW	11	6	7	17	7.1	51
SPRINGFIELD	1268	968.8	1013.9	72	45	58.4	2.8	89	13+	22	4	0	5	44	62	4.82	0.73	1.18	10	10	0.0	0	5.7	17	36	W	19	6	8	16	6.8	56
MONTANA																																
BILLINGS	3567	888.3	1013.0	56	32	43.7	-2.3	70	5	16	4+	0	14	23	48	1.63	0.32	0.75	8	1	7.3	1	3.9	31	38	NW	7	5	5	20	7.2	49
GLASCOW	2284	931.3	1013.7	57	31	44.3	.9	75	5	13	4	0	15	26	53	0.84	-0.17	0.43	4	0	0.7	1	0.9	22	35	8	16+	7	16	7	5.8	
GREAT FALLS	3662	885.2	1013.8	55	30	42.4	-1.2	80	28	16	4	0	20	24	54	0.77	-0.21	0.22	9	0	3.5	T	9.0	23	38	SW	1	6	7	17	6.9	70
HAVRE	2584	920.1	1012.6	57	30	43.6	.5	79	28	17	4	0	15	24	50	0.75	-0.22	0.39	6	0	7.0	1	4.9	26	39	NW	21	4	13	13	6.5	79
HELENA	3828	878.1	1014.8	52	27	39.8	-3.5	75	28	15	3	0	25	21	50	0.41	-0.42	0.17	6	0	3.8	1	7.2	27	34	W	24+	4	10	16	6.9	69
KALISPELL	2965	909.6	1015.5	52	28	40.0	-3.7	68	28+	18	3	0	24	25	60	0.86	-0.18	0.35	11	0	3.8	2	4.0	20	32	24	8	3	8	19	7.6	
MILES CITY	2629	919.4		58	34	45.8	.1	74	5	17	4	0	11			0.45	-0.61		8	0	T											
MISSOULA	3190	903.2	1016.4	54	31	42.6	-1.7	74	28	21	3	0	21	28	61	0.96	-0.01	0.31	13	0	3.0	1	4.4	29	31	NW	28+	5	6	19	7.3	51
NEBRASKA																																
GRAND ISLAND	1841	946.5	1012.9	61	38	49.6	.0	90	6	17	1	1	9	35	63	3.00	0.72	0.85	13	5	0.1	T	1.8	6	35	35	3	6	6	18	7.1	
LINCOLN U	1150			63	42	52.1	.3	91	6	24	2	1	7			5.41	2.96	1.28	12		0.8	1			39	SW	17	5	7	18	7.1	50
NORFOLK	1544			59	37	48.1	-.3	88	6	20	4	0	10			3.98	1.80	1.35	11		1.3	1						6	7	17	7.3	
NORTH PLATTE	2775	914.7	1012.9	60	33	46.6	-1.1	84	6	13	1	0	14	32	63	1.19	-0.82	0.59	7	1	0.1	T	2.9	5	40	NE	13	6	8	16	7.1	52
OMAHA	977	978.0	1013.5	63	39	51.2	-.5	92	6	23	4+	1	8	38	65	4.63	2.07	1.64	13	5	1.5	T	2.3	8	35	S	17+	5	8	17	7.1	54
SCOTTSBLUFF	3957	876.1	1012.6	60	32	46.0	-.6	78	6	15	1	0	14	31	62	2.91	1.10	1.27	9	3	6.2	2	2.3	1	37	6	13+	6	6	18	7.1	
VALENTINE	2587			58	33	45.4	-.3	82	6	13	1	0	12			2.32	0.34	0.73	12		0.4	T			44	N	2	5	7	18	7.4	48
NEVADA																																
ELKO	5050	842.9	1014.4	57	27	42.3	-2.0	75	28	14	30	0	25	19	43	0.36	-0.46	0.21	4	1	0.6	T	3.0	27	22	25	11	7	8	15	6.5	
ELY	6253	806.3	1012.6	58	26	41.6	-1.0	71	28	10	19	0	24	19	45	0.88	-0.07	0.55	8	0	4.3	5	3.3	23	38	S	5	10	6	14	5.8	70
LAS VEGAS	2162	936.3	1012.1	79	51	65.1	.6	89	28	38	20	0	0	19	19	0.07	-0.16	0.05	2	0	0.0	0	6.1	23	46	NW	13	16	6	8	4.0	86
RENO	4404	865.2	1015.3	63	29	46.2	-1.8	79	27	19	14	0	20	19	36	0.14	-0.40	0.09	4	0	1.0	1	2.8	24	48	SE	12	12	6	12	5.4	85
WINNEMUCCA	4301	867.3	1014.8	62	26	44.2	-1.7	79	28	6	30	0	22	21	44	0.48	-0.34	0.26	5	1	2.6	2	3.4	25	30	N	17+	10	7	13	6.1	71
NEW HAMPSHIRE																																
CONCORD	342	1002.4	1015.1	52	29	40.2	-3.6	77	30	20	7	0	20	27	64	2.71	-0.60	0.84	14	0	10.0	3	4.6	31	28	NW	21	7	9	14	6.5	55
MT WASHINGTON OBS	6262			23	11	16.6	-6.4	36	30+	-8	7	0	30			9.73	3.84	1.74	21	2	74.4	26			101Y	NW	21	1	9	20	8.0	36
NEW JERSEY																																
ATLANTIC CITY	64	1013.9	1016.2	57	36	46.5	-4.5	80	19	25	9+	0	10	36	71	4.62	1.21	1.24	11	4	T	T	2.0	26	26	20	6	5	13	12	6.4	54
ATLANTIC CITY U	11			55	42	48.3	-1.6	68	19+	28	8	0	3			3.97	0.59	1.36	12						35	NE	16+					
NEWARK	7	1014.9	1016.1	60	40	50.0	-1.3	87	19	26	8	0	4	34	59	3.08	-0.43	0.83	10	1	T	T	3.3	32	22	1	20+	5	12	13	6.6	
TRENTON U	56			59	41	49.7	-2.0	82	19	24	8	0	3			2.79	-0.42	0.73	14		0.3	T			26	N	8	5	14	11	6.3	56
NEW MEXICO																																
ALBUQUERQUE	5311	835.4	1[illegible]10.1	75	39	56.9	1.2	88	10	27	1	0	5	12	20	T	-0.47	T	0	0	T	0	3.9	27	54	NW	12	14	9	7	4.0	83
CLAYTON	4969			71	39	55.4	4.7	88	11+	27	1	0	5			0.20	-0.99	0.10	3		1.3	1						10	9	11	5.5	
ROSWELL	3612			83	44	63.4	4.4	97	6	26	1	7	3			0.00	-0.73	0.00	0		0.0	0			39	SW	13					87

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1005.4	1016.4	53	30	41.2	-5.0	80	19	16	5	0	22	27	60	3.63	0.86	0.89	12	0	6.0	4	3.7	30	37	W	9	6	9	15	6.6	55
BINGHAMTON	1590	956.3	1016.0	50	31	40.4	-3.1	75	19	15	8	0	15	28	64	2.83	-0.11	0.66	14	0	7.4	4	3.5	29	30	NW	17+	4	8	18	6.9	53
BUFFALO	705	990.2	1016.4	50	33	41.1	-2.4	69	30	13	8	0	13	30	68	2.99	-0.02	0.78	12	2	5.2	4	3.1	25	29	SW	23+	4	10	16	7.0	56
NEW YORK U	132	1012.5	1015.9	59	41	50.1	-1.3	86	19	26	8	0	4	32	57	3.92	0.49	0.97	10	1	T	T	2.2	34	27	NW	17					52
NEW YORK KENNEDY	13	1015.6	1016.3	58	42	49.8	.8	77	20	28	8	0	3	35	60	3.32	-0.16	0.77	9	2	T	T	2.0	34	30	33	8	7	12	11	5.9	
NEW YORK LA GUARDIA	11	1014.9	1016.0	56	40	47.6	-3.6	83	19	25	8	0	4	31	56	3.19	-0.38	0.78	11	2	0.1	T	2.8	34	28	NW	9	6	12	12	6.1	
ROCHESTER	547	996.6	1017.1	53	32	42.2	-2.9	76	19	17	8	0	16	31	69	2.68	0.01	0.56	13	1	7.3	6	3.3	29	27	SW	23+	4	10	16	6.7	63
SYRACUSE	410	1001.4	1016.5	50	31	40.5	-5.5	75	30	9	7	0	18	29	68	4.03	0.95	0.89	13	0	7.8	4	3.5	29	29	W	14+	8	6	16	6.4	57
NORTH CAROLINA																																
ASHEVILLE	2140	941.1	1017.1	71	41	55.8	1.2	89	15	24	9	0	8	43	68	1.49	-2.53	0.62	6	3	0.0	0	1.3	32	32	34	8	9	12	9	5.4	75
CAPE HATTERAS R	7	1017.3	1017.5	65	48	56.3	-3.0	77	14	26	10	0	2	49	77	0.72	-2.27	0.21	9	4	0.0	0	1.5	28	29	23	16	8	10	12	6.0	58
CHARLOTTE	736	989.5	1017.0	71	46	58.5	-1.8	88	15	25	9	0	3	43	61	1.75	-1.74	0.53	10	5	0.0	0	2.5	22	28	SW	16	8	11	11	5.6	75
GREENSBORO	897	985.4	1017.2	69	43	56.2	-1.2	88	15	23	9	0	6	42	62	2.72	-0.71	0.80	10	5	0.0	0	2.3	23	34	SW	16	8	9	13	6.0	64
RALEIGH	434	1001.4	1017.1	71	45	58.0	-1.3	91	15	23	9	1	5	42	61	1.92	-1.60	0.60	9	5	0.0	0	2.5	24	25	22	16	9	8	13	6.0	65
WILMINGTON	28	1016.6	1017.8	73	49	61.3	-1.2	91	15	30	9	1	2	50	71	0.78	-2.08	0.66	5	2	0.0	0	2.2	21	28	N	8	12	6	12	5.4	68
NORTH DAKOTA																																
BISMARCK	1647	955.0	1015.6	51	34	42.4	-1.1	68	15	13	1	0	10	31	67	1.81	0.59	0.95	8	0	0.9	3	2.6	12	33	SE	25	6	4	20	7.5	54
FARGO	896	983.4	1017.0	49	33	41.0	-1.0	70	28	17	4	0	12	32	71	0.96	-0.76	0.57	9	0	3.1	1	2.4	8	35	NW	2	4	6	20	7.5	55
WILLISTON	1899	945.1	1014.6	53	30	41.3	-1.0	67	21+	12	4	0	22	31	70	1.91	0.97	1.11	8	0	2.7	1	1.2	18	36	NW	22	4	11	15	7.0	49
OHIO																																
AKRON	1208	971.2	1016.3	56	34	45.4	-3.3	75	13	14	8	0	15	33	65	3.96	0.62	1.02	15	6	1.1	1	2.0	28	27	10	21+	5	10	15	6.8	
CINCINNATI ABBE OB	761			64	43	53.6	-.6	82	13	19	8	0	5			6.36	2.73	1.58	16		0.1	T			31	W	16					55
CLEVELAND	777	987.5	1016.9	56	36	46.0	-1.0	77	13	17	9	0	11	33	66	3.40	-0.01	0.74	19	3	2.3	2	0.3	31	34	SW	16	5	10	15	6.8	54
COLUMBUS	812	986.1	1016.5	59	38	48.8	-2.0	78	13	18	9	0	10	35	61	3.74	0.25	1.34	15	6	0.6	T	1.9	25	39	W	16	7	10	13	6.7	54
DAYTON	1002	979.7	1016.1	60	40	50.3	-.4	77	13	15	8	0	9	39	68	3.77	0.45	1.08	17	6	1.2	T	1.9	23	43	W	16	5	11	14	6.8	47
MANSFIELD	1295			59	37	47.7	-2.0	76	18	15	8	0	10	35	66	5.98	2.67	2.21	15	7	1.4	1	2.3	26	28	9	21+	6	9	15	6.6	
TOLEDO	669	990.9	1016.2	58	35	46.1	-.8	77	18	12	8	0	13	31	60	3.74	0.97	0.94	14	7	1.8	1	1.6	33	30	NE	7	6	7	17	6.8	53
YOUNGSTOWN	1178	973.2	1016.5	56	33	44.4	-2.6	75	13	15	8	0	15	33	67	3.97	0.27	1.60	15	4	2.1	1	1.5	31	28	27	16	6	7	17	7.0	
OKLAHOMA																																
OKLAHOMA CITY	1285	966.5	1012.4	76	50	63.2	3.3	100	12	28	1	4	2	47	59	3.10	-0.02	1.16	8	8	0.0	0	5.7	17	42	NW	3	9	11	10	5.3	64
TULSA	650	988.5	1012.5	76	50	62.8	3.9	102	12	27	4	3	2	49	63	4.45	0.43	1.57	9	8	0.0	0	5.6	18	40	SE	26	9	12	9	5.5	68
OREGON																																
ASTORIA	8	1018.0	1018.6	55	39	46.6	-2.4	66	23+	34	22+	0	0	39	77	6.82	1.64	1.24	23	3	0.2	T	4.0	22	32	16	5	1	8	21	8.3	
BURNS J	4151	872.0	1016.3	54	27	40.5	-5.5	72	27	17	22+	0	24	23	53	0.17	-0.58	0.06	7		0.2	T	4.8	26				5	13	12	6.3	
EUGENE	359	1005.8	1019.5	57	36	46.6	-4.2	71	4	27	22	0	8	39	78	5.80	3.42	1.15	18	2	T	0	3.4	21	44	18	7	1	8	21	8.0	
MEACHAM	4050	875.7	1017.5	44	27	35.8	-5.0	64	27	21	18+	0	26	27	75	3.45	0.65	0.82	20		20.6	5	2.7	27	18	28	28+	7	5	18	6.5	
MEDFORD	1298	970.5	1018.8	61	35	48.0	-2.6	81	27	24	18	0	13			0.94	-0.12	0.34	8	0	T	T	2.7	31	29	23	5	7	10	13	6.2	
PENDLETON	1482	963.1	1017.0	59	37	47.6	-4.4	81	27	29	3	0	7	30	52	0.68	-0.41	0.21	10	0	1.1	1	6.2	26	44	28	5	5	12	13	6.7	
PORTLAND	21	1017.6	1018.9	57	39	48.0	-3.8	78	27	30	22+	0	4	37	70	2.98	0.89	0.51	20	1	T	0	3.2	21	48	S	5	3	6	21	8.0	55
SALEM	196	1011.9	1019.3	57	35	46.0	-5.1	73	27	27	30+	0	11	36	72	3.79	1.46	0.84	19	0	0.1	0	3.9	22	32	17	5	3	6	21	7.9	
SEXTON SUMMIT R	3836	884.2	1018.9	48	29	38.3	-6.4	68	27	19	17	0	25			2.87	1.02	0.72	15		17.7	5	3.4	24	48	21	6					
PACIFIC AREA																																
GUAM TAGUAC R	361	999.0	1011.6	84	71	77.7	-2.2	86	21+	64	20	0	0	71	82	3.35	0.32	0.99	21	0	0.0	0	9.2	8	25	E	26					67
JOHNSTON	7	1012.5	1013.2	81	76	78.4	.4	84	19+	71	1	0	0	70	78	3.89	1.61	2.90	10	1	0.0	0	12.8	9	29	NE	30	6	7	17	7.3	71
KOROR R	94	1006.4	1010.1	89	75	81.8	.5	91	19+	73	3	8	0	75	84	7.08	-3.31	3.40	16	2	0.0	0	5.2	6	17	S	15	0	13	17	8.0	60
KWAJALEIN	8	1008.8	1009.6	86	77	81.4	.6	88	30+	74	4+	0	0	75	83	8.13	3.11	2.08	21	0	0.0	0	8.5	7	25	6	30+	0	6	24	8.9	
MAJURO	10	1010.2	1010.4	85	77	80.8	.2	87	27+	74	8+	0	0	75	83	9.17	-3.14	2.32	24	0	0.0	0	6.1	7	25	NE	30	0	12	18	8.3	53
PAGO PAGO	12	1010.5	1010.6	87	75	81.2		89	2	71	15	0	0	75	83	6.50		0.94	24	1	0.0	0	5.5	9	23	SE	27	2	15	13	7.0	15
PONAPE R	123	1003.7	1008.8	87	74	80.0	-.5	90	12	68	7	1	0	74	85	20.39	0.35	5.11	24	7	0.0	0	4.7	8	16	NE	28	0	6	24	8.8	60
TRUK MOEN ISLAND	5	1009.1	1009.4	85	77	81.0	.2	88	19+	74	21+	0	0	75	82	15.79	3.47	5.06	21	3	0.0	0	8.4	6	26	N	20	0	2	28	9.5	64
WAKE	11	1014.9	1015.1	81	70	75.6	-2.8	83	30+	66	6+	0	0	64	71	1.21	-0.66	0.39	12	0	0.0	0	17.3	6	29	NE	1	4	13	13	6.5	49

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CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile Speed	Fastest mile Direction	Fastest mile Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
YAP R	44			87	75	81.1	-.7	90	17	74	28+	1	0			8.97	2.59	3.27	16	1	0.0	0			17	NE	26+	3	16	11	6.6	84
PENNSYLVANIA																																
ALLENTOWN	387	1002.4	1016.5	58	36	47.1	-2.2	84	19	23	9	0	11	33	64	2.78	-0.98	0.85	12	1	0.4	T	3.1	31	24	29	11	5	13	12	6.3	
ERIE	731	989.5	1017.0	49	31	40.0	-4.2	70	19	17	9	0	17	30	69	2.64	-0.92	1.24	12	2	1.1	T	1.2	24	32	26	13	6	9	15	6.4	
HARRISBURG	338	1003.7	1016.6	60	39	49.6	-2.2	85	19	27	8+	0	6	35	61	4.10	1.08	0.98	14	3	1.1	1	1.7	30	31	W	1	6	15	9	5.9	60
PHILADELPHIA	5	1015.2	1016.4	60	40	49.7	-2.3	81	19	25	8	0	4	36	63	4.08	0.68	0.95	13	4	0.4	T	2.6	30	28	NW	20	7	10	13	6.6	56
PITTSBURGH	1137	971.9	1016.2	60	37	48.5	-.5	78	19	19	8	0	11	33	58	4.37	1.29	1.04	18	6	1.8	1	4.7	29	46	27	16	5	6	19	7.2	50
SCRANTON	930	981.4	1016.0	54	33	43.5	-4.9	80	19	19	8	0	14	31	65	3.31	0.04	1.10	15	1	3.8	1	2.3	29	28	S	6	6	8	16	6.8	54
WILLIAMSPORT	524	997.3	1016.6	57	35	46.0	-3.4	83	19	22	8	0	12	31	62	4.22	0.67	1.57	14	2	1.6	T	1.8	32	26	28	1	6	9	15	6.4	
RHODE ISLAND																																
BLOCK ISLAND	110			49	36	42.5	-2.1	61	29	24	8	0	6			3.98	0.37	0.80	12		0.5	T										
PROVIDENCE	51	1013.2	1015.6	54	34	44.3	-2.9	84	19	22	8	0	12	30	62	3.71	-0.04	1.03	11	0	0.7	T	3.6	33	30	35	17	7	10	13	6.5	52
SOUTH CAROLINA																																
CHARLESTON	40	1015.9	1017.9	77	51	64.0	-.8	91	16+	30	10	3	1	52	69	0.01	-2.87	0.01	1	0	0.0	0	2.3	21	42Y	W	2	13	8	9	5.0	74
CHARLESTON U	9			73	57	65.0	-.6	87	16	37	9	0	0			T	-2.54	T	0		0.0	0			32	NE	21					
COLUMBIA	213	1009.5	1017.4	77	49	63.1	-.5	91	15	29	3	2	2	49	66	1.16	-2.85	0.73	4	3	0.0	0	1.9	24	25	23	16+	7	13	10	5.5	73
GRNVLLE-SPRTNBRG	957	982.4	1016.9	73	46	59.5	-1.4	87	15	27	9	0	3	44	59	2.28	-1.66	0.67	8	5	0.0	0	2.9	24	32	S	16	10	10	10	5.1	73
SOUTH DAKOTA																																
ABERDEEN	1296	968.2	1015.6	55	35	44.8	.0	73	15	22	4	0	11	34	70	1.05	-0.99	0.34	13	0	0.4	T	4.1	6	38	16	25	5	4	21	7.4	
HURON	1281	967.8	1014.8	55	35	44.8	-.2	73	5	26	3	0	12	34	70	3.80	1.96	1.16	12	2	1.0	1	3.4	6	36	N	2	7	3	20	7.1	58
RAPID CITY	3162	902.1	1013.7	55	32	43.6	-.9	74	5	17	3+	0	15	31	69	2.78	1.11	0.89	13	0	1.0	T	3.8	36	43	S	25	5	8	17	7.3	42
SIOUX FALLS	1418	963.8	1015.7	55	33	43.8	-2.1	80	17	21	2	0	13	32	68	2.73	0.42	0.85	11	2	0.8	1	4.7	6	33	21	17+	5	5	20	7.5	
TENNESSEE																																
BRISTOL	1507	962.4	1016.7	68	42	54.9	-1.7	83	15	24	9	0	9	42	66	2.92	-0.24	0.96	10	2	T	T	1.6	28	32	32	14	6	9	15	6.4	
CHATTANOOGA	665	991.9	1016.6	72	47	59.2	-1.7	87	15	28	2	0	3	45	64	3.46	-0.83	1.94	7	4	0.0	0	2.6	22	34	NW	7	8	9	13	6.0	62
KNOXVILLE	980	982.1	1017.1	70	49	59.5	.6	83	20+	29	9	0	3	44	60	2.54	-1.16	1.04	8	3	0.0	0	4.2	26	38	SW	16	6	9	15	6.4	56
MEMPHIS	258	1005.8	1015.9	74	52	63.1	1.7	87	15	34	9+	0	0	48	60	3.51	-1.12	1.53	9	6	0.0	0	4.1	19	35	1	7	9	5	16	6.2	66
NASHVILLE	590	994.2	1016.0	73	48	60.5	.9	86	15	28	9	0	3	47	64	3.58	-0.16	0.94	11	8	T	0	3.7	22	46	NW	7	6	10	14	6.3	63
OAK RIDGE R	905			70	46	58.0	.2	86	15	27	9	0	5			2.94	-1.26	1.11	12		0.0	0						6	8	16	6.8	
TEXAS																																
ABILENE	1784	949.9	1011.8	83	56	69.4	5.1	98	13+	31	1	6	1	49	54	1.04	-1.23	0.70	4	8	0.0	0	8.6	18	50	NW	19	11	14	5	4.5	88
AMARILLO	3604	887.2	1009.4	76	43	59.5	2.0	93	6	23	1	4	2	27	35	0.03	-1.29	0.03	1	3	0.0	0	6.3	22	42	SE	25	13	10	7	4.5	83
AUSTIN	597	991.2	1012.8	85	62	73.5	5.8	97	7	44	1	4	0	58	64	1.46	-2.09	0.89	5	4	0.0	0	5.6	17	35	W	21	10	9	11	5.4	66
BROWNSVILLE	19	1011.9	1012.3	86	69	77.4	3.5	96	15	48	1	2	0	68	75	1.54	-0.01	1.46	5	2	0.0	0	10.0	14	47	SE	28	7	14	9	5.4	78
CORPUS CHRISTI	41	1011.2	1012.6	86	67	76.7	5.0	93	21+	47	1	7	0	67	77	1.53	-0.61	1.51	3	2	0.0	0	11.4	13	47	SE	28	6	17	7	5.4	59
DALLAS	481	995.6	1012.9	81	59	69.8	4.8	94	12	40	4	4	0	53	60	3.67	-0.33	2.71	6	5	0.0	0	7.7	15	32	SE	26	8	12	10	5.4	67
DEL RIO	1026	975.3	1010.9	88	62	75.3	3.7	99	14+	45	1	11	0	55	55	1.58	0.22	1.50	4	5	0.0	0	8.3	12	32	35	21	11	9	10	5.1	
EL PASO	3918	879.8	1010.0	83	48	65.2	1.8	92	10+	30	1	4	1	18	17	0.00	-0.29	0.00	0	0	0.0	0	5.4	26	48	SW	13	16	12	2	3.3	92
FORT WORTH	537	992.9	1013.2	82	58	70.1	5.3	95	12	40	1	6	0	54	60	3.25	-0.35	2.37	6	6	0.0	0	7.0	17	25	18	20+	9	10	11	5.6	
GALVESTON	7			77	68	72.5	4.0	85	16	57	9+	0	0			0.76	-1.83	0.48	2		0.0	0			28	SE	14					70
HOUSTON INTERCON	96	1010.5	1014.4	82	60	71.2	3.7	89	13	39	1	0	0	62	75	2.85	-0.49	1.89	4	4	0.0	0	5.3	14	32	36	27	8	11	11	5.6	62
LUBBOCK	3254	900.1	1009.5	81	50	65.7	6.2	96	12+	29	1	4	1	35	39	0.35	-0.80	0.35	1	1	0.0	0	5.8	21	39	16	25	13	10	7	4.2	
MIDLAND	2851	913.0	1009.6	86	54	69.7	4.8	99	12+	31	1	9	1	38	41	0.29	-0.54	0.24	2	3	0.0	0	6.0	19	31	16	25	16	10	4	3.6	
PORT ARTHUR	16	1014.6		80	60	69.6	1.4	87	16	40	1	0	0			5.42	1.48	3.67	4	2	0.0	0	7.2	15	29	S	15+	8	12	10	5.7	51
SAN ANGELO	1903	945.1	1010.7	87	56	71.7	4.6	103	13	32	1	13	1	47	48	0.57	-1.44	0.38	3	7	0.0	0	6.7	19	35	16	25	14	9	7	4.4	
SAN ANTONIO	788	985.1	1012.8	86	61	73.7	5.5	93	14	37	1	8	0	58	64	1.94	-0.88	1.18	6	4	0.0	0	5.0	13	35	E	27	11	9	10	5.4	59
VICTORIA	104	1009.5	1013.4	85	64	74.7	4.7	93	16	47	1	2	0	63	71	0.35	-2.27	0.34	2	1	0.0	0	7.4	14	43Y	NE	27	10	12	8	5.5	
WACO	501	994.9	1012.8	83	59	71.0	4.4	94	7	40	1	3	0	55	60	2.04	-1.84	1.47	4	4	0.0	0	7.4	15	29	18	3	10	10	10	5.5	
WICHITA FALLS	994	974.9	1011.2	82	52	67.0	3.0	102	12	32	4	7	1	48	56	2.39	-0.14	1.04	7	8	0.0	0	6.8	16	39	1	3	11	12	7	5.1	
UTAH																																
MILFORD	5028	843.6		64	32	47.6	-.1	77	29	23	27+	0	19			0.96	0.24	[illegible].69	5		10.8	6						9	8	13	6.0	73

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
SALT LAKE CITY	4220	869.3	1013.5	60	36	48.1	-1.8	77	24	28	30	0	10	31	55	3.62	1.86	1.28	11	1	15.0	6	1.2	29	38	SE	11	9	8	13	6.5	63
WENDOVER	4237	868.6	1013.6	61	39	50.0	-1.6	74	28+	30	30	0	3	20	34	0.05	-0.46	0.04	2		0.1	T						8	9	13	6.0	
VERMONT																																
BURLINGTON	332	1003.1	1015.8	45	26	35.6	-5.6	73	30	2	7	0	25	24	65	2.26	-0.37	0.72	12	0	9.2	3	1.5	32	29	SW	5	5	10	15	6.9	59
VIRGINIA																																
LYNCHBURG	916			69	43	56.2	.0	87	15	26	9	0	6			2.81	-0.33	1.03	11		T	0			32	SW	16+	9	7	14	5.9	61
NORFOLK	24	1015.9	1017.0	67	46	56.4	-1.6	86	20	31	10	0	1	45	70	2.15	-1.01	0.91	12	7	T	0	0.4	19	37	NW	4	9	7	14	6.2	66
RICHMOND	164	1010.2	1016.6	70	43	56.2	-1.9	88	16	27	9+	0	5	41	63	3.35	0.20	1.56	11	4	T	0	1.0	23	40	NW	15	8	4	18	6.5	56
ROANOKE	1149	974.3	1016.2	69	42	55.5	-.9	87	15	22	9	0	6	38	56	3.31	0.21	1.36	11	5	T	0	3.7	28	30	27	16	10	6	14	5.9	
WALLOPS ISLAND	9			60	44	51.6		86	20	30	9+	0	2			4.50		2.48	10		T	0			44Y	NW	16					
WASHINGTON																																
OLYMPIA	195	1010.5	1017.9	54	33	43.8	-6.2	78	27	25	3	0	15	37	80	5.87	2.91	1.10	18	1	2.2	T	5.8	21	35	20	5	0	9	21	8.4	
QUILLAYUTE	179	1009.5	1017.0	51	35	42.7	-4.5	65	3	29	29+	0	9	37	82	11.46	4.07	2.17	25	1	2.5	T	2.4	20	26	SE	5	0	8	22	8.6	26
SEATTLE-TACOMA	400	1000.7	1017.2	54	40	47.0	-2.2	77	27	34	17+	0	0	36	69	4.12	1.72	0.89	18	1	2.3	2	5.3	19	38	SW	5	0	10	20	8.2	50
SPOKANE	2356	930.6	1015.1	53	31	42.0	-5.3	73	27	23	18+	0	18	26	56	1.09	0.18	0.42	10	1	0.2	T	7.6	22	37	SW	21	4	13	13	6.6	59
STAMPEDE PASS R	3958	877.1		36	25	30.3	-6.2	54	27	20	22+	0	29			8.06	2.46	1.15	24		65.0	156						1	4	25	8.7	
WALLA WALLA U	949			60	39	49.2	-4.6	78	27	29	3	0	1			1.14	-0.26	0.44	12		T	T			38	NW	5	4	11	15	6.9	55
YAKIMA	1052	977.7	1016.7	61	30	45.5	-5.0	77	27	21	3	0	22	25	46	0.09	-0.38	0.08	2	1	T	T	5.4	27	37	24	5	7	13	10	5.8	
WEST INDIES																																
SAN JUAN P.R.	13	1013.9	1016.7	[illegible]6	74	80.1	3.5	92	2+	71	7	3	0	67	66	2.79	-0.93	0.69	14	0	0.0	0	9.0	9	27	NE	3	11	14	5	4.7	67
WEST VIRGINIA																																
BECKLEY	2504	927.9	1016.8	61	39	49.9	-.9	79	19	15	9	0	10	37	67	4.62	1.00	1.23	19	7	1.9	1	4.4	24	30	23	16	5	5	20	7.3	
CHARLESTON	939	982.1	1016.3	67	42	54.5	-.8	84	19	19	9	0	9	38	59	5.16	1.48	1.50	18	10	T	T	2.0	25	35	32	16	5	6	19	7.3	
ELKINS	1948	945.1		62	35	48.3	-1.9	79	19+	17	9	0	14			6.95	3.47	1.66	20		4.6	1						4	7	19	7.4	
HUNTINGTON	827	986.1	1016.4	65	43	54.1	-1.6	82	18	22	9	0	7	40	62	6.07	2.40	1.79	18	12	T	T	2.1	24	31	27	7	4	7	19	7.5	
PARKERSBURG U	615			65	43	53.9	-.2	81	18	22	9	0	5			6.18	2.93	1.69	17		0.4	T			45	W	16					67
WISCONSIN																																
GREEN BAY	682	991.2	1017.4	49	30	39.4	-3.8	69	28+	11	1	0	13	27	64	1.45	-1.01	0.79	12	2	2.3	5	3.0	2	34	NE	7	6	5	19	7.3	46
LA CROSSE	651	992.2	1017.2	53	33	43.0	-4.0	77	17	11	8	0	13	31	66	2.38	-0.37		13	1	3.0		1.7	6								
MADISON	858	984.4	1016.3	53	30	41.3	-3.1	78	18	9	8	0	15	32	73	2.02	-0.55	1.22	13	3	3.9	6	2.6	6	28	E	21	3	8	19	7.7	44
MILWAUKEE	672	990.9	1016.8	47	32	39.4	-4.2	76	18	21	8+	0	14	29	70	2.76	0.23	1.07	11	1	1.2	1	3.3	1	32	SE	21	4	7	19	7.2	51
WYOMING																																
CASPER	5338	833.7	1012.0	56	30	43.0	-.1	70	5	5	3	0	17	28	64	1.44	-0.25	0.64	10	0	13.9	4	3.5	28	37	26	12	5	9	16	7.3	
CHEYENNE	6126	808.3	1011.9	55	30	42.5	-.1	69	11	18	1	0	21	24	54	0.80	-1.08	0.31	9	2	8.5	3	5.7	30	46	NW	6	4	13	13	7.1	58
LANDER	5563	825.3	1011.8	57	30	43.3	.1	71	29	16	20+	0	20	23	51	2.16	-0.29	0.84	10	1	28.5	9	3.6	27	39	SW	5	5	13	12	6.7	65
SHERIDAN	3964	875.7	1013.0	58	31	44.5	.9	73	5	11	3	0	16	28	55	1.02	-1.14	0.27	11	1	7.8	2	3.0	31	36	SW	12+	6	9	15	6.5	59

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
ALABAMA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	994.9	1017.3	24.4	10.0	17.3	0.0	30.6	15	-1.1	2	0	2	8.3	58	65	-49	20	5	5	0	0	1.4	21	16.1	SW	16	8	14	8	5.2	82
HUNTSVILLE	190	993.6	1016.6	22.8	10.0	16.5	0.1	30.0	15+	0.0	2	0	1	8.9	63	102	1	52	8	5	0	0	0.9	20	13.0	19	21	7	10	13	6.0	
MOBILE	64	1009.1	1017.1	26.7	15.0	20.8	1.0	30.6	21+	3.9	9	0	0	15.0	72	46	-116	22	3	3	0	0	1.6	15	10.3	13	28	6	13	11	5.6	
MONTGOMERY	56	1010.2	1017.4	26.1	11.7	18.7	0.9	32.8	15	1.7	2	1	0	11.7	65	37	-87	25	4	2	0	0	1.2	21	13.0	S	7	10	13	7	4.9	68
ALASKA												9																				
ANCHORAGE	35	1002.4	1007.6	1.1	-6.7	-2.9	-5.6	5.6	29	-16.1	1	0	29	-7.8	69	19	8	9	6	0	320	406	0.6	32	10.7	13	17+	9	7	14	5.8	68
ANNETTE	34	1007.1	1011.2	6.7	0.0	3.3	-3.0	11.1	12	-3.3	2	0	18	-0.6	80	223	-9	71	21	0	356	102	1.8	14	12.5	16	18	0	9	21	8.6	
BARROW	9	1016.3	1017.0	-16.1	-24.4	-20.2	-2.6	-7.8	30	-34.4	2	0	30			T	-3	T	1	0	18	203	3.4	8	12.5	8	24	17	6	7	3.8	
BARTER ISLAND	12	1014.9	1016.8	-16.1	-24.4	-20.3	-3.1	-6.7	29	-34.4	1	0	30	-23.3	74	2	-3	1	3	0	18		0.9	10	20.1	8	24	9	8	13	5.8	
BETHEL	38	1004.4	1010.3	-4.4	-15.0	-9.8	-6.4	2.2	28+	-25.0	15	0	30	-11.1	87	16	1	5	12	0	239	305	2.1	26	17.0	32	17	4	6	20	7.6	
BIG DELTA	386			-0.6	-13.9	-7.3		7.8	30+	-30.0	1	0	30			7		3	6	0	150	279			14.3	20	12	6	11	13	6.3	
COLD BAY	29	1010.5	1014.3	1.7	-4.4	-1.4	-2.1	6.7	16	-11.1	6+	0	27	-3.3	87	78	41	34	24	0	251	76	4.7	28	23.7	26	11	0	0	30	9.7	
FAIRBANKS	133	992.2	1009.8	0.0	-12.2	-6.2	-4.8	7.8	30	-24.4	1	0	30	-12.8	59	5	-1	1	9	0	109	610	0.8	35	10.3	21	18+	7	6	17	6.6	
GULKANA	479			1.1	-16.1	-7.6		7.2	30	-26.7	16	0	30			7		3	5	0	102	1168	0.3	21	14.3	18	12	10	9	11	5.7	
HOMER	20			2.2	-7.8	-2.7		6.7	29+	-14.4	1	0	30			30	-3	18	9	0	442	584			11.2	19	17+	11	4	15	6.3	
JUNEAU	4	1008.5	1009.2	5.6	-2.2	1.4	-1.9	10.6	30	-8.3	9+	0	26	-4.4	69	92	19	30	17	0	262	229	2.1	11	13.4	12	24	5	2	23	8.0	43
KING SALMON	15	1007.1	1009.1	-1.1	-10.0	-5.5	-5.9	5.6	28	-20.0	15+	0	28	-9.4	72	35	19	8	17	0	221	51	1.4	22	17.4	15	11	3	11	16	7.5	
KOTZEBUE	3	1010.8	1011.4	-8.9	-18.9	-13.7	-3.3	1.1	30	-26.1	14	0	30	-17.2	74	17	9	9	6	0	279	1245	2.3	9	20.1	30	4	10	9	11	5.5	
MC GRATH	105	996.3	1009.2	-0.6	-15.6	-7.9	-5.5	6.1	30	-31.1	1	0	29	-11.7	72	30	18	9	10	0	762	1245	0.4	30	9.8	32	26	8	4	18	6.5	
NOME	4	1008.8	1009.8	-6.1	-16.1	-11.2	-5.2	1.1	30	-27.8	14	0	30	-15.0	69	11	-9	5	10	0	226	432	2.1	5	14.3	11	8	10	7	13	5.9	52
ST. PAUL ISLAND	7	1012.5	1013.4	-0.6	-7.2	-3.9	-1.9	3.3	28	-16.7	22+	0	30	-4.4	91	46	22	8	19	0	396	305	3.1	30	19.2	36	11	2	9	19	7.9	
SHEMYA	37	1013.5	1017.2	3.9	1.1	2.3	0.3	5.0	30+	-1.7	23+	0	11	0.0	87	88	36	22	17	0	58	T	4.1	25	27.7	23	22+	0	6	24	9.0	
SUMMIT	732	919.1	1010.2	-4.4	-16.1	-10.3		2.2	25	-22.2	16+	0	30	-14.4	71	6		3	7	0	208	838	3.0	6	12.5	7	7+	7	11	12	6.1	
TALKEETNA	105			2.2	-14.4	-6.1	-7.1	7.8	28	-25.0	7+	0	30			36	17	16	9	0	714	1270			9.4	2	27					
UNALAKLEET	5			-5.6	-15.0	-10.5		3.9	30	-25.0	7+	0	30			7		3	8	0	84	635			16.1	8	8	9	7	14	6.1	
YAKUTAT	9	1006.4	1007.6	2.8	-6.1	-1.8	-4.6	6.1	30	-15.0	20	0	29	-3.3	83	139	-44	29	20	0	1156	2210	1.5	10	10.3	11	24	5	3	22	7.7	
ARIZONA																																
FLAGSTAFF	2135	785.6	1014.7	14.4	-5.6	4.3	-1.9	20.0	5	-15.0	14	0	28	-10.0	39	18	-12	14	3	0	38	25	2.6	22	13.0	SW	13+	16	7	7	3.8	91
PHOENIX	340	972.6	1011.2	30.6	13.3	21.9	2.3	34.4	5	8.3	15	13	0	-4.4	18	T	-8	T	0	0	0	0	0.9	20	16.1Y	WSW	13	17	5	8	3.4	94
TUCSON	788	924.1	1011.3	28.3	9.4	18.8	-0.1	33.3	5	2.8	15	3	0	-6.1	20	0	-7	0	0	0	0	0	1.1	23	15.6	SW	17	15	5	10	4.0	90
WINSLOW	1492	849.6	1012.7	22.8	1.7	12.3	-0.8	29.4	10+	-5.6	14	0	11	-10.6	23	1	-11	1	1	0	5	0	2.9	23	23.2	22	13	18	4	8	3.6	
YUMA	59	1004.4	1011.6	31.1	13.9	22.3	0.9	36.1	5	7.2	20	14	0			T	-2	T	0	0	0	0	1.9	29	13.4	W	13+	20	7	3	2.7	93
ARKANSAS																																
FORT SMITH	136	997.6	1014.2	24.4	8.9	16.5	0.0	33.3	12	-2.8	1	2	2	8.9	64	67	-41	34	11	9	0	0	0.8	14	18.3	SW	13	9	9	12	5.8	62
LITTLE ROCK	78	1005.4	1015.1	23.9	10.0	16.9	0.1	31.7	13+	0.0	2	0	1	10.0	66	46	-79	23	5	5	0	0	1.3	19	17.9	NW	21	11	3	16	6.2	69
CALIFORNIA																																
BAKERSFIELD	145	998.6	1016.3	24.4	10.6	17.4	0.2	34.4	27	5.0	14	1	0	3.9	43	2	-19	2	2	0	0	0	2.5	34	13.0	32	5	20	6	4	3.0	
BISHOP	1252	871.7		22.8	1.7	12.1	-0.8	28.3	28	-5.6	19	0	10			T	-12	T	0		0	0						17	7	6	4.2	
BLUE CANYON	1609			10.6	1.1	5.8	-1.7	19.4	26	-8.3	13	0	11			172	49	53	7		960	508			11.6	26	12+	11	7	12	5.2	
EUREKA U	13			12.8	6.1	9.5	-0.7	23.9	4	2.2	13	0	0			58	-10	17	11		0	0			17.9	N	17	11	6	13	5.6	74
FRESNO	100	1004.7	1016.5	24.4	7.8	16.2	-0.1	33.9	27	2.2	14	1	0	3.9	49	7	-22	6	2	0	0	0	2.1	30	12.5	NW	13	18	6	6	3.7	88
LONG BEACH	8	1014.6	1016.0	23.3	11.7	17.2	1.7	30.0	27	6.7	20	0	0	8.9	64	5	-15	5	1	1	0	0	1.2	25	11.2	32	13	16	6	8	4.2	
LOS ANGELES	30	1011.9	1015.5	20.6	12.2	16.4	1.2	26.7	26	8.3	20	0	0	10.6	74	T	-27	T	0	1	0	0	2.3	25	17.0Y	W	13	18	4	8	3.8	
LOS ANGELES U	82			23.3	12.2	17.7	1.2	32.8	26	7.8	20	1	0			1	-29	1	1		0	0			9.8	NW	13	18	5	7	3.6	87
MT SHASTA R	1080	892.3	1017.4	12.8	0.6	6.6	-2.0	21.1	27	-4.4	22+	0	17	-1.1	63	67	-4	33	8		64	25	0.5	33								
OAKLAND	2	1018.3	1018.5	17.8	9.4	13.7	0.0	23.3	27+	6.1	13	0	0	7.2	69	24	-11	9	5	0	0	0	2.8	28	13.0	35	18	13	8	9	4.6	
RED BLUFF	104	1004.1	1016.6	21.1	7.2	14.3	-1.5	29.4	27	0.0	13	0	1	1.7	50	15	-32	6	5	0	0	0	0.8	32	16.5	SE	12+	13	8	9	4.3	88
SACRAMENTO	5	1016.3	1017.0	22.2	7.2	14.8	0.1	30.6	27	2.2	13	0	0	3.9	55	35	T	12	6	1	0	0	1.3	26	15.2	N	18	11	11	8	4.5	84
SANDBERG R	1377	862.2		15.6	3.9	9.9	-0.6	23.3	30	-3.3	13	0	6			1	-24	1	2		8	T			23.2	36	25	14	6	10	4.3	
SAN DIEGO	4	1014.9	1016.0	20.6	13.3	16.8	0.4	24.4	5	8.9	20	0	0	10.0	67	1	-20	1	1	0	0	0	2.1	29	11.2	N	19	15	7	8	4.3	80
SAN FRANCISCO	2	1018.0	1018.6	17.8	8.3	13.0	-0.2	26.1	27	3.9	13	0	0	6.1	68	30	-3	13	6	0	0	0	3.8	28	14.3	29	28	12	8	10	4.9	
SAN FRANCISCO U	16			16.7	9.4	13.1	-0.1	23.9	26	7.2	13	0	0			27	-9	11	5		0	0			14.8	W	27					85
SANTA MARIA	72			20.6	5.6	13.1	-0.1	28.3	26	-0.6	20	0	1			5	-25	5	2		0	0						21	2	7	3.5	
STOCKTON	7	1016.9	1017.8	22.8	7.8	15.4	0.0	32.8	27	3.3	20	1	0	3.9	53	14	-14	5	5	0	0	0	2.9	30	13.9	34	18	11	11	8	4.7	
COLORADO																																
ALAMOSA	2297	768.7		16.1	-4.4	5.9	0.5	23.3	10	-11.1	1	0	25			T	-18	T	0		T	T						13	9	8	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p s							%
COLORADO																																
COLORADO SPRINGS	1873	807.3	1011.0	16.7	2.2	9.5	1.9	26.1	10	- 5.0	1	0	7	- 3.9	47	11	- 23	8	4	4	84	T	0.7	2	19.7	33	26+	6	14	10	5.8	
DENVER	1610	832.4	1009.8	17.2	1.1	9.2	1.2	26.7	11+	- 4.4	4	0	12	- 1.7	57	89	36	77	10	5	437	305	0.8	32	17.0	NW	6	6	10	14	6.6	58
GRAND JUNCTION	1476	848.6	1010.2	20.0	3.3	11.8	0.6	27.8	24	- 2.2	27+	0	5	- 7.2	30	3	- 16	1	6	0	T	0	1.1	22	16.1	SW	18	9	9	12	5.9	63
PUEBLO	1428	851.3	1009.5	20.6	2.8	11.6	1.7	29.4	10+	- 4.4	1	0	6	- 1.1	50	17	- 13	11	5	3	T	T	0.4	33	22.4	NW	26	9	7	14	6.1	83
CONNECTICUT																																
BRIDGEPORT	2	1015.2	1015.9	12.8	2.8	7.8	- 1.1	22.8	19	- 3.3	8	0	5	- 1.1	59	143	47	44	11	0	T	T	1.6	32	14.3	30	9	7	10	13	5.9	
HARTFORD	52	1008.8	1015.6	13.3	0.6	6.8	- 2.3	30.6	19	- 4.4	8+	0	17	- 2.2	58	117	22	36	13	0	69	25	1.6	31	13.9	NW	17	6	11	13	6.4	61
DELAWARE																																
WILMINGTON	23	1013.9	1016.9	16.1	3.9	10.0	- 1.2	28.3	19	- 3.3	8	0	6	2.2	62	114	29	30	12	4	T	T	1.0	32	9.4	7	20+	5	13	12	6.7	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1004.7	1016.5	17.8	3.3	10.7		29.4	19	- 4.4	9+	0	10	3.9	68	112		30	11	4	10	T	0.4	28	11.2	30	4	8	7	15	6.5	
WASHINGTON NATIONAL	3	1013.9	1016.4	18.3	6.1	12.3	- 0.9	29.4	19	- 2.2	9	0	3	3.9	59	101	21	36	11	4	15	25	0.5	30	13.4	NW	4	9	6	15	6.0	55
FLORIDA																																
APALACHICOLA U	4			25.0	17.2	21.0	1.3	27.8	22+	10.6	1	0	0			12	- 97	12	2	1	0	0			10.7	SW	23	12	13	5	4.6	92
DAYTONA BEACH	9	1016.9	1018.4	26.7	16.1	21.6	1.1	33.3	16+	7.8	3	3	0	15.0	70	36	- 40	24	6	3	0	0	0.4	8	8.9	36	26+	11	8	11	5.2	
FORT MYERS	5	1017.6	1017.8	29.4	17.2	23.3	0.7	33.9	19	10.0	3	2	0	16.7	71	7	- 60	6	2	0	0	0	0.2	5	10.7	9	28+	16	9	5	3.8	
JACKSONVILLE	8	1017.3	1018.3	26.7	13.9	20.4	0.0	32.2	21+	6.7	3	3	0	13.9	71	76	- 14	24	7	4	0	0	0.6	22	13.0	NW	22	10	11	9	5.1	73
KEY WEST	1	1016.6	1017.2	27.8	23.3	25.5	1.2	29.4	23+	18.9	3	0	0	18.3	67	19	- 44	16	6	2	0	0	3.2	10	11.2	NE	27+	21	3	6	3.4	85
LAKELAND U	65			27.8	17.2	22.3	0.4	31.7	21+	11.7	3	0	0			11	- 78	6	5		0	0						15	9	6	4.1	77
MIAMI	2	1017.3	1017.4	27.8	20.0	23.9	0.4	31.7	17	13.9	3	0	0	17.2	68	68	- 31	59	7	4	0	0	1.8	9	10.3	8	29	16	9	5	4.3	
ORLANDO	33	1013.9	1018.2	28.9	16.7	22.6	0.8	33.9	22+	10.0	3	7	0	15.0	66	35	- 52	24	4	2	0	0	0.1	27	10.3	25	23+	9	13	8	5.2	
PENSACOLA	34	1013.2	1017.5	25.0	15.6	20.4	0.5	29.4	24+	6.1	2	0	0	14.4	70	52	- 82	22	4	3	0	0	1.3	18	9.4	14	28+	5	16	9	5.9	
TALLAHASSEE	17	1015.6	1017.8	28.3	12.2	20.1	0.4	33.3	14	2.8	2	5	0	13.3	69	14	-104	7	4	2	0	0	0.8	21	11.2	22	7	7	17	6	5.3	
TAMPA	6	1018.0	1018.1	27.8	16.1	21.9	0.0	31.1	21+	7.8	3	0	0	15.0	68	10	- 62	8	3	2	0	0	0.2	17	9.4	5	9+	16	7	7	4.2	82
WEST PALM BEACH	5	1016.6	1017.3	28.3	18.3	23.4	0.1	33.9	17	11.7	3	2	0	16.7	68	321	210	157	7	6	0	0	1.6	10	11.6	8	28+	13	9	8	5.1	
GEORGIA																																
ATHENS	244	988.2	1017.1	23.9	9.4	16.6	0.4	30.6	20+	0.0	9	0	1	8.3	63	39	- 72	14	6	2	0	0	1.1	24	10.3	25	15	10	11	9	4.9	
ATLANTA	308	980.4	1017.0	22.8	9.4	16.3	0.6	30.6	15	- 1.1	2	0	1	8.3	63	59	- 55	23	7	3	0	0	1.5	25	17.0	NW	7	9	12	9	5.3	76
AUGUSTA	41	1012.2	1017.4	25.0	10.0	17.3	- 0.1	31.7	15	- 1.1	10	0	1	10.0	67	23	- 68	12	4	1	0	0	1.0	22	12.5	22	16	8	15	7	5.2	
COLUMBUS	117	1003.4		26.1	11.7	18.8	1.2	32.8	15	2.2	2	1	0	10.0	61	27	- 89	14	2	2	0	0	0.6	25	10.3	30	2	11	12	7	4.9	
MACON	108	1005.1	1018.1	26.1	10.6	18.3	- 0.3	32.8	15	1.1	10	1	0	10.6	66	13	- 82	6	3	1	0	0	0.8	23	14.3	NW	8	9	12	9	5.3	78
ROME	194			24.4	7.8	16.0	0.6	31.1	15	- 2.2	2	0	3			49	- 68	21	8		0	0										
SAVANNAH	14	1016.3	1018.1	26.1	12.2	19.3	0.6	33.3	15	1.7	10	2	0	12.2	69	30	- 64	17	6	1	0	0	1.0	22	11.6	E	21+	9	12	9	5.6	73
HAWAII																																
HILO	8	1016.3	1017.5	26.1	18.9	22.6	0.6	29.4	14	15.6	28	0	0	18.9	85	452	149	154	30	2	0	0	0.5	13	8.9	E	14+	0	5	25	9.0	22
HONOLULU	2	1016.3	1016.8	27.2	20.6	23.9	0.4	28.9	30+	16.7	1	0	0	17.2	70	131	98	107	11	4	0	0	5.5	6	14.8	NE	10	3	8	19	7.6	56
KAHULUI	15	1013.9	1016.3	28.3	18.3	23.1	0.1	29.4	18+	13.9	1	0	0	17.8	74	8	- 29	2	10	1	0	0	4.9	6	13.0	E	24+	4	8	18	7.7	62
LIHUE	31	1013.2	1018.1	25.6	21.1	23.3	0.8	27.2	30+	15.6	1	0	0	18.9	77	271	186	166	15	4	0	0	4.7	6	12.1	S	14	0	7	23	8.6	43
IDAHO																																
BOISE	865	914.7	1015.3	14.4	1.7	8.2	- 2.1	24.4	28	- 5.0	19+	0	12	- 2.8	48	16	- 14	7	9	0	41	T	1.2	31	14.3	NW	28	5	9	16	6.7	64
LEWISTON	431			14.4	2.2	8.4	- 2.1	25.6	27	- 2.8	3	0	10			25	- 4	8	13		28	T			21.0Y		21	2	8	20	7.6	
POCATELLO	1358	860.5	1014.2	12.8	- 0.6	6.1	- 1.9	22.2	28	- 8.3	3	0	16	- 5.0	51	35	8	20	7	1	23	T	4.3	23	16.5	SW	29	6	10	14	6.4	65
ILLINOIS																																
CAIRO U	96			20.6	10.6	15.5	0.3	27.8	19	- 2.2	8	0	2			172	69	81	9		0	0			15.6	SW	20+	9	9	12	5.9	62
CHICAGO O HARE	201	991.2	1015.9	12.2	2.2	7.1	- 1.3	25.0	18	-10.0	8	0	10	1.7	72	121	46	60	14	6	84	76	1.2	3	17.0	5	7	6	5	19	7.3	
CHICAGO MIDWAY	185	993.2	1016.2	13.3	3.3	8.3	- 1.2	25.6	18	- 6.7	8	0	6	1.1	65	93	16	25	13	6	84	51	1.0	5	15.2	NE	7	5	8	17	7.2	54
MOLINE	177	994.2	1016.0	14.4	3.3	8.9	- 1.1	26.1	18	- 6.1	8	0	11	2.8	70	132	51	43	12	7	66	25	1.3	9	15.2	NE	7+	5	5	20	7.6	39
PEORIA	199	991.2	1015.4	15.0	3.9	9.4	- 1.1	26.1	18	- 7.2	8	0	10	2.8	68	111	10	27	12	8	23	25	1.1	12	14.3	NE	7	5	6	19	7.5	51
ROCKFORD	221	988.5	1015.8	12.2	1.7	6.9	- 1.8	25.0	18	- 9.4	8	0	11	1.1	70	158	80	81	10	4	69	102	1.5	9	13.4	12	21	5	6	19	7.3	
SPRINGFIELD	179	992.9	1015.0	17.2	5.6	11.4	- 0.5	26.7	6	- 5.6	8	0	7	5.6	70	85	- 6	33	11	3	T	T	1.3	14	15.2	NW	6	5	5	20	7.3	49
INDIANA																																
EVANSVILLE	116	1001.7	1015.7	19.4	7.8	13.6	- 0.7	28.3	19	- 4.4	8	0	5	6.7	65	169	68	68	15	8	T	T	0.7	19	13.0	SW	22+	6	7	17	6.8	50

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No of days		Snow, Ice pellets		Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers) Speed	Fastest mile Direction	Fastest mile Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
INDIANA																																
FORT WAYNE	241	986.8	1017.0	14.4	2.8	8.7	- 0.9	24.4	18+	- 9.4	8	0	10	2.8	68	160	80	38	16	7	48	25	0.4	26	15.2	W	16	5	9	16	7.1	60
INDIANAPOLIS	241	986.8	1016.1	17.2	5.0	11.2	0.7	26.7	18	- 7.8	8	0	8	4.4	67	148	53	51	15	7	15	T	0.4	18	21.5	N	7	6	8	16	6.8	54
SOUTH BEND	236	987.8	1016.1	13.3	1.7	7.4	- 1.2	24.4	18	-11.7	8	0	10	1.7	71	82	- 9	23	16	7	180	102	0.2	11	12.5	11	21	4	8	18	7.2	
IOWA																																
BURLINGTON	211			15.6	3.9	9.6	- 0.8	26.7	18	- 8.3	8	0	9	3.3	66	102	14	31	11	8	T	T	1.2	11	14.3	36	16	4	7	19	7.4	
DES MOINES	286	980.0	1014.9	15.6	3.3	9.4	0.1	30.6	6	- 6.7	8+	0	8	2.8	68	90	26	30	15	5	15	T	1.3	8	14.3	NW	23+	5	6	19	7.6	41
DUBUQUE	322	976.3		11.7	1.7	6.5	- 1.7	23.9	18	-11.1	8	0	10			140	61	47	10		114	76						4	5	21	7.6	
SIOUX CITY	334	974.3	1014.4	15.6	3.9	9.7	0.3	31.7	6	- 5.0	4	0	8	1.7	62	87	30	36	14	5	20	25	1.8	7	17.9	SW	17	6	7	17	7.2	48
WATERLOO	265	983.4	1015.7	12.8	1.1	6.8	- 1.7	24.4	18+	-12.8	8	0	14	0.6	69	84	15	28	12	4	86	51	1.7	9	11.6	11	6	3	7	20	7.9	
KANSAS																																
CONCORDIA	448	959.0	1012.1	17.8	4.4	11.2	- 0.4	28.9	6	- 7.2	1	0	7	4.4	68	109	55	30	12	5	T	T	0.9	11	18.8	S	17	6	8	16	7.1	59
DODGE CITY	787	920.4	1010.8	20.6	5.0	12.8	0.8	32.2	12	- 6.1	1	1	3	- 0.6	45	52	6	33	6	3	T	0	0.3	19	21.9	N	3	9	5	16	6.3	65
GOODLAND	1114	883.8	1010.7	18.3	1.7	9.9	1.0	29.4	17	-10.0	1	0	7	0.0	58	15	- 25	9	4	3	T	T	0.3	2	21.5	14	25	8	5	17	6.3	
TOPEKA	267	981.4	1013.1	19.4	5.6	12.6	0.2	30.6	18+	- 6.7	4	0	5	5.6	66	100	16	37	15	6	T	0	0.9	10	22.8	SW	30	8	5	17	7.1	47
WICHITA	403	963.8	1011.6	20.6	5.6	12.9	- 0.8	35.6	12	- 7.2	4	1	5	5.6	64	84	26	25	7	7	0	0	0.8	16	16.1	N	3	6	9	15	6.5	61
KENTUCKY																																
COVINGTON	265	984.1	1016.0	17.2	5.6	11.4	0.2	26.7	13	- 6.7	8	0	7	3.3	61	150	68	37	15	9	13	T	0.9	23	12.5	27	16	5	9	16	7.0	
LEXINGTON	294	981.0	1016.8	18.3	6.1	12.1	- 0.4	26.1	18+	- 5.6	9	0	8	5.6	69	222	120	70	17	11	T	T	1.4	22	12.5	25	16+	5	9	16	6.8	
LOUISVILLE	145	998.3	1015.9	19.4	7.8	13.4	0.8	28.3	19	- 4.4	8	0	5	6.1	64	215	118	53	15	9	T	0	0.8	22	17.9	SW	16	8	9	13	6.3	54
LOUISIANA																																
ALEXANDRIA	28	1011.9	1016.1	26.1	12.8	19.5	0.7	31.1	15+	2.8	1	0	0	13.9	74	36	-109	20	5	3	0	0	1.8	17	11.2	19	7	10	12	8	5.0	
BATON ROUGE	20	1013.5	1016.4	27.2	14.4	21.1	0.9	31.7	20+	5.0	1	0	0	13.9	67	37	- 85	20	4	3	0	0	1.8	15	10.3	17	15	11	13	6	4.8	
LAKE CHARLES	3	1014.6	1015.6	26.7	15.6	21.0	1.1	30.6	16	5.0	1	0	0	16.7	79	40	- 71	19	5	2	0	0	2.3	14	11.2	10	28	10	9	11	5.5	
NEW ORLEANS	1	1015.6	1016.5	26.7	15.0	21.0	1.1	30.6	20+	4.4	1	0	0	16.1	74	42	- 74	14	4	2	0	0	1.8	15	11.6	14	27	9	15	6	5.0	
SHREVEPORT	77	1005.8	1014.8	25.6	12.8	19.4	0.9	31.1	13	3.3	9	0	0	13.9	74	52	- 64	14	7	7	0	0	2.1	16	11.6	15	27	8	7	15	5.9	54
MAINE																																
CARIBOU	190	989.5		6.7	- 3.3	1.5	- 0.9	17.2	30	-15.0	8	0	28			28	- 39	13	13		239	483						5	13	12	6.5	
PORTLAND	13	1012.5	1014.[illegible]	9.4	0.0	4.8	- 1.1	20.6	30	- 3.9	8+	0	18	- 2.8	63	64	- 30	20	12	0	160	25	1.9	30	14.8	NW	21	6	10	14	6.6	57
MARYLAND																																
BALTIMORE	45	1011.2	1016.8	17.2	5.0	10.9	- 1.4	29.4	19	- 2.2	8+	0	5	2.8	61	135	43	39	11	4	8	T	0.9	31	14.8	W	20	8	8	14	6.3	58
MASSACHUSETTS																																
BLUE HILL OBS R	192			10.6	0.6	5.6	- 2.1	25.6	19	- 6.7	8	0	15			94	- 7	29	13		114	25			20.1	NW	21					50
BOSTON	5	1014.2	1015.2	11.1	3.3	7.2	- 1.7	23.3	30	- 3.9	8	0	4	- 1.7	60	85	- 11	22	11	0	10	T	1.6	32	14.3	NW	17	6	9	15	6.5	55
WORCESTER	301	978.3	1015.8	10.0	- 0.6	4.7	- 2.3	25.0	19	- 8.3	8	0	18	- 3.9	59	109	9	26	15	0	183	51	2.5	31	11.2	30	19+	7	9	14	6.5	
MICHIGAN																																
ALPENA	210	991.9	1017.8	7.8	- 3.9	1.9	- 2.1	20.6	28+	-13.9	8	0	26	- 5.0	63	43	- 24	16	14	1	84	152	0.8	5	12.1	E	22	10	7	13	6.0	56
DETROIT	189			12.2	2.2	7.2	- 1.5	23.9	18	- 8.3	8	0	10	- 2.2	56	79	3	26	14	3	15		0.7	35	10.3	3	7					
DETROIT METRO	193	991.9	1016.3	12.8	1.1	7.0	- 1.1	23.3	18	- 7.8	8	0	11	- 0.6	63	92	15	28	13	3	64	25	0.8	36	14.3	E	16	8	7	15	6.4	56
FLINT	235	988.2	1016.4	10.6	1.1	5.8	- 1.6	23.3	18	- 8.3	8	0	14	- 1.7	61	97	29	46	15	4	38	T	0.4	35	11.6	28	13+	6	6	18	7.1	
GRAND RAPIDS	239	986.8	1016.5	11.7	0.0	5.7	- 1.9	24.4	18	- 8.9	8	0	14	- 0.6	67	98	23	50	16	4	191	152	0.1	1	14.8	E	22+	5	9	16	7.0	62
HOUGHTON LAKE	350	974.3	1017.2	8.3	- 3.3	2.6	- 2.3	20.6	29+	-15.0	5	0	22	- 3.9	66	36	- 23	11	11	3	74	102	0.6	4	11.2	11	21	8	7	15	6.4	
LANSING	256	984.4	1016.8	11.1	- 0.6	5.3	- 2.3	24.4	18	-10.0	8	0	16	- 1.7	63	116	43	52	16	4	147	76	0.4	32	16.1	SE	22	7	8	15	6.6	47
MARQUETTE U	206			5.6	- 2.2	1.6	- 2.4	18.9	27	-12.8	7	0	20			67	- 2	34	11		366	762			8.9	NW	16	6	6	18	7.0	50
MUSKEGON	191	993.6	1016.8	11.1	0.6	5.9	- 1.4	20.6	18	- 8.3	9	0	15	- 1.7	62	53	- 12	23	11	4	64	25	0.0	5	15.6	10	21	6	10	14	6.6	
SAULT STE MARIE	220	990.2	1017.6	5.6	- 3.3	1.1	- 2.3	19.4	30	-15.0	7	0	21	- 4.4	69	72	17	29	11	2	373	660	0.4	1	17.0	SE	22	7	9	14	6.2	65
MINNESOTA																																
DULUTH	435	965.1	1017.9	5.6	- 3.9	0.7	- 2.1	16.7	26	-15.0	8	0	24	- 5.0	68	55	- 5	22	11	1	518	483	1.9	8	17.9	E	12	5	9	16	6.9	47
INTERNATIONAL FALLS	359	973.6	1017.8	8.3	- 2.8	2.7	- 0.3	22.2	29	-16.1	5	0	21	- 5.6	58	23	- 17	13	9	0	305	457	0.5	10	11.6	30	4	5	9	16	6.8	
MINNEAPOLIS	254	985.8	1016.7	10.6	0.6	5.5	- 1.3	25.0	17	- 7.8	8	0	13	- 1.7	65	43	- 4	19	14	2	203	76	1.4	8	15.2	SW	17	4	5	21	7.7	50
ROCHESTER	395	967.8	1016.3	10.6	0.0	5.2	- 1.5	22.8	17	-12.8	8	0	14	0.6	75	42	- 13	21	13	1	69	51	1.6	9	14.3	20	17	2	7	21	7.9	
ST CLOUD	313			10.0	- 1.1	4.3	- 1.7	25.6	17	- 9.4	8	0	18			40	- 11	15	13		183	76						6	6	18	7.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1 o kilometers)							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32 2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
MISSISSIPPI	M.	Mb.	Mb	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
JACKSON	94	1004.7	1016.7	26.7	11.7	19.1	0.8	32.2	15	1.1	2	1	0	13.3	73	62	- 63	22	7	3	0	0	1.5	19	11.6	NW	16+	12	10	8	4.7	75
MERIDIAN	88	1006.1	1017.1	26.1	11.1	18.7	0.7	31.7	15	0.6	2	0	0	11.1	65	54	- 82	16	6	4	0	0	1.0	18	10.7	18	3	11	11	8	5.2	
MISSOURI																																
COLUMBIA REGIONAL	270	982.1	1014.5	19.4	7.2	13.2	0.4	32.2	12	- 3.3	4	1	6	6.1	67	113	29	53	12	9	T	T	1.7	15	13.0	N	16+	4	7	19	7.6	53
KANSAS CITY	226	986.1	1013.1	20.6	7.8	14.1	0.9	33.3	14+	- 1.7	8+	2	4	6.1	63	101	11	27	11	7	T	T	1.1	9	20.1	W	30	5	9	16	7.0	59
ST JOSEPH	247			20.0	6.1	13.0	1.0	32.2	18	- 4.4	4	1	4	6.1	72	89	9		9		0		0.8	10	15.6	13	30	3	13	14	7.0	
ST LOUIS	163	994.6	1014.9	20.0	6.7	13.4	0.7	31.1	13+	- 5.6	8	0	7	6.7	70	114	20	25	13	14	T	0	1.1	14	13.9	NW	11	6	7	17	7.1	51
SPRINGFIELD	386	968.8	1013.9	22.2	7.2	14.7	1.6	31.7	13+	- 5.6	4	0	5	6.7	62	122	19	30	10	10	0	0	2.5	17	16.1	W	19	6	8	16	6.8	56
MON.ANA																																
BILLINGS	1087	888.3	1013.0	13.3	0.0	6.5	- 1.3	21.1	5	- 8.9	4+	0	14	- 5.0	48	41	8	19	8	1	185	25	1.7	31	17.0	NW	7	5	5	20	7.2	49
GLASGOW	696	931.3	1013.7	13.9	- 0.6	6.8	0.5	23.9	5	-10.6	4	0	15	- 3.3	53	21	- 4	11	4	0	18	25	0.4	22	15.6	8	16+	7	16	7	5.8	
GREAT FALLS	1116	885.2	1013.8	12.8	- 1.1	5.8	- 0.7	26.7	28	- 8.9	4	0	20	- 4.4	54	20	- 5	6	9	0	89	T	4.0	23	17.0	SW	1	6	7	17	6.9	70
HAVRE	788	920.1	1012.6	13.9	- 1.1	6.4	0.3	26.1	28	- 8.3	4	0	15	- 4.4	50	19	- 6	10	6	0	178	25	2.2	26	17.4	NW	21	4	13	13	6.5	79
HELENA	1167	878.1	1014.8	11.1	- 2.8	4.3	- 1.9	23.9	28	- 9.4	3	0	25	- 6.1	50	10	- 11	4	6	0	97	25	3.2	27	15.2	W	24+	4	10	16	6.9	69
KALISPELL	904	909.6	1015.5	11.1	- 2.2	4.4	- 2.1	20.0	28+	- 7.8	3	0	24	- 3.9	60	22	- 5	9	11	0	97	51	1.8	20	14.3	24	8	3	8	19	7.6	
MILES CITY	801	919.4		14.4	1.1	7.7	0.1	23.3	5	- 8.3	4	0	11			11	- 15		8	0	T											
MISSOULA	972	903.2	1016.4	12.2	- 0.6	5.9	- 0.9	23.3	28	- 6.1	3	0	21	- 2.2	61	24	T	8	13	0	76	25	2.0	29	13.9	NW	28+	5	6	19	7.3	51
NEBRASKA																																
GRAND ISLAND	561	946.5	1012.9	16.1	3.3	9.8	0.0	32.2	6	- 8.3	1	1	9	1.7	63	76	18	22	13	5	T	T	0.8	6	15.6	35	3	6	6	18	7.1	
LINCOLN U	351			17.2	5.6	11.2	0.2	32.8	6	- 4.4	2	1	7			137	75	33	12		20	25			17.4	SW	17	5	7	18	7.1	50
NORFOLK	471			15.0	2.8	8.9	- 0.2	31.1	6	- 6.7	4	0	10			101	46	34	11		33	25						6	7	17	7.3	
NORTH PLATTE	846	914.7	1012.9	15.6	0.6	8.1	- 0.6	28.9	6	-10.6	1	0	14	0.0	63	30	- 21	15	7	1	T	T	1.3	5	17.9	NE	13	6	8	16	7.1	52
OMAHA	298	978.0	1013.5	17.2	3.9	10.7	- 0.3	33.3	6	- 5.0	4+	1	8	3.3	65	118	53	42	13	5	38	T	1.0	8	15.6	S	17+	5	8	17	7.1	54
SCOTTSBLUFF	1206	876.1	1012.6	15.6	0.0	7.8	- 0.3	25.6	6	- 9.4	1	0	14	- 0.6	62	74	28	32	9	3	157	51	1.0	1	16.5	6	13+	6	6	18	7.1	
VALENTINE	789			14.4	0.6	7.4	- 0.2	27.8	6	-10.6	1	0	12			59	9	19	12		10	T			19.7	N	2	5	7	18	7.4	48
																9	- 12	5	4	1	15	T	1.3	27	9.8	25	11	7	8	15	6.5	
NEVADA																																
ELKO	1539	842.9	1014.4	13.9	- 2.8	5.7	- 1.1	23.9	28	-10.0	30	0	25	- 7.2	43																	
ELY	1906	806.3	1012.6	14.4	- 3.3	5.3	- 0.6	21.7	28	-12.2	19	0	24	- 7.2	45	22	- 2	14	8	0	109	127	1.5	23	17.0	S	5	10	6	14	5.8	70
LAS VEGAS	659	936.3	1012.1	26.1	10.6	18.4	0.3	31.7	28	3.3	20	0	0	- 7.2	19	2	- 4	1	2	0	0	0	2.7	23	20.6	NW	13	16	6	8	4.0	86
RENO	1342	865.2	1015.3	17.2	- 1.7	7.9	- 1.0	26.1	27	- 7.2	14	0	20	- 7.2	36	4	- 10	2	4	0	25	25	1.3	24	21.5	SE	12	12	6	12	5.4	85
WINNEMUCCA	1311	867.3	1014.8	16.7	- 3.3	6.8	- 0.9	26.1	28	-14.4	30	0	22	- 6.1	44	12	- 9	7	5	1	66	51	1.5	25	13.4	N	17+	10	7	13	6.1	71
NEW HAMPSHIRE																																
CONCORD	104	1002.4	1015.1	11.1	- 1.7	4.6	- 2.0	25.0	30	- 6.7	7	0	20	- 2.8	64	69	- 15	21	14	0	254	76	2.1	31	12.5	NW	21	7	9	14	6.5	55
MT WASHINGTON OBS	1909			- 5.0	-11.7	- 8.6	- 3.6	2.2	30+	-22.2	7	0	30			247	98	44	21	2	1890	660			45.2Y	NW	21	1	9	20	8.0	36
NEW JERSEY																																
ATLANTIC CITY	20	1013.9	1016.2	13.9	2.2	8.1	- 2.5	26.7	19	- 3.9	9+	0	10	2.2	71	117	31	31	11	4	T	T	0.9	26	11.6	20	6	5	13	12	6.4	54
ATLANTIC CITY U	3			12.8	5.6	9.1	- 0.9	20.0	19+	- 2.2	8	0	3			101	15	35	12		0				15.6	NE	16+					
NEWARK	2	1014.9	1016.1	15.6	4.4	10.0	- 0.7	30.6	19	- 3.3	8	0	4	1.1	59	78	- 11	21	10	1	T	T	1.5	32	9.8	1	20+	5	12	13	6.6	
TRENTON U	17			15.0	5.0	9.8	- 1.1	27.8	19	- 4.4	8	0	3			71	- 11	19	14		8	T			11.6	N	8	5	14	11	6.3	56
NEW MEXICO																																
ALBUQUERQUE	1619	835.4	1010.1	23.9	3.9	13.8	0.7	31.1	10	- 2.8	1	0	5	-11.1	20	T	- 12	T	0	0	T	0	1.7	27	24.1	NW	12	14	9	7	4.0	83
CLAYTON	1515			21.7	3.9	13.0	2.6	31.1	11+	- 2.8	1	0	5			5	- 25	3	3		33	25						10	9	11	5.5	
ROSWELL	1101			28.3	6.7	17.4	2.4	36.1	6	- 3.3	1	7	3			0	- 19	0	0		0	0			17.4	SW	13					87
NEW YORK																																
ALBANY	84	1005.4	1016.4	11.7	- 1.1	5.1	- 2.8	26.7	19	- 8.9	5	0	22	- 2.8	60	92	22	23	12	0	152	102	1.7	30	16.5	W	9	6	9	15	6.6	55
BINGHAMTON	485	956.3	1016.0	10.0	- 0.6	4.7	- 1.7	23.9	19	- 9.4	8	0	15	- 2.2	64	72	- 3	17	14	0	188	102	1.6	29	13.4	NW	17+	4	8	18	6.9	53
BUFFALO	215	990.2	1016.4	10.0	0.6	5.1	- 1.3	20.6	30	-10.6	8	0	13	- 1.1	68	76	- 1	20	12	2	132	102	1.4	25	13.0	SW	23+	4	10	16	7.0	56
NEW YORK U	40	1012.5	1015.9	15.0	5.0	10.1	- 0.7	30.0	19	- 3.3	8	0	4	0.0	57	100	12	25	10	1	T	T	1.0	34	12.1	NW	17					52
NEW YORK KENNEDY	4	1015.6	1016.3	14.4	5.6	9.9	0.4	25.0	20	- 2.2	8	0	3	1.7	60	84	- 4	20	9	2	T	T	0.9	34	13.4	33	8	7	12	11	5.9	
NEW YORK LA GUARDIA	3	1014.9	1016.0	13.3	4.4	8.7	- 2.0	28.3	19	- 3.9	8	0	4	- 0.6	56	81	- 10	20	11	2	T	T	1.3	34	12.5	NW	9	6	12	12	6.1	
ROCHESTER	167	996.6	1017.1	11.7	0.0	5.7	- 1.6	24.4	19	- 8.3	8	0	16	- 0.6	69	68	T	14	13	1	185	152	1.5	29	12.1	SW	23+	4	10	16	6.7	63
SYRACUSE	125	1001.4	1016.5	10.0	- 0.6	4.7	- 3.1	23.9	30	-12.8	7	0	18	- 1.7	68	102	24	23	13	0	198	102	1.6	29	13.0	W	14+	8	6	16	6.4	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1972

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1 6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32 2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NORTH CAROLINA	M	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ASHEVILLE	652	941.1	1017.1	21.7	5.0	13.2	0.7	31.7	15	- 4.4	9	0	8	6.1	68	38	- 64	16	6	3	0	0	0.6	32	14.3	34	8	9	12	9	5.4	75
CAPE HATTERAS R	2	1017.3	1017.5	18.3	8.9	13.5	- 1.7	25.0	14	- 3.3	10	0	2	9.4	77	18	- 58	5	9	4	0	0	0.7	28	13.0	23	16	8	10	12	6.0	58
CHARLOTTE	224	989.5	1017.0	21.7	7.8	14.7	- 1.0	31.1	15	- 3.9	9	0	3	6.1	61	44	- 44	13	10	5	0	0	1.1	22	12.5	SW	16	8	11	11	5.6	75
GREENSBORO	273	985.4	1017.2	20.6	6.1	13.4	- 0.7	31.1	15	- 5.0	9	0	6	5.6	62	69	- 18	20	10	5	0	0	1.0	23	15.2	SW	16	8	9	13	6.0	64
RALEIGH	132	1001.4	1017.1	21.7	7.2	14.4	- 0.7	32.8	15	- 5.0	9	1	5	5.6	61	49	- 41	15	9	5	0	0	1.1	24	11.2	22	16	9	8	13	6.0	65
WILMINGTON	9	1016.6	1017.8	22.8	9.4	16.3	- 0.7	32.8	15	- 1.1	9	1	2	10.0	71	20	- 53	17	5	2	0	0	1.0	21	12.5	N	8	12	6	12	5.4	68
NORTH DAKOTA																																
BISMARCK	502	955.0	1015.6	10.6	1.1	5.8	- 0.6	20.0	15	-10.6	1	0	10	- 0.6	67	46	15	24	8	0	23	76	1.2	12	14.8	SE	25	6	4	20	7.5	54
FARGO	273	983.4	1017.0	9.4	0.6	5.0	- 0.6	21.1	28	- 8.3	4	0	12	0.0	71	24	- 19	14	9	0	79	25	1.1	8	15.6	NW	2	4	6	20	7.5	55
WILLISTON	579	945.1	1014.6	11.7	- 1.1	5.2	- 0.6	19.4	21+	-11.1	4	0	22	- 0.6	70	49	25	28	8	0	69	25	0.5	18	16.1	NW	22	4	11	15	7.0	49
OHIO																																
AKRON	368	971.2	1016.3	13.3	1.1	7.4	- 1.8	23.9	13	-10.0	8	0	15	0.6	65	101	16	26	15	6	28	25	0.9	28	12.1	10	21+	5	10	15	6.8	
CINCINNATI ABBE OB	232			17.8	6.1	12.0	- 0.3	27.8	13	- 7.2	8	0	5			162	69	40	16		T	T			13.9	W	16					55
CLEVELAND	237	987.5	1016.9	13.3	2.2	7.8	- 0.6	25.0	13	- 8.3	9	0	11	0.6	66	86	T	19	19	3	58	51	0.1	31	15.2	SW	16	5	10	15	6.8	54
COLUMBUS	247	986.1	1016.5	15.0	3.3	9.3	- 1.1	25.6	13	- 7.8	9	0	10	1.7	61	95	6	34	15	6	15	T	0.8	25	17.4	W	16	7	10	13	6.7	54
DAYTON	305	979.7	1016.1	15.6	4.4	10.2	- 0.2	25.0	13	- 9.4	8	0	9	3.9	68	96	11	27	17	6	30	T	0.8	23	19.2	W	16	5	11	14	6.8	47
MANSFIELD	395			15.0	2.8	8.7	- 1.1	24.4	18	- 9.4	8	0	10	1.7	66	152	68	56	15	7	36	25	1.0	26	12.5	9	21+	6	9	15	6.6	
TOLEDO	204	990.9	1016.2	14.4	1.7	7.8	- 0.4	25.0	18	-11.1	8	0	13	- 0.6	60	95	25	24	14	7	46	25	0.7	33	13.4	NE	7	6	7	17	6.8	53
YOUNGSTOWN	359	973.2	1016.5	13.3	0.6	6.9	- 1.4	23.9	13	- 9.4	8	0	15	0.6	67	101	7	41	15	4	53	25	0.7	31	12.5	27	16	6	7	17	7.0	
OKLAHOMA																																
OKLAHOMA CITY	392	966.5	1012.4	24.4	10.0	17.3	1.8	37.8	12	- 2.2	1	4	2	8.3	59	79	- 1	29	8	8	0	0	2.5	17	18.8	NW	3	9	11	10	5.3	64
TULSA	198	988.5	1012.5	24.4	10.0	17.1	2.2	38.9	12	- 2.8	4	3	2	9.4	63	113	11	40	9	8	0	0	2.5	18	17.9	SE	26	9	12	9	5.5	68
OREGON																																
ASTORIA	2	1018.0	1018.6	12.8	3.9	8.1	- 1.3	18.9	23+	1.1	22+	0	0	3.9	77	173	42	31	23	3	5	T	1.8	22	14.3	16	5	1	8	21	8.3	
BURNS U	1265	872.0	1016.3	12.2	- 2.8	4.7	- 3.1	22.2	27	- 8.3	22+	0	24	- 5.0	53	4	- 15	2	7		5	T	2.1	26				5	13	12	6.3	
EUGENE	109	1005.8	1019.5	13.9	2.2	8.1	- 2.3	21.7	4	- 2.8	22	0	8	3.9	78	147	87	29	18	2	T	0	1.5	21	19.7	18	7	1	8	21	8.0	
MEACHAM	1234	875.7	1017.5	6.7	- 2.8	2.1	- 2.8	17.8	27	- 6.1	18+	0	26	- 2.8	75	88	17	21	20		523	127	1.2	27	8.0	28	28+	7	5	18	6.5	
MEDFORD	396	970.5	1018.8	16.1	1.7	8.9	- 1.4	27.2	27	- 4.4	18	0	13			24	- 3	9	8	0	T	T	1.2	31	13.0	23	5	7	10	13	6.2	
PENDLETON	452	963.1	1017.0	15.0	2.8	8.7	- 2.4	27.2	27	- 1.7	3	0	7	- 1.1	52	17	- 10	5	10	0	28	25	2.8	26	19.7	28	5	5	12	13	6.7	
PORTLAND	6	1017.6	1018.9	13.9	3.9	8.9	- 2.1	25.6	27	- 1.1	22+	0	4	2.8	70	76	23	13	20	1	T	0	1.4	21	21.5	S	5	3	6	21	8.0	55
SALEM	60	1011.9	1019.3	13.9	1.7	7.8	- 2.8	22.8	27	- 2.8	30+	0	11	2.2	72	96	37	21	19	0	T	0	1.7	22	14.3	17	5	3	6	21	7.9	
SEXTON SUMMIT R	1169	884.2	1018.9	8.9	- 1.7	3.5	- 3.6	20.0	27	- 7.2	17	0	25			73	26	18	15		450	127	1.5	24	21.5	21	6					
PACIFIC AREA																																
GUAM TAGUAC R	110	999.0	1011.6	28.9	21.7	25.4	- 1.2	30.0	21+	17.8	20	0	0	21.7	82	85	8	25	21	0	0	0	4.1	8	11.2	E	26					67
JOHNSTON	2	1012.5	1013.2	27.2	24.4	25.8	0.2	28.9	19+	21.7	1	0	0	21.1	78	99	41	74	10	1	0	0	5.7	9	13.0	NE	30	6	7	17	7.3	71
KOROR R	29	1006.4	1010.1	31.7	23.9	27.7	0.3	32.8	19+	22.8	3	8	0	23.9	84	180	- 84	86	16	2	0	0	2.3	6	7.6	S	15	0	13	17	8.0	60
KWAJALEIN	2	1008.8	1009.6	30.0	25.0	27.4	0.3	31.1	30+	23.3	4+	0	0	23.9	83	207	79	53	21	0	0	0	3.8	7	11.2	6	30+	0	6	24	8.9	
MAJURO	3	1010.2	1010.4	29.4	25.0	27.1	0.1	30.6	27+	23.3	8+	0	0	23.9	83	233	- 80	59	24	0	0	0	2.7	7	11.2	NE	30	0	12	18	8.3	53
PAGO PAGO	4	1010.5	1010.6	30.6	23.9	27.3		31.7	2	21.7	15	0	0	23.9	83	165		24	24	1	0	0	2.5	9	10.3	SE	27	2	15	13	7.0	15
PONAPE R	37	1003.7	1008.8	30.6	23.3	26.7	- 0.3	32.2	12	20.0	7	1	0	23.3	85	518	9	130	24	7	0	0	2.1	8	7.2	NE	28	0	6	24	8.8	60
TRUK MOEN ISLAND	2	1009.1	1009.4	29.4	25.0	27.2	0.1	31.1	19+	23.3	21+	0	0	23.9	82	401	88	129	21	3	0	0	3.8	6	11.6	N	20	0	2	28	9.5	64
WAKE	3	1014.9	1015.1	27.2	21.1	24.2	- 1.6	28.3	30+	18.9	6+	0	0	17.8	71	31	- 17	10	12	0	0	0	7.7	6	13.0	NE	1	4	13	13	6.5	49
YAP R	13			30.6	23.9	27.3	- 0.4	32.2	17	23.3	28+	1	0			228	66	83	16	1	0	0			7.6	NE	26+	3	16	11	6.6	84
PENNSYLVANIA																																
ALLENTOWN	118	1002.4	1016.5	14.4	2.2	8.4	- 1.2	28.9	19	- 5.0	9	0	11	0.6	64	71	- 25	22	12	1	10	T	1.4	31	10.7	29	11	5	13	12	6.3	
ERIE	223	989.5	1017.0	9.4	- 0.6	4.4	- 2.3	21.1	19	- 8.3	9	0	17	- 1.1	69	67	- 23	31	12	2	28	T	0.5	24	14.3	26	13	6	9	15	6.4	
HARRISBURG	103	1003.7	1016.6	15.6	3.9	9.8	- 1.2	29.4	19	- 2.8	8+	0	6	1.7	61	104	27	25	14	3	28	25	0.8	30	13.9	W	1	6	15	9	5.9	60
PHILADELPHIA	2	1015.2	1016.4	15.6	4.4	9.8	- 1.3	27.2	19	- 3.9	8	0	4	2.2	63	104	17	24	13	4	10	T	1.2	30	12.5	NW	20	7	10	13	6.6	56
PITTSBURGH	347	971.9	1016.2	15.6	2.8	9.2	- 0.3	25.6	19	- 7.2	8	0	11	0.6	58	111	33	26	18	6	46	25	2.1	29	20.6	27	16	5	6	19	7.2	50
SCRANTON	283	981.4	1016.0	12.2	0.6	6.4	- 2.7	26.7	19	- 7.2	8	0	14	- 0.6	65	84	1	28	15	1	97	25	1.0	29	12.5	S	6	6	8	16	6.8	54
WILLIAMSPORT	160	997.3	1016.6	13.9	1.7	7.8	- 1.9	28.3	19	- 5.6	8	0	12	- 0.6	62	107	17	40	14	2	41	T	0.8	32	11.6	28	1	6	9	15	6.4	
RHODE ISLAND																																
BLOCK ISLAND	34			9.4	2.2	5.8	- 1.2	16.1	29	- 4.4	8	0	6			101	9	20	12		13	T										
PROVIDENCE	16	1013.2	1015.6	12.2	1.1	6.8	- 1.6	28.9	19	- 5.6	8	0	12	- 1.1	62	94	- 1	26	11	0	18	T	1.6	33	13.4	35	17	7	10	13	6.5	52

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
SOUTH CAROLINA	M	Mb.	Mb	C.	C.	C.	C.	C		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p s.							%
CHARLESTON	12	1015.9	1017.9	25.0	10.6	17.8	- 0.4	32.8	16+	- 1.1	10	3	1	11.1	69	T	- 73	T	1	0	0	0	1.0	21	18.8Y	W	2	13	8	9	5.0	74
CHARLESTON U	3			22.8	13.9	18.3	- 0.3	30.6	16	2.8	9	0	0			T	- 65	T	0		0	0			14.3	NE	21					
COLUMBIA	65	1009.5	1017.4	25.0	9.4	17.3	- 0.3	32.8	15	- 1.7	3	2	2	9.4	66	29	- 72	19	4	3	0	0	0.8	24	11.2	23	16+	7	13	10	5.5	73
GRNVLLE-SPRTNBRG	292	982.4	1016.9	22.8	7.8	15.3	- 0.8	30.6	15	- 2.8	9	0	3	6.7	59	58	- 42	17	8	5	0	0	1.3	24	14.3	S	16	10	10	10	5.1	73
SOUTH DAKOTA																																
ABERDEEN	395	968.2	1015.6	12.8	1.7	7.1	0.0	22.8	15	- 5.6	4	0	11	1.1	70	27	- 25	9	13	0	10	T	1.8	6	17.0	16	25	5	4	21	7.4	
HURON	390	967.8	1014.8	12.8	1.7	7.1	- 0.1	22.8	5	- 3.3	3	0	12	1.1	70	97	50	29	12	2	25	25	1.5	6	16.1	N	2	7	3	20	7.1	58
RAPID CITY	964	902.1	1013.7	12.8	0.0	6.4	- 0.5	23.3	5	- 8.3	3+	0	15	- 0.6	69	71	28	23	13	0	25	T	1.7	36	19.2	S	25	5	8	17	7.3	42
SIOUX FALLS	432	963.8	1015.7	12.8	0.6	6.6	- 1.2	26.7	17	- 6.1	2	0	13	0.0	68	69	11	22	11	2	20	25	2.1	6	14.8	21	17+	5	5	20	7.5	
TENNESSEE																																
BRISTOL	459	962.4	1016.7	20.0	5.6	12.7	- 0.9	28.3	15	- 4.4	9	0	9	5.6	66	74	- 6	24	10	2	T	T	0.7	28	14.3	32	14	6	9	15	6.4	
CHATTANOOGA	203	991.9	1016.6	22.2	8.3	15.1	- 0.9	30.6	15	- 2.2	2	0	3	7.2	64	88	- 21	49	7	4	0	0	1.2	22	15.2	NW	7	8	9	13	6.0	62
KNOXVILLE	299	982.1	1017.1	21.1	9.4	15.3	0.3	28.3	20+	- 1.7	9	0	3	6.7	60	65	- 29	26	8	3	0	0	1.9	26	17.0	SW	16	6	9	15	6.4	56
MEMPHIS	79	1005.8	1015.9	23.3	11.1	17.3	0.9	30.6	15	1.1	9+	0	0	8.9	60	89	- 28	39	9	6	0	0	1.8	19	15.6	1	7	9	5	16	6.2	66
NASHVILLE	180	994.2	1016.0	22.8	8.9	15.8	0.5	30.0	15	- 2.2	9	0	3	8.3	64	91	- 4	24	11	8	T	0	1.7	22	20.6	NW	7	6	10	14	6.3	63
OAK RIDGE R	276			21.1	7.8	14.4	0.1	30.0	15	- 2.8	9	0	5			75	- 32	28	12		0	0						6	8	16	6.8	
TEXAS																																
ABILENE	544	949.9	1011.8	28.3	13.3	20.8	2.8	36.7	13+	- 0.6	1	6	1	9.4	54	26	- 31	18	4	8	0	0	3.8	18	22.4	NW	19	11	14	5	4.5	88
AMARILLO	1098	887.2	1009.4	24.4	6.1	15.3	1.1	33.9	6	- 5.0	1	4	2	- 2.8	35	1	- 33	1	1	3	0	0	2.8	22	18.8	SE	25	13	10	7	4.5	83
AUSTIN	182	991.2	1012.8	29.4	16.7	23.1	3.2	36.1	7	6.7	1	4	0	14.4	64	37	- 53	23	5	4	0	0	2.5	17	15.6	W	21	10	9	11	5.4	66
BROWNSVILLE	6	1011.9	1012.3	30.0	20.6	25.2	1.9	35.6	15	8.9	1	2	0	20.0	75	39	T	37	5	2	0	0	4.5	14	21.0	SE	28	7	14	9	5.4	78
CORPUS CHRISTI	12	1011.2	1012.6	30.0	19.4	24.8	2.8	33.9	21+	8.3	1	7	0	19.4	77	39	- 15	38	3	2	0	0	5.1	13	21.0	SE	28	6	17	7	5.4	59
DALLAS	147	995.6	1012.9	27.2	15.0	21.0	2.7	34.4	12	4.4	4	4	0	11.7	60	93	- 8	69	6	5	0	0	3.4	15	14.3	SE	26	8	12	10	5.4	67
DEL RIO	313	975.3	1010.9	31.1	16.7	24.1	2.1	37.2	14+	7.2	1	11	0	12.8	55	40	6	38	4	5	0	0	3.7	12	14.3	35	21	11	9	10	5.1	
EL PASO	1194	879.8	1010.0	28.3	8.9	18.4	1.0	33.3	10+	- 1.1	1	4	1	- 7.8	17	0	- 7	0	0	0	0	0	2.4	26	21.5	SW	13	16	12	2	3.3	92
FORT WORTH	164	992.9	1013.2	27.8	14.4	21.2	2.9	35.0	12	4.4	1	6	0	12.2	60	83	- 9	60	6	6	0	0	3.1	17	11.2	18	20+	9	10	11	5.6	
GALVESTON U	2			25.0	20.0	22.5	2.2	29.4	16	13.9	9+	0	0			19	- 46	12	2		0	0			12.5	SE	14					70
HOUSTON INTERCON	29	1010.5	1014.4	27.8	15.6	21.8	2.1	31.7	13	3.9	1	0	0	16.7	75	72	- 12	48	4	4	0	0	2.4	14	14.3	36	27	8	11	11	5.6	62
LUBBOCK	992	900.1	1009.5	27.2	10.0	18.7	3.4	35.6	12+	- 1.7	1	4	1	1.7	39	9	- 20	9	1	1	0	0	2.6	21	17.4	16	25	13	10	7	4.2	
MIDLAND	869	913.0	1009.6	30.0	12.2	20.9	2.7	37.2	12+	- 0.6	1	9	1	3.3	41	7	- 14	6	2	3	0	0	2.7	19	13.9	16	25	16	10	4	3.6	
PORT ARTHUR	5	1014.6		26.7	15.6	20.9	0.8	30.6	16	4.4	1	0	0			138	38	93	4	2	0	0	3.2	15	13.0	S	15+	8	12	10	5.7	51
SAN ANGELO	580	945.1	1010.7	30.6	13.3	22.1	2.6	39.4	13	0.0	1	13	1	8.3	48	14	- 37	10	3	7	0	0	3.0	19	15.6	16	25	14	9	7	4.4	
SAN ANTONIO	240	985.1	1012.8	30.0	16.1	23.2	3.1	33.9	14	2.8	1	8	0	14.4	64	49	- 22	30	6	4	0	0	2.2	13	15.6	E	27	11	9	10	5.4	59
VICTORIA	32	1009.5	1013.4	29.4	17.8	23.7	2.6	33.9	16	8.3	1	2	0	17.2	71	9	- 58	9	2	1	0	0	3.3	14	19.2Y	NE	27	10	12	8	5.5	
WACO	153	994.9	1012.8	28.3	15.0	21.7	2.4	34.4	7	4.4	1	3	0	12.8	60	52	- 47	37	4	4	0	0	3.3	15	13.0	18	3	10	10	10	5.5	
WICHITA FALLS	303	974.9	1011.2	27.8	11.1	19.4	1.7	38.9	12	0.0	4	7	1	8.9	56	61	- 4	26	7	8	0	0	3.0	16	17.4	1	3	11	12	7	5.1	
UTAH																																
MILFORD	1533	843.6		17.8	0.0	8.7	- 0.1	25.0	29	- 5.0	27+	0	19			24	6	18	5		274	152						9	8	13	6.0	73
SALT LAKE CITY	1286	869.3	1013.5	15.6	2.2	8.9	- 1.0	25.0	24	- 2.2	30	0	10	- 0.6	55	92	47	33	11	1	381	152	0.5	29	17.0	SE	11	9	8	13	6.5	63
WENDOVER	1291	868.6	1013.6	16.1	3.9	10.0	- 0.9	23.3	28+	- 1.1	30	0	3	- 6.7	34	1	- 12	1	2		T	T						8	9	13	6.0	
VERMONT																																
BURLINGTON	101	1003.1	1015.8	7.2	- 3.3	2.0	- 3.1	22.8	30	-16.7	7	0	25	- 4.4	65	57	- 9	18	12	0	234	76	0.7	32	13.0	SW	5	5	10	15	6.9	59
VIRGINIA																																
LYNCHBURG	279			20.6	6.1	13.4	0.0	30.6	15	- 3.3	9	0	6			71	- 8	26	11		T	0			14.3	SW	16+	9	7	14	5.9	61
NORFOLK	7	1015.9	1017.0	19.4	7.8	13.6	- 0.9	30.0	20	- 0.6	10	0	1	7.2	70	55	- 26	23	12	7	T	0	0.2	19	16.5	NW	4	9	7	14	6.2	66
RICHMOND	50	1010.2	1016.6	21.1	6.1	13.4	- 1.1	31.1	16	- 2.8	9+	0	5	5.0	63	85	5	40	11	4	T	0	0.4	23	17.9	NW	15	8	4	18	6.5	56
ROANOKE	350	974.3	1016.2	20.6	5.6	13.1	- 0.5	30.6	15	- 5.6	9	0	6	3.3	56	84	5	35	11	5	T	0	1.7	28	13.4	27	16	10	6	14	5.9	
WALLOPS ISLAND	3			15.6	6.7	10.9		30.0	20	- 1.1	9+	0	2			114		63	10		T	0			19.7Y	NW	16					
WASHINGTON																																
OLYMPIA	59	1010.5	1017.9	12.2	0.6	6.6	- 3.4	25.6	27	- 3.9	3	0	15	2.8	80	149	74	28	18	1	56	T	2.6	21	15.6	20	5	0	9	21	8.4	
QUILLAYUTE	55	1009.5	1017.0	10.6	1.7	5.9	- 2.5	18.3	3	- 1.7	29+	0	9	2.8	82	291	103	55	25	1	64	T	1.1	20	11.6	SE	5	0	8	22	8.6	26
SEATTLE-TACOMA	122	1000.7	1017.2	12.2	4.4	8.3	- 1.2	25.0	27	1.1	17+	0	0	2.2	69	105	44	23	18	1	58	51	2.4	19	17.0	SW	5	0	10	20	8.2	50
SPOKANE	718	930.6	1015.1	11.7	- 0.6	5.6	- 2.9	22.8	27	- 5.0	18+	0	18	- 3.3	56	28	5	11	10	1	5	T	3.4	22	16.5	SW	21	4	13	13	6.6	59
STAMPEDE PASS R	1206	877.1		2.2	- 3.9	- 0.9	- 3.4	12.2	27	- 6.7	22+	0	29			205	62	29	24		1651	3962						1	4	25	8.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
																									Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
WASHINGTON	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WALLA WALLA U	289			15.6	3.9	9.6	- 2.6	25.6	27	- 1.7	3	0	1			29	- 7	11	12		T	T			17.0	NW	5	4	11	15	6.9	55
YAKIMA	321	977.7	1016.7	16.1	- 1.1	7.5	- 2.8	25.0	27	- 6.1	3	0	22	- 3.9	46	2	- 10	2	2	1	T	T	2.4	27	16.5	24	5	7	13	10	5.8	
WEST INDIES																																
SAN JUAN P.R.	4	1013.9	1016.7	30.0	23.3	26.7	1.9	33.3	2+	21.7	7	3	0	19.4	66	71	- 24	18	14	0	0	0	4.0	9	12.1	NE	3	11	14	5	4.7	67
WEST VIRGINIA																																
BECKLEY	763	927.9	1016.8	16.1	3.9	9.9	- 0.5	26.1	19	- 9.4	9	0	10	2.8	67	117	25	31	19	7	48	25	2.0	24	13.4	23	16	5	5	20	7.3	
CHARLESTON	286	982.1	1016.3	19.4	5.6	12.5	- 0.4	28.9	19	- 7.2	9	0	9	3.3	59	131	38	38	18	10	T	T	0.9	25	15.6	32	16	5	6	19	7.3	
ELKINS	594	945.1		16.7	1.7	9.1	- 1.1	26.1	19+	- 8.3	9	0	14			177	88	42	20		117	25						4	7	19	7.4	
HUNTINGTON	252	986.1	1016.4	18.3	6.1	12.3	- 0.9	27.8	18	- 5.6	9	0	7	4.4	62	154	61	45	18	12	T	T	0.9	24	13.9	27	7	4	7	19	7.5	
PARKERSBURG U	187			18.3	6.1	12.2	- 0.1	27.2	18	- 5.6	9	0	5			157	74	43	17		10	T			20.1	W	16					67
WISCONSIN																																
GREEN BAY	208	991.2	1017.4	9.4	- 1.1	4.1	- 2.1	20.6	28+	-11.7	1	0	13	- 2.8	64	37	- 26	20	12	2	58	127	1.3	2	15.2	NE	7	6	5	19	7.3	46
LA CROSSE	198	992.2	1017.2	11.7	0.6	6.1	- 2.2	25.0	17	-11.7	8	0	13	- 0.6	66	60	- 9		13	1	76		0.8	6								
MADISON	262	984.4	1016.3	11.7	- 1.1	5.2	- 1.7	25.6	18	-12.8	8	0	15	0.0	73	51	- 14	31	13	3	99	152	1.2	6	12.5	E	21	3	8	19	7.7	44
MILWAUKEE	205	990.9	1016.8	8.3	0.0	4.1	- 2.3	24.4	18	- 6.1	8+	0	14	- 1.7	70	70	6	27	11	1	30	25	1.5	1	14.3	SE	21	4	7	19	7.2	51
WYOMING																																
CASPER	1627	833.7	1012.0	13.3	- 1.1	6.1	- 0.1	21.1	5	-15.0	3	0	17	- 2.2	64	37	- 6	16	10	0	353	102	1.6	28	16.5	26	12	5	9	16	7.3	
CHEYENNE	1867	808.3	1011.9	12.8	- 1.1	5.8	- 0.1	20.6	11	- 7.8	1	0	21	- 4.4	54	20	- 27	8	9	2	216	76	2.5	30	20.6	NW	6	4	13	13	7.1	58
LANDER	1696	825.3	1011.8	13.9	- 1.1	6.3	0.1	21.7	29	- 8.9	20+	0	20	- 5.0	51	55	- 7	21	10	1	724	229	1.6	27	17.4	SW	5	5	13	12	6.7	65
SHERIDAN	1208	875.7	1013.0	14.4	- 0.6	6.9	0.8	22.8	5	-11.7	3	0	16	- 2.2	55	26	- 29	7	11	1	198	51	1.3	31	16.1	SW	12+	6	9	15	6.5	59

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table

HEATING DEGREE DAYS

(Base 65°F.)

APRIL 1972

State and station	Current season		Normals July through this month
	This month	Period July through this month	
ALABAMA			
BIRMINGHAM	138	2345	2542
HUNTSVILLE	163	2694	3051
MOBILE	35	1053	1560
MONTGOMERY	91	1769	2291
ALASKA			
ANCHORAGE	1138	11027	9820
ANNETTE	803	7042	6258
BARROW	2081	18302	17772
BARTER ISLAND	2094	18300	17565
BETHEL	1516	12988	11988
BETTLES	1549	16532	
BIG DELTA	1374	14658	
COLD BAY	1056	9409	8498
FAIRBANKS	1318	14397	13502
GULKANA	1391	14696	
HOMER	1128	10165	
JUNEAU	906	9119	8093
KING SALMON	1281	11604	10262
KOTZEBUE	1725	15035	14412
MC GRATH	1415	14355	13377
NOME	1584	13528	12668
ST. PAUL ISLAND	1193	10430	9537
SHEMYA	857	8167	8154
SUMMIT	1539	14491	
TALKEETNA	1310	12327	10633
UNALAKLEET	1551	13522	
YAKUTAT	1079	9631	8025
ARIZONA			
FLAGSTAFF	749	7072	6535
PHOENIX	12	1341	1765
TUCSON	50	1743	1794
WINSLOW	316	4433	4686
YUMA	9	1167	1217
ARKANSAS			
FORT SMITH	145	3004	3270
LITTLE ROCK	149	2611	3210
CALIFORNIA			
BAKERSFIELD	82	2287	2103
BISHOP	330	4165	4048
BLUE CANYON	667	5444	4915
EUREKA U	472	4184	3986
FRESNO	128	2707	2436
LONG BEACH	62	1401	1603
LOS ANGELES	103	1478	1624
LOS ANGELES U	61	1158	1263
MT SHASTA R	627	5672	5216
OAKLAND	246	2698	2600
RED BLUFF	218	2865	2468
SACRAMENTO	190	2768	2665
SANDBERG R	448	4125	3888
SAN DIEGO	78	1294	1319
SAN FRANCISCO	282	2919	2675
SAN FRANCISCO U	278	2799	2582
SANTA MARIA	280	2940	2569
STOCKTON	165	2723	2642
COLORADO			
ALAMOSA	666	7861	7921
COLORADO SPRINGS	469	5723	6020
DENVER	486	5568	5929
GRAND JUNCTION	346	5317	5474
PUEBLO	359	5026	5273
CONNECTICUT			
BRIDGEPORT	564	5046	5382
HARTFORD	619	5849	5971
DELAWARE			
WILMINGTON	443	4404	4812
DIST.OF COLUMBIA			
WASHINGTON DULLES	404	4434	
WASHINGTON NATIONAL	326	3745	4150
FLORIDA			
APALACHICOLA U	16	869	1308
DAYTONA BEACH	15	441	879
FORT MYERS	0	85	442
JACKSONVILLE	40	861	1239
KEY WEST	0	8	108
LAKELAND U	6	299	661
MIAMI	0	41	214
ORLANDO	6	240	766
PENSACOLA	29	1019	1463
TALLAHASSEE	42	1133	1485
TAMPA	5	286	683
WEST PALM BEACH	0	52	253
GEORGIA			
ATHENS	152	2474	2907
ATLANTA	161	2612	2958
AUGUSTA	123	2032	2397
COLUMBUS	84	1749	2383
MACON	96	1880	2136
ROME	177	2853	3292
SAVANNAH	74	1346	1819
IDAHO			
BOISE	543	5546	5483
LEWISTON	530	5304	5213
POCATELLO	654	7091	6573
ILLINOIS			
CAIRO U	195	3363	3774
CHICAGO O HARE	602	6027	6307
CHICAGO MIDWAY	539	5681	5896
MOLINE	504	6186	6180
PEORIA	475	5876	5809
ROCKFORD	606	6507	6534
SPRINGFIELD	375	5071	5275
INDIANA			
EVANSVILLE	274	4180	4367
FORT WAYNE	513	5730	5977
INDIANAPOLIS	389	5046	5483
SOUTH BEND	582	5827	6140
IOWA			
BURLINGTON	464	5901	5904
DES MOINES	478	6313	6558
DUBUQUE	632	7070	7038
SIOUX CITY	463	6662	6698
WATERLOO	611	7614	7037
KANSAS			
CONCORDIA	388	5168	5312
DODGE CITY	301	4627	4853
GOODLAND	445	5406	5863
TOPEKA	324	4788	5046
WICHITA	310	4647	4527
KENTUCKY			
COVINGTON	374	4761	5092
LEXINGTON	343	4073	4578
LOUISVILLE	282	3910	4546
LOUISIANA			
ALEXANDRIA	60	1589	1921
BATON ROUGE	32	1122	1560
LAKE CHARLES	22	1041	1459
NEW ORLEANS	25	1029	1385
SHREVEPORT	62	1725	2184
MAINE			
CARIBOU	903	9597	9116
PORTLAND	725	7017	7028
MARYLAND			
BALTIMORE	396	4127	4564
MASSACHUSETTS			
BLUE HILL OBS R	686	6077	6032
BOSTON	598	5228	5390
WORCESTER	733	6489	6587
MICHIGAN			
ALPENA	883	7834	7904
DETROIT	596	5751	5970
DETROIT METRO.	608	6111	6196
FLINT	669	6475	6524
GRAND RAPIDS	675	6551	6604
HOUGHTON LAKE	847	7854	7805
LANSING	696	6623	6567
MARQUETTE U	897	8094	7748
MUSKEGON	665	6548	6308
SAULT STE MARIE	926	8846	8370
MINNESOTA			
DULUTH	946	9814	9312
INTERNATIONAL FALLS	833	10379	9989
MINNEAPOLIS	687	8310	8013
ROCHESTER	704	8072	7901
ST CLOUD	752	8938	8448
MISSISSIPPI			
JACKSON	76	1715	2203
MERIDIAN	81	1754	2289
MISSOURI			
COLUMBIA REGIONAL	304	4515	4913
KANSAS CITY	263	4452	4602
ST JOSEPH	303	5126	5336
ST LOUIS	295	4348	4764
SPRINGFIELD	243	3972	4450
MONTANA			
BILLINGS	633	7378	6662
GLASGOW	614	8721	8511
GREAT FALLS	667	7631	7180
HAVRE	635	8789	8200
HELENA	747	8007	7553
KALISPELL	742	8030	7587
MILES CITY	569	7985	7348
MISSOULA	666	7307	7515
NEBRASKA			
GRAND ISLAND	463	5848	6274
LINCOLN U	393	5477	5663
NORFOLK	506	6633	6698
NORTH PLATTE	549	6355	6379
OMAHA	408	5833	6024
SCOTTSBLUFF	561	6116	6313
VALENTINE	584	6935	7053
NEVADA			
ELKO	673	6977	6832
ELY	693	7174	7052
LAS VEGAS	69	2590	2703
RENO	558	5908	5786
WINNEMUCCA	617	6259	6245
NEW HAMPSHIRE			
CONCORD	736	7263	7010
MT WASHINGTON OBS	1450	12339	12284
NEW JERSEY			
ATLANTIC CITY	550	4825	4664
ATLANTIC CITY U	494	4241	4528
NEWARK	444	4480	4931
TRENTON U	455	4533	4847
NEW MEXICO			
ALBUQUERQUE	244	4178	4267
CLAYTON	293	4612	4954
ROSWELL	109	3186	3762
NEW YORK			
ALBANY	707	6737	6591
BINGHAMTON	732	6880	6874
BUFFALO	707	6303	6655
NEW YORK U	445	4564	4744
NEW YORK KENNEDY	449	4300	5040
NEW YORK LA GUARDIA	520	4795	4691
ROCHESTER	677	6305	6421
SYRACUSE	731	6470	6463
NORTH CAROLINA			
ASHEVILLE	294	3598	4346
CAPE HATTERAS R	267	2129	2587
CHARLOTTE	226	3043	3169
GREENSBORO	282	3445	3758
RALEIGH	237	3072	3359
WILMINGTON	167	2032	2347
NORTH DAKOTA			
BISMARCK	671	8980	8405
FARGO	718	9232	8795
WILLISTON	702	9248	8745
OHIO			
AKRON	581	5949	5796
CINCINNATI ABBE OB.	349	4517	4679
CLEVELAND	564	5572	5886
COLUMBUS	482	5341	5462
DAYTON	438	5135	5425
MANSFIELD	515	5430	5559
TOLEDO	560	6048	6192
YOUNGSTOWN	611	6048	6109
OKLAHOMA			
OKLAHOMA CITY	144	3416	3691
TULSA	161	3348	3813
OREGON			
ASTORIA	545	4610	4592
BURNS U	730	7016	6414
EUGENE	547	4676	4312
MEACHAM	871	7511	7008
MEDFORD	505	4632	4688
PENDLETON	515	4922	4859
PORTLAND	501	4250	4285
SALEM	560	4608	4337
SEXTON SUMMIT R	795	6160	5510
PENNSYLVANIA			
ALLENTOWN	531	5397	5619
ERIE	742	6297	6508
HARRISBURG	457	4755	5115
PHILADELPHIA	450	4450	4974
PITTSBURGH	489	5343	5753
PITTSBURGH U	441	4876	5146
SCRANTON	634	6067	6026
WILLIAMSPORT	562	5727	5733
RHODE ISLAND			
BLOCK ISLAND	669	5137	5361
PROVIDENCE	616	5501	5667
SOUTH CAROLINA			
CHARLESTON	113	1636	2033
CHARLESTON	89	1443	1794
COLUMBIA	136	2120	2484
GRNVLLE-SPRTNBRG	205	2975	3021
SOUTH DAKOTA			
ABERDEEN	597	8490	8088
HURON	600	8017	7848
RAPID CITY	634	7249	6893
SIOUX FALLS	628	7989	7491
TENNESSEE			
BRISTOL	307	3688	4075
CHATTANOOGA	215	3112	3229
KNOXVILLE	211	3153	3451
MEMPHIS	146	2706	3210
NASHVILLE	193	3011	3538
OAK RIDGE R	244	3502	3761
TEXAS			
ABILENE	49	2263	2624
AMARILLO	203	3988	3929
AUSTIN	6	1262	1711
BROWNSVILLE	2	301	600
CORPUS CHRISTI	2	541	914
DALLAS	33	1826	2357
DEL RIO	2	1027	1504
EL PASO	56	2301	2700
FORT WORTH	26	1860	2405
GALVESTON U	2	698	1235
HOUSTON INTERCON	17	1109	1676
LUBBOCK	94	2930	3547
MIDLAND	37	2298	2591
PORT ARTHUR	20	1150	1447
SAN ANGELO	26	1880	2255
SAN ANTONIO	7	1109	1546
VICTORIA	2	801	1173
WACO	19	1640	2030
WICHITA FALLS	77	2715	2826
UTAH			
MILFORD	516	6065	6131
SALT LAKE CITY	499	5652	5735
WENDOVER	447	5718	5550
VERMONT			
BURLINGTON	872	7583	7826
VIRGINIA			
LYNCHBURG	282	3757	4088
NORFOLK	272	2777	3384
RICHMOND	286	3494	3812
ROANOKE	305	3843	4085
WALLOPS ISLAND	399	3600	
WASHINGTON			
OLYMPIA	632	5418	4752
QUILLAYUTE	663	5560	5066
SEATTLE-TACOMA	531	4784	4691
SPOKANE	684	6820	6232
STAMPEDE PASS R	1033	8456	8146
WALLA WALLA U	469	4702	4583
YAKIMA	578	6088	5652
WEST VIRGINIA			
BECKLEY	446	4804	5195
CHARLESTON	333	3860	4371
ELKINS	494	5109	5429
HUNTINGTON	335	4072	4335
PARKERSBURG U	334	4322	4633
WISCONSIN			
GREEN BAY	762	7928	7595
LA CROSSE	655	7449	7275
MADISON	705	7378	7451
MILWAUKEE	758	7135	7128
WYOMING			
CASPER	653	7353	6900
CHEYENNE	668	6631	6795
LANDER	643	7461	7336
SHERIDAN	607	7566	7167

Data from airport unless otherwise specified.
U Indicates Urban, R Indicates Rural, others [illegible]

COOLING DEGREE DAYS

(Base 65°F.)

APRIL 1972

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	88	105	
HUNTSVILLE	71	76	
MOBILE	173	275	
MONTGOMERY	117	145	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	212	423	
TUCSON	82	165	
WINSLOW	0	0	
YUMA	230	457	
ARKANSAS			
FORT SMITH	58	58	
LITTLE ROCK	81	86	
CALIFORNIA			
BAKERSFIELD	42	94	
BISHOP	0	1	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	18	35	
LONG BEACH	12	12	
LOS ANGELES	3	11	
LOS ANGELES U	34	65	
MT SHASTA R	0	0	
OAKLAND	0	3	
RED BLUFF	7	16	
SACRAMENTO	5	11	
SANDBERG R	0	2	
SAN DIEGO	4	4	
SAN FRANCISCO	0	1	
SAN FRANCISCO U	0	3	
SANTA MARIA	0	2	
STOCKTON	12	18	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	2	2	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	2	2	
CONNECTICUT			
BRIDGEPORT	0	0	
HARTFORD	3	3	
DELAWARE			
WILMINGTON	0	2	
DIST.OF COLUMBIA			
WASHINGTON DULLES	3	9	
WASHINGTON NATIONAL	5	8	
FLORIDA			
APALACHICOLA U	166	219	
DAYTONA BEACH	193	383	
FORT MYERS	278	775	
JACKSONVILLE	158	244	
KEY WEST	396	1257	
LAKELAND U	229	527	
MIAMI	307	940	
ORLANDO	243	614	
PENSACOLA	149	243	
TALLAHASSEE	146	208	
TAMPA	204	445	
WEST PALM BEACH	277	804	
GEORGIA			
ATHENS	60	60	
ATLANTA	56	59	
AUGUSTA	73	80	
COLUMBUS	118	149	
MACON	102	120	
ROME	56	57	
SAVANNAH	130	180	
HAWAII			
HILO	236	851	
HONOLULU	307	904	
KAHULUI	264	797	
LIHUE	278	867	
IDAHO			
BOISE	0	0	
LEWISTON	0	0	
POCATELLO	0	0	
ILLINOIS			
CAIRO U	47	48	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	1	1	
MOLINE	3	3	
PEORIA	0	0	
ROCKFORD	0	0	
SPRINGFIELD	6	6	
INDIANA			
EVANSVILLE	21	23	
FORT WAYNE	0	0	
INDIANAPOLIS	8	8	
SOUTH BEND	0	0	
IOWA			
BURLINGTON	2	2	
DES MOINES	3	3	
DUBUQUE	0	0	
SIOUX CITY	3	3	
WATERLOO	0	0	
KANSAS			
CONCORDIA	10	12	
DODGE CITY	11	15	
GOODLAND	1	1	
TOPEKA	22	27	
WICHITA	26	28	
KENTUCKY			
COVINGTON	7	7	
LEXINGTON	11	11	
LOUISVILLE	25	28	
LOUISIANA			
ALEXANDRIA	129	196	
BATON ROUGE	183	273	
LAKE CHARLES	172	267	
NEW ORLEANS	175	289	
SHREVEPORT	128	191	
MAINE			
CARIBOU	0	0	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	1	6	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	[illegible]	
DETROIT	0	0	
DETROIT METRO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	0	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	0	0	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	126	193	
MERIDIAN	106	141	
MISSOURI			
COLUMBIA REGIONAL	35	35	
KANSAS CITY	41	51	
ST JOSEPH	20	20	
ST LOUIS	35	40	
SPRINGFIELD	53	53	
MONTANA			
BILLINGS	0	[illegible]	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	0	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	0	0	
NEBRASKA			
GRAND ISLAND	8	8	
LINCOLN U	12	12	
NORFOLK	2	2	
NORTH PLATTE	0	0	
OMAHA	3	3	
SCOTTSBLUFF	0	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	80	148	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	0	0	
NEWARK	4	7	
TRENTON U	1	4	
NEW MEXICO			
ALBUQUERQUE	5	5	
CLAYTON	13	13	
ROSWELL	68	75	
NEW YORK			
ALBANY	0	0	
BINGHAMTON	0	0	
BUFFALO	0	0	
NEW YORK U	5	5	
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	2	2	
ROCHESTER	0	0	
SYRACUSE	0	0	
NORTH CAROLINA			
ASHEVILLE	24	24	
CAPE HATTERAS R	12	21	
CHARLOTTE	40	40	
GREENSBORO	23	26	
RALEIGH	37	42	
WILMINGTON	64	71	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI ABBE OB	12	13	
CLEVELAND	1	1	
COLUMBUS	1	1	
DAYTON	4	4	
MANSFIELD	0	0	
TOLEDO	0	0	
YOUNGSTOWN	0	0	
OKLAHOMA			
OKLAHOMA CITY	97	110	
TULSA	99	116	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	0	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	390	1490	
JOHNSTON	408	1511	
KOROR R	512	1969	
KWAJALEIN	496	2015	
MAJURO	483	1927	
PAGO PAGO	490	1872	
PONAPE R	458	1914	
TRUK MOEN ISLAND	487	1949	
WAKE	323	1239	
YAP R	491	1901	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	3	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	0	0	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	1	1	
SOUTH CAROLINA			
CHARLESTON	93	108	
CHARLESTON U	95	108	
COLUMBIA	86	92	
GRNVLLE-SPRTNBRG	48	48	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	11	11	
CHATTANOOGA	51	51	
KNOXVILLE	53	53	
MEMPHIS	95	98	
NASHVILLE	62	63	
OAK RIDGE R	41	41	
TEXAS			
ABILENE	188	241	
AMARILLO	44	48	
AUSTIN	269	420	
BROWNSVILLE	382	867	
CORPUS CHRISTI	360	701	
DALLAS	182	265	
DEL RIO	317	518	
EL PASO	70	89	
FORT WORTH	185	258	
GALVESTON U	234	375	
HOUSTON INTERCON	208	357	
LUBBOCK	120	134	
MIDLAND	187	218	
PORT ARTHUR	164	255	
SAN ANGELO	232	317	
SAN ANTONIO	276	423	
VICTORIA	299	519	
WACO	203	302	
WICHITA FALLS	145	175	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	25	25	
NORFOLK	20	28	
RICHMOND	30	37	
ROANOKE	26	26	
WALLOPS ISLAND	2	2	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE-TACOMA	0	0	
SPOKANE	0	0	
STAMPEDE PASS R	0	0	
WALLA WALLA U	0	0	
YAKIMA	0	0	
WEST INDIES			
SAN JUAN P.R.	458	1665	
WEST VIRGINIA			
BECKLEY	2	2	
CHARLESTON	24	24	
ELKINS	0	0	
HUNTINGTON	16	17	
PARKERSBURG U	8	10	
WISCONSIN			
GREEN BAY	0	0	
LA CROSSE	0	0	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

APRIL 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS
Alabama	1	1			4			4	3			4																	
Alaska*																													
Arizona*																													
Arkansas	4	2			5			3	3		4	5			1	5													
California																												3	2
Colorado								2				5								°6	C								
Connecticut*																													
Delaware*																													
Florida	1	1			2																								
Georgia	5	3		1	5			5	5		1	4																	
Hawaii												?														3		4	
Idaho												4																	5
Illinois	14	4	5	56	6			5	4		14	5	3																
Indiana	2	2			5			5	4	1	15	6	4		2	3													
Iowa								3																				4	
Kansas	12	3		5	6			7	6		16	6	5			4												4	4
Kentucky	7	3		5	5		4	°6	C		2	°6	C	1		5										5	?	°6	C
Louisiana	3	2			5			?			5	5																	
Maine																				4									
Maryland												4								4				4				4	
Massachusetts																												2	
Michigan	3	1		8	6							5				4													
Minnesota												4								4									
Mississippi	7	3		70	6			3	2		1	4																	
Missouri	4	4		12	6			5		1	30	6			3	4												5	
Montana											1	4								4									
Nebraska*																													
Nevada*																													
New Hampshire																3				3									
New Jersey																4							?	5					
New Mexico*																													
New York*																													
North Carolina									5	1	2	5	6		1	5												4	5
North Dakota*																													
Ohio							?	5			?	5			?	5											?	6	
Oklahoma	11	8	5	6	5			5	5		6	6				5													
Oregon	1	1			5						1	5								?									?
Pacific Area																											12		
Pennsylvania												4																	
Puerto Rico*																													
Rhode Island																4													
South Carolina																													7
South Dakota*																													
Tennessee	6	4		29	6			°5	C		10	6				4										1		6	4
Texas	13	6			5			6	6		5	6	3			4												5	3
Utah*																													
Vermont																4				3									
U.S. Virgin Is.*																													
Virginia								3	C		2	4				4								3				3	
Washington	4	1	6	301	7			4	4							5	4										6	4	2
West Virginia																4													
Wisconsin												4				3												5	
Wyoming*																													

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

APRIL 1972

Elmer R. Nelson, Office of Hydrology

Severe flooding occurred in the Kentucky River Basin in Kentucky during April. Record to near record flooding occurred over portions of the Kentucky River. Flood damage amounted to nearly $5 million on the Kentucky River and more than $100,000 on each of the Licking and Red Rivers, and at least 3 deaths were reported.

The flooding in the lower Ohio River during April was the greatest since March 1963. At Evansville, Ind., it was the highest flood since 1967.

Monthly runoff for the Scioto River at Chillicothe, Ohio, was the greatest for any April since the beginning of records in 1921.

In Alaska, snowmelt caused overtopping and failure of a small manmade dam, 10 miles southeast of Anchorage.

HUDSON BAY DRAINAGE

Red River of the North Basin -- Heavy rains over portions of the Red River of the North Valley during the middle of the month caused heavy runoff and flooding on some tributaries and along the main stem. The high runoff was due to the highly saturated soil conditions from the March snowmelt and the heavy precipitation during the fall of 1971.

In the Souris Basin minor flooding occurred over sections of the Basin. Spring precipitation was comparatively light. An orderly release of water from Lake Darling by the U.S. Fish and Wildlife Service kept river stages at a minimum at and below Minor, N. Dak.

Along the main stem of the Red River of the north, the crest of 38.7 feet at Grand Forks, N. Dak., on the 18th was 1.2 feet higher than the earlier crest from the winter snowmelt on March 28. Downstream at Drayton, N. Dak., the crest of 35.75 feet on April 24 was 2.5 feet higher than the earlier crest on the 3d.

ST. LAWRENCE DRAINAGE

Lake Michigan -- Heavy rain (around 2 inches) over the lower Grand River Basin in Michigan on the 16th caused flooding of low areas from Ionia downstream through the Comstock Park area, just upstream from Grand Rapids. Frost was still present in the ground at depths of from 1 to 2 feet, and aided in nearly 100 percent runoff. Only minor flooding occurred to some basements. People living in the flood plain were inconvenienced by the high water.

Lake Huron -- Heavy rains of 1 to 2 inches in southern Michigan on the 16th and 17th caused flooding on the Shiawassee River at Owosso, Mich. The crest on the 17th was 0.4 foot above flood stage. No damage was reported.

Lake Erie -- Heavy rainfall of more than 2 inches in 24 hours in Ohio at the headwaters of Lake St. Marys caused considerable flooding on the St. Marys River. The flooding was complicated by the lake pouring through spillways from over 2 feet above normal levels. Flooding on other streams in the Maumee Basin was comparatively minor. No flooding occurred on the Maumee below Ft. Wayne, Ind.

Streamflow was excessive throughout the Sandusky Basin in Ohio during April. Rainfall averaged about 159 percent of normal during the month. Minor flooding occurred along the Sandusky River on the 20th-23d from rainfall that averaged 2.7 inches on the 20th-21st.

ATLANTIC SLOPE DRAINAGE

Minor lowland flooding occurred on Otter Creek near Center Rutland, Vt., on the 21st. The creek reached a crest of 6.9 feet (flood stage 7 feet). This rise was due to moderate rains and normal snowmelt. Most of the ice in Lake Champlain, except in a few bays, moved out during April.

Minor lowland flooding occurred along the Connecticut River through Massachusetts and Connecticut between the 19th and 29th. Rainfall amounts were near to below normal throughout New England. Melting snow and rainfall caused high base flows on most streams in New England. Most rivers and streams in central and southern New England ran one-half to two-thirds bankfull most of the month. No important damage resulted from the spring freshet.

Rivers and streams in the Hudson River Basin ran high during much of April, but remained generally within their banks. The Mohawk River at Schenectady and the Hudson River at Troy, N. Y., rose to within 3 feet of flood stage. The Hudson River at Albany, N. Y., rose to about 5 feet of flood stage. The Gilboa Dam spilled water throughout April, reaching its peak on the 23d when nearly a foot of water passed over the dam. The highest stages occurred on or around the 21st.

Precipitation in the Delaware River Basin during April was mostly near normal. It ranged from 87 percent of normal in the basin above Trenton, N. J., to 92 percent of normal in the lower basin. In northern New Jersey precipitation averaged 3.3 inches or 84 percent of normal to 3.8 inches or 110 percent of normal in the central and southern interior portions of the State. Snowfall occurred during the first half of the month, with a few stations in New York reporting 8 to 12 inches. In the Poconos, in northeastern Pennsylvania, snowfall amounts in early April were generally 2 to 4 inches. Rapid snowmelt with mild temperatures during mid-month depleted the snow cover by the 19th.

Reservoirs in New Jersey showed little change during April and at the end of the month all were spilling except the pumped storage reservoir at Round Valley, which was at 95 percent of usable capacity. In the Upper Delaware, New York City's three reservoirs increased storage by over 15 billion gallons during April and at the end of the month all three reservoirs were filled to capacity and spilling.

Slight overflows occurred along the upper Susquehanna, the Chenango, and Chemung Rivers in New York between the 13th and 22d. There were two separate rises on the Chenango and the Susquehanna. No damage was reported during either rise.

Minor flooding occurred on the Lumber River at Lumberton, N. C., on the 2d-3d when it reached but did not exceed flood stage.

EAST GULF OF MEXICO DRAINAGE

Minor overflow occurred on the Pearl River at Bogalusa, La., on March 31 to April 6. The crest on the 1st was 0.85 feet above flood stage. No significant damage resulted, although farm work and timber cutting operations were hampered by wet ground in the area of lowland flooding.

MISSISSIPPI SYSTEM

Upper Mississippi Basin -- Precipitation during April was below normal over Minnesota and Wisconsin except for much above normal over parts of the central Minnesota River Basin and near normal over the northern Wisconsin River Basin. Daytime temperatures were above freezing during much of the month and nighttime temperatures a little below freezing. These conditions contributed to a steady snowmelt, with most of the snowmelt completed by the third week of the month. The Chippewa River crested below flood stage except at Durand, Wis., where it crested slightly above flood stage on the 21st. Minor overflow occurred on the Wisconsin River at Merrill and Portage, Wis., between the 18th and the 25th.

Locally heavy rainfall on the 16th-17th on nearly saturated ground produced minor flooding on the Maquoketa River at Maquoketa, Iowa, on the 16th and on the Wapsipinicon River at DeWitt, Iowa, on the 17th-19th. Additional heavy rainfall on the 21st-22d produced additional minor flooding on the Wapsipinicon River. Minor flooding occurred on Edwards River at New Boston, Ill., on the 19th and on Pope Creek at Keithsburg, Ill., on the 21st-24th. Little damage resulted as most of the land was rural and planting had not yet begun.

Heavy rains on the 11th-16th in east-central Missouri and southern Illinois caused some flooding on the Meramec, Big, and Cuivre Rivers in Missouri and on the Big Muddy River in Illinois. Several stations reported 3 to 6 inches of rainfall during that period. Additional heavy rains on the 19th-22d in the same general area, except in Illinois, where the rains extended farther north, produced minor flooding on the Illinois River and on the Bourbeuse and Meramec Rivers in Missouri. No significant flood damage was observed or reported.

The Upper Mississippi River at and above Fort Ripley, Minn., had the first snowmelt crest during the period of the 20th-25th, with minor overflow at Fort Ripley, Minn., on the 18th-30th. A second crest was in progress above Fort Ripley during the first part of May. Crests in the reach below Fort Ripley to above Dubuque, Iowa, were below flood stage. In the reach from Dubuque, Iowa, to Burlington, Iowa, crests ranged from bankfull to 2.5 feet above flood stage. Little or no damage resulted in this reach due to previously constructed protection works. The Mississippi at Cape Girardeau, Mo., reached but did not exceed flood stage on the 26th.

Missouri Basin -- The James River at Columbia, S. Dak., continued in flood from March 19 to April 26. The crest of 12.8 feet on the 3d-4th was 1 foot lower than on March 23. At Stratford, S. Dak., the James rose above flood stage on March 30 and continued in flood through April. The crest on the 13th was 1.4 feet above flood stage. About 8,000 acres were inundated during March and April in the Columbia-Stratford reach.

Heavy rains that began during the late morning hours of the 20th over east-central Kansas and west-central Missouri caused flash flooding in the south sections of Kansas City. Areas in the southeast section of metropolitan Kansas City reported about 2.5 inches of rain in 2 hours from 10 a.m. to noon on the 20th. Areas to the north of Kansas City reported 1-1/2 inches during the afternoon of the 20th. The rain ended in central Missouri about noon on the 21st. Most rivers rose to about three-quarters bankfull to bankfull. The only river to rise above bankfull was the Grand River at Sumner, Mo., which crested 2.2 feet above flood stage on the 22d.

Ohio Basin -- Heavy rain on the 13th-15th caused flooding in the Guyandot and Levisa Fork Basins in West Virginia. More than 2 inches of rain was reported at Logan, W. Va., on the Guyandot, and in the Pikeville, W. Va., area of the Levisa Fork. Little or no damage occurred in the Guyandot Basin. In the Big Sandy Basin the Corps of Engineers estimated the damage at $298,000.

Heavy rain on the 6th-7th within the Scioto River Basin in Ohio caused minor flooding of ditches and some small streams draining into the Scioto River. Minor flooding developed on the Scioto River on the 13th-19th due to rainfall averaging 1.5 inches. The U. S. Geological Survey reported this flood was in the 2- to 7-year recurrence interval. The Corps of Engineers reported the damage at $35,000. Heavy rain on the 20th-21st caused minor flooding in the Scioto Basin on the 20th-25th. The U. S. Geological Survey reported this flood was in the 2- to 5-year recurrence interval. Streamflow was excessive throughout the Scioto Basin during April. Monthly runoff for the Scioto River at Chillicothe, Ohio, was the greatest for any April since the beginning of records in 1921.

Heavy rainfall on the 11th-16th over upstream areas of the Kentucky Basin caused flooding over the Kentucky, Licking, and Red Rivers. The rainfall during the six days ranged from 7 to 9 inches in Lee, Estill, Madison, Garrard, Jessamine, Mercer, and Boyle Counties in Kentucky to 3 to 4 inches north and south of the 8-inch areas. Flooding began over the Kentucky River headwaters on the 12th-16th and continued downstream until the 19th. The South Fork of the Licking River at Paris, Ky., was 12 feet above bankfull stage on the 22d. The crest of 43.5 feet at Lock No. 8, Little Hickman, Ky., exceeded the previous high crest set in 1962 by 2.2 feet. The crest of 42.25 feet at Lock No. 4, Frankfort, Ky., was the second highest crest since the crest of 47.46 feet in 1937. Flood damage was estimated at nearly $5 million on the Kentucky River and its tributaries and more than $100,000 on each of the Licking and Red Rivers. At least 3 fatalities were reported.

Minor to local moderate flooding occurred in the Wabash Basin in Indiana due to heavy rainfall from the 10th to the 20th. By the end of the month, the Wabash River from Lafayette, Ind., downstream and the White River at and below Edwardsport, Ind., were falling but above flood stage. The flood damage was estimated at $92,000.

Minor flooding occurred in the upper Cumberland River in southeast Kentucky on the 12th-14th. No significant damage resulted from the flooding.

The Tennessee River near Paducah, Ky., continued above flood stage from the 16th into May.

Intermittent heavy rains from the 11th through the 15th caused flooding along the Ohio River at and below Louisville, Ky. Flooding continued into May in the reach at and below Evansville, Ind. This was the greatest flood on the lower Ohio River (below Mt. Vernon, Ind.) since March of 1963. At Evansville, Ind., the crest of 43.19 feet was the highest since 1967.

White Basin -- Heavy rains (2 to 3.5 inches) over the White and Black River Basins on the 15th-16th and an additional 1 to 2 inches on the 21st caused flooding on the Black and Cache Rivers in Arkansas. Minor damage was confined to lowlands along the rivers, where farm operations were delayed.

Arkansas Basin -- Local thunderstorm activity produced some minor flooding in the downtown business district of Lamar, Colo., on the 25th. The precipitation totalled 1.95 inches between 5:30 p.m. and 6:45 p.m.

Lowland flooding occurred along the Illinois River at Tahlequah, Okla., on the 22d-23d. The rainfall averaged a little over 2 inches on the morning of the 21st. No damage was reported.

Lower Mississippi Basin -- Heavy rain (more than 2 inches) on the 15th-16th caused the St. Francis River to rise above flood stage at Fisk, Mo., on the 17th and at St. Francis, Ark., on the 18th. General rains on the 20th-22d maintained the rise to the 25th-26th. It continued above flood stage into May.

Minor flooding occurred on the Big Black River at West, Miss. Lowlands adjacent to the river were inundated for a few days. By the end of the first week of April the Big Black River had receded within its banks. Farm work and timber cutting operations were hampered by the wet ground in the area of lowland flooding.

The lower Mississippi River began rising steadily around the 11th. The sharpest rises occurred from the 12th to the 20th. It rose above flood stage at Caruthersville, Mo., on the 22d and at New Madrid, Mo., on the 23d. The crests on the 28th-30th ranged from 3.5 to 4.5 feet above flood stage.

WEST GULF OF MEXICO DRAINAGE

Locally heavy rains of 5 to 7 inches caused considerable flash flooding in the streets of Corpus Christi, Tex., on the 27th.

PACIFIC SLOPE DRAINAGE

Columbia Basin -- Cold, moist weather was observed in most major runoff-producing areas in the Columbia Basin during April. Temperatures averaged 4° to 5° below normal and precipitation about 0.3 inch above normal.

Even though temperatures were below normal, attrition of the low elevation snowpack continued in most sections of the Columbia Basin. Natural flow of the Columbia River at The Dalles, Oreg., for 15,020,000 acre-feet or 118 percent of the 15-year average.

Minor streamflow rises, primarily the result of rainfall runoff, occurred in central Oregon and Washington tributary streams and in the lower Snake River on the 5th-7th.

These rises in combination with Columbia reservoir draw-down schedules produced a rise in the lower Columbia River at Vancouver, Wash., (flood stage, 16 feet) from near 11.5 feet on the 6th to 15.9 feet on the 11th. The average April stage at Vancouver, Wash., was 11.1 feet, compared to the long term April normal of 8.0 feet.

ALASKA

Below normal temperatures and additional snowfall kept the snowpack above normal through April. Temperatures ranged from 5° to 10° below normal in the northern half of Alaska. The first appreciable snowmelt and decrease of the snowpack began on the 18th in the lower elevations of the Matanuska and Susitna Valleys and on the 22d in southeastern and the Copper River Valley.

As of the 30th, a few of the smaller tributaries were open and a few open spots were appearing on the major tributaries.

Snowmelt caused overtopping and failure of a small manmade dam 10 miles southeast of Anchorage on the 29th. A 10-year-old boy lost his life in the water about a mile downstream.

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

River and station		Flood stage	Above flood stages -dates		Crest *	
			From–	To–	Stage	Date
		Ft.			Ft.	
HUDSON BAY DRAINAGE						
Red River of the North Basin						
Maple:	Enderlin, N. Dak.	6	15	20	7.0	17
Buffalo:	Hawley, Minn.	7	15	18	7.35	16
Wild Rice:	Hendrum, Minn.	17	13	19	23.35	15
Marsh:	Shelly, Minn.	15	14	15	15.9	15
Red Lake:	Crookston, Minn.	15	14	19	22.0	15
Snake:	Warren, Minn.	845	14	14	846.0	14
Park:	Grafton, N. Dak.	12	12	15	14.2	14
Two Rivers:	Hallock, Minn.	802	16	16	802.6	16
Souris:	Lake Darling, N.Dak.	21	2	6	21.2	3
	Foxholm 3 E, N.Dak.	10	Mar 22	21	13.4	4
	Minot 4 NW, N. Dak.	14	9	14	14.4	11
	Bantry 8 E, N. Dak.	11	Mar 28	May 5	12.5	24
	Westhope 7 NNE, N. Dak.	10	Mar 26	May 19	13.3	20
Red River of the North:						
	Fargo, N. Dak.	17	13	17	18.1	14
	Grand Forks, N.Dak.	28	15	26	38.7	18
	Oslo, Minn.	28	15	25	34.3	19
	Drayton, N. Dak.	32	Mar 30 17	5 29	33.25 35.8	3 23
ST. LAWRENCE DRAINAGE						
Lake Michigan						
Grand:	Comstock Park, Mich.	12	19	22	12.6	20
Lake Ontario						
Shiawassee:	Owosso, Mich.	7	16	17	7.4	17
Lake Erie						
St. Marys:	Decatur, Ind.	15	7 20	19 27	19.0 22.4	17 23
St. Joseph:	Montpelier, Ohio	10	21	23	10.1	22
Tiffin:	Stryker, Ohio	10	17	25	11.4	19, 23
Maumee:	Fort Wayne, Ind.	15	21	26	17.2	23
Sandusky:	Upper Sandusky, Ohio	13	21	22	13.5	21
	Tiffin, Ohio	8	22	23	9.3	23
	Freemont, Ohio	10	22	23	10.1	23
ATLANTIC SLOPE DRAINAGE						
Connecticut:						
	Montague City, Mass.	28	20	21	28.9	20
	Hartford, Conn.	16	19	28	20.3	21
	Bodkin Rock, Conn.	8	17	29	11.1	22
Tioughnioga:						
	Whitney Point, N. Y.	12	14	21	12.8	18
Chenango:	Sherburne, N. Y.	8	13 20	13 20	8.2 8.3	13 20
Chemung:	Chemung, N. Y.	12	17	17	12.5	17
Susquehanna:						
	Bainbridge, N. Y.	13	17 21	18 21	13.4 13.9	17 21
	Conklin, N. Y.	11	18 21	19 22	11.1 11.4	18 21
Lumber:	Lumberton, N. C.	9	2	3	9.0	2-3
EAST GULF OF MEXICO DRAINAGE						
Pearl:	Bogalusa, La.	15	Mar 31	6	15.85	1
MISSISSIPPI SYSTEM						
Upper Mississippi Basin						
Crow:	Delano, Minn.	8	Mar 21	2	12.0	Mar 22
Chippewa:	Durand, Wisc.	11	20	22	11.3	21
Wisconsin:	Merrill, Wisc.	11	18	19	11.0	18
	Portage, Wisc.	17	19	25	18.0	21
Maquoketa:	Maquoketa, Iowa	13	16	16	14.5	16
MISSISSIPPI SYSTEM-Cont.						
Upper Mississippi Basin (Continued)						
Wapsipinicon:	DeWitt, Iowa	10	17 22	19 23	10.2 10.1	17 23
Edwards:	New Boston, Ill.	17	19	19	17.4	19
Pope Creek:	Keithsburg, Ill.	17	21	24	18.1	21
Cuivre:	Troy, Mo.	21	20	21	24.6	20
Illinois:	LaSalle, Ill.	20	23	25	21.0	23
	Chillicothe, Ill.	45	24	1	# 46.1	27
	Havana, Ill.	14	22	May 20	15.9	May 1
	Beardstown, Ill.	14	22	May 18	17.1	May 1
	Meredosia, Ill.	32	25	May 5	33.7	May 1
Big:	Byrnesville, Mo.	16	15 21	18 23	19.8 19.9	17 23
Bourbeuse:	Union, Mo.	15	23	23	15.8	23
Meramec:	Steelville, Mo.	12	16 22	17 22	13.3 12.3	17 22
	Sullivan, Mo.	15	16 22	17 22	17.2 16.1	16 22
	Pacific, Mo.	11	17 22	19 25	14.7 16.8	17 24
	Eureka, Mo.	18	17 22	18 25	21.3 22.1	18 23
	Valley Park, Mo.	16	17 23	19 25	19.15 20.65	18 23
Big Muddy:	Murphysboro, Ill.	16	16	May 3	26.45	26
Mississippi:	Fort Ripley, Minn.	10	18	30	10.6	20
	Dubuque, Iowa	17	27	May 2	17.7	Apr. 29
	Clinton, Iowa	16	30	May 5	16.5	May 1-3
	LeClaire, Iowa	10	30	May 5	10.45	May 2
	Davenport, Iowa	15	May 3	May 3	15.0	May 3
	Muscatine, Iowa	16	May 1	May 5	16.3	May 3
	Keithsburg, Ill.	12	24	May 16	13.8	May 3
	Burlington, Iowa	15	30	May 13	15.8	May 11
	Cape Girardeau, Mo.	32	25	27	32.3	26
Missouri Basin						
James:	Columbia, S. Dak.	11	Mar 19	26	13.8 12.8	Mar 23 3-4
	Stratford, S. Dak.	14	Mar 30	May 20	15.4	13
Grand:	Sumner, Mo.	26	22	23	28.2	22
Ohio Basin						
Hocking:	Athens, Ohio	20	15	15	20.3	15
Guyandot:	Branchland, W. Va.	30	15	17	31.2	16
Tug Fork:	Williamson, W. Va.	27	15	15	28.9	15
Levisa Fork:	Prestonsburg, Ky.	30	14	16	34.7	15
	Paintsville, Ky.	35	15	16	37.1	15
Paint Creek:	Bourneville, Ohio	10	13	13	10.7	13
	Chillicothe, Ohio	11	13	14	13.9	14
Scioto:	Larue, Ohio	11	13 20	14 22	11.15 11.9	13 20
	Prospect, Ohio	10	21	25	13.1	22
	Circleville, Ohio	14	13 21	16 24	16.45 15.6	14 23
	Piketon, Ohio	16	13 22	19 25	20.25 20.45	17 23
South Fork Licking:						
	Cynthiana, Ky.	20	23	23	20.0	23
Licking:	Farmers, Ky.	25	22	22	25.3	22
North Fork Kentucky:						
	Hazard, Ky.	20	12	12	21.3	12
	Jackson, Ky.	29	15	15	29.0	15
South Fork Kentucky:						
	Oneida, Ky.	29	12	12	29.4	12

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM - Cont.					
Ohio Basin - Cont.					
Kentucky:					
Lock 11, College Hill, Ky.	30	M	M	31.7	17
Lock 10, Fords Ferry, Ky.	25	14	18	32.3	16
Lock 9, Valley View, Ky.	U	M	M	38.5	16
Lock 8, Little Hickman, Ky	U	M	M	43.5	15
Lock 7, High Bridge, Ky.	30	M	M	42.0	16
Lock 6, Salvisa, Ky.	U	M	M	41.2	16
Lock 5, Tyrone, Ky.	U	M	M	43.6	16
Lock 4, Frankfort, Ky.	31	14	19	42.25	16
Lock 2, Lockport, Ky.	U	M	M	47.1	17
Lock 1, Carrollton, Ky.	U	M	M	37.5	18
Rolling Fork:					
Boston, Ky.	40	14	24	49.8	17
Green:					
Lock No. 2, Calhoun, Ky.	23	15	29	26.4	19
Dundee, Ky.	25	16	18	26.9	17
Eagle Creek:					
Zionsville, Ind.	7	20 22	20 22	9.65 8.4	20 22
Muscatatuck:					
Austin, Ind.	16	14 21	18 24	23.6 20.5	17 21
East Fork White:					
Seymour, Ind.	14	16	18	16.7	17
Bedford, Ind.	20	17	23	22.6	21
Williams, Ind.	10	20	22	10.3	21
White:					
Anderson, Ind.	10	22	22	10.2	22
Noblesville, Ind.	14	21	22	14.2	22
Nora, Ind.	12	M	M	12.9	22
Ravenswood, Ind.	6	21	24	7.5	22
Centerton, Ind.	603	22	24	604.9	23
Spencer, Ind.	14	16 21	19 27	15.9 19.7	17 24
Elliston, Ind.	18	10 6	14 28	19.9 23.8	13 25
Edwardsport, Ind.	15	11	30	20.8	27
Petersburg, Ind.	16	12	May 1	22.7	22
Hazleton, Ind.	16	14	M	23.8	23
Skillet:					
Wayne City, Ill.	15	14	24	18.6	15
Little Wabash:					
Wilcox, Ill.	16	13	27	21.35	23
Carmi, Ill.	27	16	May 5	33.2	26
Wabash:					
Bluffton, Ind.	10	M	25	M	M
Wabash, Ind.	12	13 17 20	13 17 20	13.7 12.7 13.3	13 17 20
Lafayette, Ind.	11	7 14 17	12 15 30	14.4 13.6 18.0	8 14 23
Covington, Ind.	16	9	30	22.4	24
Montezuma, Ind.	14	8	May 3	24.25	23
Clinton, Ind.	18	U	U	24.0	23
Terre Haute, Ind.	14	10	May 3	20.2	24
Hutsonville, Ill.	20	8	May 1	23.1	25
Riverton, Ind.	18	22	May 2	20.2	26
Vincennes, Ind.	16	18	May 4	20.7	27
Mt. Carmel, Ill.	17	15	May 4	24.3	27

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft	
MISSISSIPPI SYSTEM - Cont.					
Ohio Basin-Cont.					
Wabash - Cont.					
New Harmony, Ind.	15	16	May 5	18.4	24, 29
Cumberland:					
Baxter, Ky.	16	12	12	16.2	12
Barbourville, Ky.	27	13	13	28.4	13
Williamsburg, Ky.	21	13	14	22.7	13
Tennessee:					
Paducah (nr), Ky.	320	30	May 12	328.35	May 1
Ohio: Dam 41, Louisville, Ky(U.G)	23	17	27	27.3	20
Dam 41, Louisville, Ky(L.G)	55	17	27	57.0	19
Dam 43, Evans Landing, Ind.	57	22	29	61.4	20
Dam 44, Leavenworth Dam,Ind	53	16	28	62.1	20
Cannelton L&D, Ind. (LG)	43	17	28	46.9	21
Tell City, Ind.	38	15	30	45.2	22
Dam 46, Owensboro, Ky.	41	17	29	44.0	22
Dam 47, Newburgh, Ind.	38	13	May 2	45.4	22
Evansville, Ind.	42	19	29	43.2	22
Dam 48, Cypress, Ind.	38	14	May 3	45.9	23
Mt. Vernon, Ind.	35	14	May 4	44.4	24
Dam 49, Uniontown, Ky.	37	14	May 5	47.7	24
Shawneetown, Ill.	33	13	May 6	47.7	25
Dam 50, Fords Ferry, Ky.	34	13	May 7	50.7	26
Dam 51, Golconda, Ill.	40	19	May 5	46.4	28
Paducah, Ky.	39	22	May 6	41.6	May 1
Dam 52, Brookport, Ill.	37	18	May 9	43.7	May 2
Dam 53, Grand Chain, Ill	42	17	May 13	49.7	28
Cairo, Ill.	40	17	May 16	49.1	26
White Basin					
Black: Pocahontas, Ark.	17	25	May 8	19.1 19.2	27 May 3
Black Rock, Ark.	14	22	May 13	18.8	23, 29
Cache: Patterson, Ark.	7	Mar 31 24	May 20 May 20	7.8 8.3 8.8	7 29 May 7
Arkansas Basin					
Illinois:					
Tahlequah, Okla.	11	22	23	12.7	23
Lower Mississippi Basin					
St. Francis:					
Fisk, Mo.	20	17	May 8	24.5	26
St. Francis, Ark.	18	18	May 13	20.9 21.2	25 May 2
Big Black:					
West, Miss.	12	1	4	15.45	2
Mississippi:					
New Madrid, Mo.	34	23	May 10	37.4	28
Caruthersville, Mo.	32	22	May 12	36.5	29-30

* Provisional
# Highest stage observed

1 Continued at the end of the month
___ Highest stage of record

M Missing
U Unknown

RAWINSONDE DATA

Average monthly values

APRIL 1972

ALBANY, N. Y.
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	1.2	-2.3	30	.7
1000	26	152	1.6	-4.2	32	1.3
950	30	553	.6	-5.8	32	4.4
900	30	986	-1.3	-8.5	32	6.1
850	30	1,440	-3.0	-11.7	32	9.4
800	30	1,919	-5.0	-15.2	31	11.6
750	30	2,424	-6.5	-19.6	30	13.5
700	30	2,961	-9.2	-20.3	29	15.8
650	30	3,532	-11.6	-22.6	29	18.1
600	30	4,142	-14.8	-25.0	29	20.9
550	30	4,795	-19.0	-29.8	29	22.5
500	30	5,498	-23.8	-35.0	29	24.2
450	30	6,259	-29.2	-40.3	28	26.0
400	30	7,091	-34.9	-44.4	28	30.8
350	30	8,014	-40.7	-44.0	28	32.9
300	30	9,047	-47.0		28	36.0
250	30	10,240	-51.9		28	34.9
200	30	11,679	-53.6		29	30.7
175	30	12,541	-52.5		29	25.2
150	30	13,537	-52.7		28	21.3
125	30	14,711	-54.3		28	18.3
100	30	16,137	-55.5		28	14.0
80	30	17,554	-57.2		27	9.3
70	30	18,398	-57.6		28	6.9
60	30	19,372	-57.5		30	4.5
50	30	20,527	-56.1		33	.7
40	29	21,950	-55.5		07	2.3
30	28	23,790	-54.5		09	4.0
25	27	24,958	-54.0		09	4.7
20	27	26,394	-52.9		08	4.5
15	25	28,260	-50.4		07	3.9
10	16	30,930	-45.9			
7						
5						

ALBUQUERQUE, N. MEX.
836 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	6.0	-11.1	12	.9
1000						
950						
900						
850						
800	30	1,983	9.4	-12.4	28	2.5
750	30	2,514	6.2	-13.9	28	6.2
700	30	3,075	2.0	-16.3	28	8.7
650	30	3,668	-2.5	-19.9	27	11.1
600	30	4,298	-7.2	-22.9	26	14.1
550	30	4,970	-11.7	-28.3	26	16.7
500	30	5,693	-16.5	-33.8	26	18.7
450	30	6,476	-22.0	-37.9	26	21.3
400	30	7,332	-28.2	-42.5	26	22.7
350	30	8,280	-34.9	-47.7	26	24.9
300	30	9,334	-43.5	-48.1	26	26.8
250	30	10,538	-51.9		26	31.3
200	30	11,961	-57.6		27	34.5
175	30	12,802	-58.7		27	32.6
150	30	13,768	-59.5		26	29.0
125	30	14,901	-62.6		26	25.7
100	29	16,266	-64.9		26	20.2
80	28	17,624	-65.0		26	12.7
70	28	18,440	-64.3		27	8.4
60	28	19,386	-62.5		28	5.3
50	26	20,520	-59.9		27	2.3
40	25	21,924	-57.6		34	.7
30	25	23,747	-55.7		02	.6
25	25	24,913	-54.0		01	1.0
20	25	26,353	-51.8		32	.5
15	24	28,232	-48.7		27	3.5
10	16	30,920	-43.7		27	10.2
7						
5						

AMARILLO, TEXAS
888 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	9.6	-1.3	21	2.5
1000						
950						
900						
850	30	1,461	12.6	-1.5	24	6.0
800	30	1,968	11.2	-5.2	26	8.4
750	30	2,504	8.1	-9.4	26	10.7
700	30	3,069	4.1	-14.7	27	12.5
650	30	3,667	-.5	-18.3	26	14.0
600	30	4,301	-5.4	-21.8	26	14.8
550	30	4,977	-10.4	-27.6	26	15.9
500	30	5,703	-15.9	-31.4	26	18.0
450	30	6,489	-21.4	-37.0	26	19.5
400	30	7,346	-27.8	-43.0	26	21.2
350	30	8,294	-35.1	-48.4	26	23.8
300	30	9,347	-43.6		26	26.8
250	30	10,549	-52.5		27	30.3
200	30	11,972	-58.0		26	33.7
175	30	12,812	-58.7		26	34.9
150	29	13,780	-60.2		26	30.6
125	27	14,902	-62.7		27	28.0
100	26	16,262	-66.0		26	21.3
80	26	17,617	-65.3		26	15.5
70	26	18,431	-65.1		27	10.7
60	26	19,375	-63.1		27	4.8
50	26	20,507	-59.7		26	3.0
40	25	21,907	-58.1		31	1.7
30	25	23,730	-55.9		36	.8
25	24	24,891	-54.3		30	.4
20	24	26,325	-53.2		34	1.1
15	23	28,195	-49.5		27	3.4
10	17	30,881	-44.7		26	7.3
7						
5						

* ANCHORAGE, ALASKA
1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	-4.5	-9.6	35	.4
1000	19	117	-3.4	-11.9	02	1.1
950	30	471	-4.9	-12.6	06	.7
900	30	894	-7.4	-14.6	09	.9
850	30	1,337	-10.4	-16.4	12	1.2
800	30	1,801	-13.3	-19.0	15	2.0
750	30	2,290	-16.3	-23.1	18	2.3
700	30	2,805	-19.5	-26.2	20	2.5
650	30	3,353	-22.7	-29.4	20	2.7
600	30	3,935	-26.5	-34.0	21	2.4
550	30	4,559	-30.8	-37.6	23	2.7
500	29	5,234	-35.5	-39.8	25	3.6
450	29	5,960	-40.0	-42.4	27	4.7
400	29	6,756	-44.9		27	6.1
350	29	7,644	-48.7		28	9.0
300	29	8,648	-51.0		28	11.9
250	29	9,836	-50.2		28	12.1
200	29	11,300	-48.3		27	9.5
175	29	12,181	-47.7		27	8.8
150	29	13,198	-48.0		27	7.7
125	29	14,401	-48.2		26	5.4
100	28	15,874	-48.4		25	4.0
80	28	17,343	-48.5		24	2.6
70	28	18,221	-49.2		22	1.8
60	27	19,229	-49.8		21	1.6
50	26	20,419	-50.0		16	2.5
40	25	21,877	-50.2		14	2.5
30	24	23,754	-50.9		11	3.4
25	23	24,934	-51.0		11	4.6
20	22	26,389	-50.3		11	5.6
15	22	28,270	-49.5		10	7.1
10	19	30,933	-47.3		10	8.6
7	10	33,322	-43.9			
5						

* ANNETTE, ALASKA
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	1.4	-.4	11	2.0
1000	22	128	1.4	-3.0	13	1.6
950	30	505	-1.1	-4.5	16	4.6
900	30	934	-4.3	-6.8	17	6.6
850	30	1,382	-7.4	-9.8	18	6.6
800	30	1,852	-10.2	-14.2	19	6.8
750	30	2,347	-13.0	-16.9	21	7.3
700	30	2,869	-16.3	-22.2	22	7.4
650	30	3,423	-19.8	-26.7	23	8.9
600	30	4,013	-23.5	-30.3	23	9.4
550	30	4,644	-27.6	-33.9	23	10.7
500	30	5,323	-32.5	-37.8	23	11.0
450	30	6,057	-37.8	-39.9	23	12.9
400	30	6,860	-42.7	-41.8	23	13.1
350	30	7,755	-47.4		25	15.1
300	30	8,762	-51.4		26	13.2
250	30	9,940	-53.4		27	11.0
200	30	11,384	-51.0		27	10.2
175	30	12,254	-50.5		27	8.8
150	30	13,259	-50.5		27	7.2
125	30	14,447	-50.8		26	6.1
100	29	15,895	-51.4		26	4.8
80	27	17,349	-51.0		24	2.9
70	27	18,217	-51.4		22	1.6
60	27	19,217	-52.0		19	1.5
50	27	20,399	-51.7		16	1.3
40	26	21,850	-52.3		12	1.9
30	26	23,708	-52.9		10	3.9
25	26	24,885	-52.3		10	4.9
20	25	26,331	-51.6		09	6.3
15	22	28,218	-49.9		09	7.7
10	19	30,896	-47.2		10	8.2
7	10	33,307	-42.4			
5	■	35,595	-39.1			

ATHENS, GEORGIA
989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	10.8	7.4	27	.9
1000						
950	30	580	12.6	5.3	25	3.8
900	30	1,034	10.9	2.6	26	5.2
850	30	1,508	8.8	-.9	27	6.1
800	30	2,008	6.7	-5.3	28	7.7
750	30	2,537	4.7	-13.2	28	9.1
700	30	3,096	1.6	-17.5	28	10.0
650	30	3,689	-1.7	-21.7	28	12.0
600	30	4,321	-6.1	-23.5	28	13.6
550	30	4,996	-10.8	-26.8	28	15.5
500	30	5,721	-16.2	-31.3	28	16.8
450	30	6,506	-21.6	-36.0	28	18.6
400	30	7,363	-27.8	-42.8	28	21.2
350	30	8,311	-34.9	-47.1	28	24.1
300	30	9,366	-42.7	-51.9	28	26.9
250	30	10,575	-51.0		28	29.7
200	30	12,005	-57.4		29	34.5
175	30	12,846	-58.7		28	33.6
150	30	13,811	-60.2		28	32.0
125	30	14,940	-63.1		28	25.4
100	30	16,304	-65.8		28	19.9
80	30	17,655	-66.3		28	14.1
70	30	18,466	-65.6		28	9.8
60	30	19,407	-64.0		29	5.2
50	30	20,530	-61.3		31	3.0
40	30	21,927	-58.3		35	1.7
30	29	23,748	-55.4		06	2.5
25	28	24,915	-54.2		07	2.6
20	28	26,354	-52.0		01	.9
15	27	28,228	-49.0		29	4.6
10	14	30,923	-43.9		28	7.3
7						
5						

* BARROW, ALASKA
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	-21.7	-27.9	08	3.4
1000	29	137	-18.7	-20.8	09	4.4
950	30	516	-16.0	-20.2	10	5.5
900	30	925	-14.5	-20.7	10	5.8
850	30	1,358	-14.6	-22.1	10	5.7
800	30	1,816	-16.2	-23.4	10	5.5
750	30	2,300	-18.3	-26.3	10	5.4
700	30	2,813	-21.1	-29.7	10	5.4
650	30	3,357	-24.2	-32.5	11	5.5
600	30	3,936	-27.8	-35.5	11	5.7
550	30	4,556	-31.8	-38.9	11	5.4
500	30	5,224	-36.2	-42.8	10	5.1
450	30	5,948	-41.0	-46.5	11	4.7
400	30	6,740	-46.6		10	4.7
350	30	7,618	-52.0		10	4.8
300	30	8,604	-55.5		12	3.7
250	30	9,769	-53.7		14	3.3
200	28	11,221	-49.7		18	4.3
175	28	12,097	-48.6		18	5.1
150	28	13,114	-47.3		18	5.5
125	28	14,323	-46.7		18	6.5
100	28	15,805	-46.3		19	6.7
80	28	17,287	-46.6		18	6.1
70	28	18,173	-46.8		19	5.4
60	28	19,194	-47.3		18	4.5
50	26	20,402	-47.8		17	4.0
40	23	21,874	-48.7		16	3.9
30	18	23,765	-49.2		15	3.8
25	14	24,961	-49.3		15	3.8
20						
15						
10						
7						
5						

BARTER IS., ALASKA
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-22.3	-25.8	14	.8
1000	28	137	-19.6	-23.7	10	2.0
950	30	510	-15.4	-20.0	10	3.4
900	30	920	-13.5	-19.6	10	3.1
850	30	1,355	-14.1	-20.6	11	2.9
800	30	1,814	-15.7	-21.6	10	3.5
750	30	2,299	-17.8	-23.8	10	4.2
700	30	2,813	-20.2	-26.2	10	3.6
650	30	3,358	-23.4	-29.7	09	3.1
600	30	3,940	-27.0	-33.4	09	3.5
550	30	4,562	-30.9	-37.2	[illegible]	3.3
500	30	5,232	-35.3	-41.2	09	3.0
450	30	5,959	-40.0	-44.3	[illegible]	2.9
400	30	6,754	-45.4		09	3.1
350	30	7,636	-50.9		09	3.2
300	30	8,628	-54.4		11	2.4
250	30	9,801	-51.6		15	1.8
200	30	11,263	-47.7		19	2.8
175	30	12,147	-46.8		19	3.7
150	30	13,171	-46.0		19	4.4
125	30	14,384	-46.2		19	4.1
100	30	15,869	-46.3		19	4.9
80	30	17,350	-46.7		18	3.9
70	30	18,235	-47.2		18	3.2
60	30	19,255	-47.5		19	2.8
50	30	20,459	-47.7		16	2.3
40	29	21,924	-48.2		14	2.9
30	29	23,818	-48.7		13	2.7
25	29	25,017	-48.4		12	2.5
20	28	26,486	-48.3		12	2.9
15	26	28,387	-47.7		10	3.3
10	19	31,068	-45.7		10	4.5
7	13	33,433	-43.3			
5						

BETHEL, ALASKA
1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	-10.8	-12.2	27	2.0
1000	22	116	-10.1	-12.4	27	3.0
950	29	479	-9.2	-11.9	30	2.6
900	29	897	-10.7	-14.2	27	2.8
850	29	1,335	-12.5	-17.1	27	4.0
800	29	1,797	-14.1	-19.4	27	4.3
750	29	2,284	-16.4	-21.9	28	5.2
700	29	2,801	-19.0	-25.1	28	5.9
650	29	3,349	-22.1	-28.7	28	6.7
600	29	3,934	-25.5	-32.4	28	8.0
550	29	4,560	-29.2	-36.2	28	9.3
500	29	5,236	-33.2	-39.7	28	11.6
450	29	5,970	-37.7	-41.4	28	13.6
400	29	6,773	-42.9	-43.8	28	16.3
350	29	7,666	-48.1		27	15.4
300	29	8,670	-51.6		28	13.0
250	29	9,852	-51.9		27	12.3
200	29	11,305	-49.5		27	11.1
175	29	12,180	-49.4		26	11.1
150	27	13,186	-49.1		26	10.6
125	25	14,380	-48.8		26	8.5
100	24	15,845	-48.6		25	5.7
80	23	17,309	-48.9		23	3.8
70	23	18,187	-48.9		22	3.7
60	23	19,198	-49.6		20	3.2
50	22	20,391	-50.0		17	2.7
40	21	21,845	-50.3		13	2.7
30	20	23,721	-50.4		12	3.6
25	20	24,911	-50.4		11	4.3
20	19	26,373	-50.3		11	5.9
15	17	28,266	-49.1		10	5.6
10	7	30,926	-47.9			
7						
5						

* BISMARCK, N. DAK.
955 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	503	1.9	-1.3	12	1.5
1000						
950	24	566	1.2	-4.0	14	1.1
900	30	979	.8	-4.2	17	2.0
850	30	1,438	-.3	-6.5	25	1.4
800	30	1,921	-2.3	-8.7	28	3.1
750	30	2,432	-4.7	-12.7	29	5.0
700	30	2,972	-7.4	-15.7	29	7.5
650	30	3,546	-10.5	-18.7	29	9.6
600	30	4,158	-14.1	-24.9	29	10.4
550	30	4,814	-18.1	-30.5	28	10.6
500	30	5,519	-23.2	-35.4	28	12.0
450	30	6,281	-29.0	-40.1	28	14.2
400	30	7,113	-35.2	-45.8	28	16.4
350	30	8,033	-42.2	-47.4	27	18.5
300	30	9,056	-50.0		27	20.2
250	30	10,231	-56.0		27	21.1
200	30	11,646	-56.3		27	20.3
175	30	12,498	-54.7		27	18.5
150	29	13,480	-54.6		27	16.4
125	29	14,647	-54.7		27	14.3
100	29	16,075	-55.1		27	11.6
80	28	17,499	-55.4		27	7.5
70	28	18,350	-55.7		28	5.1
60	28	19,330	-56.2		28	3.8
50	26	20,491	-55.0		32	1.3
40	26	21,919	-54.6		06	1.5
30	26	23,764	-53.9		09	3.1
25	26	24,938	-53.0		09	3.6
20	25	26,382	-51.8		09	4.8
15	25	28,255	-49.8		08	5.9
10	21	30,931	-45.6		09	7.6
7	15	33,347	-40.1		10	5.3
5	■	35,658	-36.8			

BOISE, IDAHO
915 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	871	4.4	-2.8	26	.5
1000						
950						
900	30	1,002	5.4	-3.9	30	1.3
850	30	1,468	3.8	-7.4	30	4.1
800	30	1,958	.4	-9.3	30	5.2
750	30	2,473	-3.2	-11.3	29	6.2
700	30	3,015	-7.0	-14.9	28	8.0
650	30	3,589	-10.7	-18.7	27	8.9
600	30	4,200	-14.5	-22.8	26	10.6
550	30	4,854	-18.6	-26.8	26	12.6
500	30	5,559	-23.3	-32.6	26	14.1
450	30	6,322	-28.6	-37.5	26	15.7
400	30	7,155	-34.6	-41.9	26	17.9
350	30	8,078	-41.2	-45.6	26	18.5
300	30	9,106	-48.6		26	19.7
250	30	10,287	-55.2		26	23.2
200	30	11,699	-57.9		26	22.0
175	30	12,542	-57.0		26	20.8
150	30	13,520	-56.7		26	18.5
125	30	14,676	-57.1		26	16.0
100	30	16,087	-57.5		25	12.0
80	29	17,500	-57.4		25	8.8
70	29	18,344	-57.3		25	5.5
60	29	19,319	-57.4		24	3.7
50	28	20,471	-56.7		22	2.1
40	25	21,887	-56.9		26	.8
30	24	23,709	-56.4		09	1.8
25	20	24,862	-55.4		09	2.0
20	16	26,295	-53.5		08	2.2
15	10	28,139	-51.9		09	2.5
10	5	30,783	-48.2			
7						

BOOTHVILLE, LA.
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	19.5	17.0	13	1.5
1000	30	139	20.1	16.1	15	3.0
950	30	580	17.0	12.9	18	4.3
900	30	1,041	15.0	6.8	21	4.2
850	30	1,523	13.2	-1.0	23	5.0
800	30	2,032	11.4	-7.0	25	5.7
750	30	2,568	8.9	-11.0	27	6.1
700	30	3,135	5.5	-14.5	28	7.2
650	30	3,737	1.9	-18.7	28	7.9
600	30	4,377	-2.6	-21.6	29	9.5
550	30	5,061	-7.1	-26.3	28	11.0
500	30	5,797	-12.4	-30.1	28	12.8
450	30	6,593	-18.0	-34.4	28	14.7
400	30	7,462	-24.4	-38.9	28	17.6
350	30	8,424	-31.5	-45.6	28	19.9
300	30	9,494	-39.5	-50.8	28	23.1
250	30	10,719	-48.1		28	26.7
200	30	12,161	-56.8		28	30.4
175	30	13,000	-60.2		28	30.3
150	29	13,955	-63.3		28	28.0
125	29	15,065	-67.6		27	24.9
100	29	16,396	-70.9		27	20.2
80	29	17,715	-71.4		27	14.1
70	29	18,507	-70.2		28	8.4
60	29	19,430	-67.1		30	4.2
50	29	20,540	-63.0		02	1.9
40	28	21,930	-59.1		04	2.7
30	27	23,753	-55.0		07	1.9
25	27	24,925	-52.7		06	1.2
20	24	26,373	-49.7		30	1.7
15	19	28,278	-45.9		[illegible]	6.5
10						
7						

* BROWNSVILLE, TEXAS
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	21.9	19.3	14	3.5
1000	29	104	22.8	20.6	14	4.9
950	30	547	20.7	16.5	16	10.2
900	30	1,014	19.7	8.2	17	9.7
850	30	1,505	17.7	2.9	17	7.3
800	30	2,022	15.9	-3.3	18	5.0
750	30	2,567	13.4	-8.3	20	2.5
700	30	3,143	9.7	-13.5	25	2.4
650	30	3,753	5.3	-15.7	27	4.5
600	30	4,401	.5	-18.5	28	7.8
550	30	5,092	-4.7	-23.3	29	10.6
500	30	5,834	-10.5	-26.1	27	12.9
450	30	6,636	-15.8	-33.4	27	14.9
400	30	7,514	-21.9	-40.5	27	16.9
350	30	8,485	-29.3	-45.8	27	20.2
300	30	9,564	-37.6	-52.6	27	23.2
250	29	10,797	-47.0		27	28.1
200	28	12,240	-56.8		27	30.8
175	28	13,077	-61.4		27	31.4
150	28	14,022	-66.3		27	28.4
125	28	15,115	-70.9		26	23.7
100	27	16,426	-74.8		26	17.4
80	27	17,720	-75.0		26	10.1
70	27	18,498	-72.9		26	6.3
60	27	19,411	-69.0		26	1.9
50	27	20,519	-62.7		02	2.2
40	27	21,908	-58.6		07	3.1
30	27	23,736	-54.1		08	3.0
25	27	24,912	-51.7		04	1.4
20	27	26,369	-48.9		29	2.2
15	24	28,270	-45.4		26	6.9
10	14	30,987	-40.6		26	16.0
7						

BUFFALO, N. Y.
990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	218	1.7	-2.0	19	1.1
1000	5	226	1.0	-4.7		
950	29	553	2.0	-4.5	24	1.2
900	29	988	-.2	-6.9	26	3.7
850	29	1,444	-2.1	-9.1	27	7.1
800	29	1,924	-3.9	-12.4	28	8.7
750	29	2,431	-6.2	-16.2	28	10.5
700	29	2,969	-8.8	-19.7	28	12.5
650	29	3,541	-11.7	-21.9	28	14.4
600	29	4,151	-14.6	-26.2	28	17.1
550	29	4,806	-19.0	-30.4	29	18.6
500	29	5,510	-23.1	-34.7	29	21.7
450	29	6,274	-28.3	-39.8	28	25.7
400	29	7,109	-34.1	-43.3	28	27.9
350	29	8,034	-40.5	-44.9	28	30.4
300	29	9,067	-47.0		28	32.8
250	29	10,259	-52.2		28	32.3
200	29	11,692	-54.8		28	30.0
175	29	12,548	-54.4		28	26.0
150	29	13,539	-53.6		28	21.8
125	28	14,711	-54.2		28	18.8
100	28	16,135	-56.0		28	13.1
80	28	17,552	-57.3		28	9.3
70	28	18,394	-58.1		28	6.9
60	28	19,367	-57.5		29	4.7
50	28	20,524	-55.5		30	3.1
40	27	21,945	-55.3		33	1.7
30	25	23,786	-54.4		04	1.8
25	25	24,956	-53.9		04	2.3
20	25	26,391	-53.3		07	3.5
15	22	28,261	-50.0		06	3.8
10	20	30,942	-45.1		05	1.7
7	■	33,369	-40.2			

CAPE HATTERAS, N. C.
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	11.1	8.2	36	1.2
1000	30	148	13.1	7.4	30	2.0
950	30	579	11.7	3.4	29	4.5
900	30	1,030	9.6	-1.3	29	5.1
850	30	1,502	7.3	-5.3	29	6.8
800	30	1,999	4.8	-8.3	28	9.4
750	30	2,523	2.3	-12.9	27	11.4
700	30	3,078	-.2	-18.1	28	12.7
650	30	3,667	-3.5	-21.9	28	15.0
600	30	4,295	-7.5	-23.6	28	17.3
550	30	4,966	-12.0	-26.3	28	19.3
500	30	5,689	-16.9	-31.0	28	21.3
450	30	6,472	-22.1	-36.8	27	23.8
400	30	7,328	-28.4	-42.2	27	25.8
350	30	8,275	-35.3	-47.3	27	26.8
300	30	9,328	-43.4	-54.6	27	29.6
250	30	10,532	-51.6		28	30.6
200	29	11,965	-57.1		28	34.7
175	29	12,808	-58.0		28	33.7
150	29	13,777	-59.4		28	30.7
125	29	14,912	-62.0		28	26.5
100	29	16,283	-64.4		28	21.4
80	29	17,648	-64.4		28	14.0
70	29	18,465	-64.0		29	9.5
60	28	19,418	-62.4		29	4.3
50	28	20,551	-59.4		32	2.2
40	27	21,957	-57.4		06	1.3
30	26	23,789	-54.8		07	3.1
25	25	24,958	-53.4		07	2.0
20	23	26,399	-51.6		02	1.6
15	22	28,283	-47.8		31	1.3
10	20	30,985	-42.7		28	7.4
7	■	33,404	-39.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	-1.6	-6.8	31	2.0
1000						
950	30	519	-2.1	-8.2	32	3.3
900	30	947	-4.3	-11.0	32	3.8
850	30	1,395	-7.1	-13.2	32	4.6
800	30	1,865	-10.2	-15.2	31	4.9
750	30	2,360	-12.5	-21.2	31	6.0
700	30	2,884	-15.2	-24.7	31	6.6
650	30	3,441	-18.3	-28.4	30	7.5
600	30	4,035	-21.5	-32.7	29	9.6
550	30	4,673	-24.4	-37.1	28	12.3
500	30	5,362	-28.3	-40.3	28	14.8
450	30	6,111	-32.8	-43.9	27	17.5
400	30	6,932	-37.8	-48.1	27	20.1
350	29	7,849	-42.8		27	23.7
300	29	8,875	-47.3		27	26.1
250	29	10,076	-49.5		28	24.6
200	29	11,538	-49.0		27	20.6
175	29	12,416	-48.9		27	17.1
150	27	13,427	-49.5		27	15.0
125	26	14,618	-50.7		27	12.9
100	25	16,069	-51.8		27	11.5
80	23	17,510	-53.8		27	6.7
70	22	18,369	-54.8		28	5.3
60	22	19,355	-54.5		28	3.2
50	22	20,525	-53.8		29	.5
40	22	21,959	-53.9		09	1.5
30	22	23,807	-53.8		08	3.8
25	22	24,979	-53.4		08	5.4
20	20	26,421	-52.2		09	6.0
15	19	28,292	-50.0		08	7.2
10	14	30,977	-44.7		09	7.6
7	12	33,406	-39.2		04	3.2
5	6	35,695	-35.6			

CHARLESTON, S. C. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	12.9	10.3	30	.8
1000	30	147	15.0	9.3	28	1.3
950	30	582	14.4	5.0	27	4.4
900	30	1,037	11.9	1.8	27	4.6
850	30	1,513	9.4	-2.6	27	5.2
800	30	2,014	7.5	-7.9	27	6.7
750	30	2,543	5.3	-14.4	28	9.1
700	30	3,104	2.7	-19.0	28	10.3
650	30	3,699	-1.1	-21.3	28	11.6
600	30	4,332	-5.6	-24.6	28	12.7
550	30	5,008	-10.2	-27.1	28	14.1
500	30	5,736	-15.1	-31.4	27	16.4
450	30	6,524	-20.4	-35.8	27	19.1
400	30	7,385	-26.7	-39.8	27	22.5
350	30	8,339	-33.5	-44.0	27	25.0
300	30	9,399	-41.5	-49.5	27	27.8
250	30	10,612	-50.1		28	31.5
200	30	12,048	-57.0		28	34.5
175	29	12,893	-57.9		28	32.7
150	27	13,865	-61.0		28	29.4
125	27	14,989	-64.3		28	26.8
100	27	16,343	-67.1		28	21.4
80	27	17,687	-67.6		28	13.5
70	27	18,493	-66.6		29	9.6
60	27	19,431	-64.5		29	5.0
50	26	20,553	-60.8		31	2.6
40	26	21,950	-58.3		04	2.1
30	26	23,774	-55.0		08	2.4
25	26	24,944	-53.4		06	1.7
20	26	26,388	-51.3		35	1.3
15	25	28,275	-47.5		28	5.2
10	18	30,991	-42.0		27	10.8
7						
5						

CHATHAM, MASS. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	16	3.6	.3	33	2.6
1000	29	128	3.3	-2.7	33	4.1
950	30	539	2.3	-5.1	32	6.0
900	30	975	.9	-8.3	31	6.3
850	30	1,432	-1.5	-11.5	30	8.1
800	30	1,913	-3.2	-13.9	29	10.8
750	30	2,422	-5.6	-16.4	28	13.0
700	30	2,960	-8.1	-20.4	28	15.5
650	30	3,533	-10.7	-22.6	28	17.7
600	30	4,145	-13.9	-25.3	28	20.0
550	30	4,801	-18.1	-29.5	28	22.3
500	30	5,507	-22.8	-34.2	28	24.9
450	30	6,272	-27.4	-38.0	27	27.4
400	30	7,110	-33.3	-43.0	27	30.7
350	30	8,038	-39.9	-46.6	27	32.8
300	30	9,072	-47.0		28	36.1
250	30	10,265	-52.2		28	35.7
200	30	11,701	-54.3		28	31.5
175	29	12,565	-53.4		28	27.0
150	29	13,558	-53.4		27	24.4
125	29	14,728	-54.9		27	20.8
100	29	16,149	-56.6		27	14.1
80	27	17,566	-58.0		27	9.1
70	27	18,407	-58.3		27	6.5
60	24	19,376	-57.8		28	3.9
50	24	20,530	-56.0		29	.9
40	23	21,952	-55.3		09	1.6
30	22	23,795	-54.4		09	3.1
25	21	24,967	-53.2		[illegible]	4.3
20	21	26,409	-51.8		09	3.1
15	20	28,273	-49.2		07	3.0
10	19	30,961	-43.8		07	1.4
7	12	33,340	-38.5			
5	7	35,688	-33.1			

CHIHUAHUA, MEXICO 855 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	11.8	-5.4	23	.8
1000						
950						
900						
850	29	1,481	15.0	-4.5	25	.9
800	30	1,994	16.0	-4.3	27	3.0
750	30	2,538	12.4	-6.7	26	4.3
700	30	3,112	8.4	-9.4	25	6.7
650	30	3,719	4.1	-13.5	24	8.9
600	30	4,364	-.7	-17.4	24	11.1
550	30	5,053	-5.3	-22.3	25	12.1
500	30	5,794	-10.6	-26.9	25	13.5
450	30	6,596	-16.4	-30.0	26	15.8
400	30	7,471	-22.6	-35.6	26	18.6
350	30	8,439	-30.1	-40.5	26	21.5
300	30	9,515	-38.6	-47.0	27	25.3
250	30	10,744	-47.3		27	27.3
200	30	12,191	-55.9		27	30.2
175	30	13,032	-59.9		27	28.3
150	30	13,986	-63.7		26	28.1
125	29	15,096	-66.9		26	24.7
100	28	16,441	-69.7		26	18.5
80	28	17,764	-70.8		26	14.1
70	27	18,554	-70.1		26	8.2
60	25	19,465	-67.1		27	4.7
50	25	20,575	-63.4		31	1.6
40	24	21,960	-60.4		06	2.2
30	24	23,768	-56.6		05	1.0
25	24	24,931	-54.5		35	.8
20	22	26,368	-52.2		27	1.5
15	21	28,247	-48.2		27	4.7
10	17	30,968	-41.8		29	8.8
7						
5						

* COLD BAY, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	30	-1.7	-3.5	28	5.0
1000	24	143	-2.9	-6.4	29	7.7
950	28	524	-4.7	-6.9	29	10.0
900	28	948	-6.9	-8.8	29	10.6
850	28	1,392	-8.7	-12.3	29	11.6
800	28	1,861	-10.5	-15.1	29	12.5
750	28	2,356	-12.5	-18.1	29	13.9
700	28	2,880	-15.0	-21.5	28	14.8
650	28	3,438	-18.0	-24.9	28	15.1
600	28	4,032	-21.1	-28.8	28	14.2
550	28	4,670	-24.7	-32.9	28	16.2
500	28	5,358	-28.9	-36.1	29	17.3
450	28	6,105	-33.7	-38.5	29	19.4
400	28	6,921	-39.1	-40.5	29	20.5
350	27	7,835	-44.7	-42.6	29	20.8
300	27	8,851	-50.1		28	22.3
250	27	10,030	-54.1		27	20.1
200	27	11,458	-54.8		27	17.8
175	27	12,314	-53.8		26	15.9
150	25	13,312	-52.8		26	14.7
125	24	14,482	-53.4		26	12.1
100	23	15,928	-52.8		25	8.3
80	22	17,361	-52.7		24	6.3
70	21	18,222	-53.0		24	3.6
60	21	19,216	-53.0		21	3.8
50	21	20,392	-52.9		21	2.6
40	20	21,834	-53.1			
30	19	23,690	-53.3			
25	17	24,869	-53.2			
20	17	26,309	-52.7			
15	15	28,175	-51.3			
10	10	30,820	-49.9			
7	8	33,128	-48.4			
5						

DAYTON, OHIO 981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	299	6.1	2.1	32	.4
1000						
950	30	559	7.1	-.1	25	2.2
900	30	1,003	5.6	-2.4	27	4.7
850	30	1,469	3.9	-5.3	28	7.0
800	30	1,961	1.6	-8.7	28	8.6
750	30	2,479	-.8	-13.1	28	10.4
700	30	3,027	-3.6	-16.2	28	12.3
650	30	3,609	-6.8	-19.1	28	14.4
600	30	4,230	-10.6	-23.2	28	16.2
550	30	4,894	-14.9	-27.5	28	17.7
500	30	5,608	-19.7	-31.7	28	19.7
450	30	6,382	-25.2	-36.7	28	22.2
400	30	7,227	-31.2	-42.6	28	23.7
350	30	8,164	-37.8	-44.5	27	25.7
300	30	9,206	-45.8		28	27.3
250	30	10,399	-53.0		28	30.1
200	30	11,821	-56.6		28	35.1
175	30	12,671	-55.7		28	31.9
150	30	13,651	-56.4		28	26.4
125	30	14,803	-58.4		28	22.2
100	30	16,202	-59.9		28	16.3
80	30	17,593	-60.8		28	11.2
70	30	18,424	-60.4		29	8.0
60	29	19,389	-59.6		28	5.3
50	29	20,534	-57.8		29	3.0
40	29	21,946	-56.6		35	1.4
30	29	23,779	-55.1		05	2.0
25	29	24,946	-54.0		07	2.0
20	29	26,385	-52.3		06	2.4
15	26	28,263	-49.9		34	1.4
10	6	30,932	-44.1			
7						

DEL RIO, TEXAS 976 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	18.9	12.7	11	3.2
1000						
950	30	543	19.1	12.1	14	5.6
900	30	1,008	17.8	9.9	17	7.2
850	30	1,496	16.7	5.1	19	6.4
800	30	2,011	14.4	-.1	21	5.4
750	30	2,554	11.9	-5.5	24	5.0
700	30	3,127	8.2	-11.6	27	5.6
650	30	3,733	3.5	-15.7	27	7.2
600	30	4,377	-1.4	-20.3	27	10.1
550	30	5,063	-7.0	-23.1	27	11.1
500	30	5,798	-12.8	-27.5	26	14.5
450	30	6,593	-18.1	-33.3	26	17.8
400	30	7,462	-24.7	-38.9	26	20.3
350	30	8,423	-31.7	-44.6	26	23.7
300	30	9,492	-39.7	-52.2	27	28.3
250	30	10,717	-48.2		27	32.2
200	30	12,157	-57.3		27	33.7
175	30	12,994	-61.1		27	33.1
150	30	13,942	-64.7		26	31.8
125	30	15,047	-67.9		27	25.9
100	29	16,373	-71.5		26	19.7
80	29	17,686	-72.3		26	12.7
70	29	18,476	-70.0		26	8.7
60	29	19,402	-66.5		27	4.1
50	29	20,516	-62.3		33	1.2
40	29	21,909	-58.5		05	1.3
30	29	23,735	-54.5		07	1.9
25	28	24,909	-52.9		04	.8
20	26	26,354	-50.4		31	1.6
15	26	28,246	-46.9		27	5.1
10	19	30,924	-42.5		28	14.7
7	6	33,293	-37.9			

DENVER, COLO. 834 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,611	3.4	-1.0	24	.2
1000						
950						
900						
850						
800	29	1,949	4.8	-5.6	30	1.7
750	29	2,474	2.6	-9.6	30	4.1
700	29	3,029	-.8	-12.4	29	7.0
650	29	3,617	-4.6	-16.7	29	9.7
600	29	4,241	-9.1	-21.9	29	11.5
550	29	4,909	-13.5	-28.5	28	13.0
500	29	5,627	-18.2	-34.7	27	13.0
450	29	6,405	-24.3	-39.5	27	13.8
400	29	7,252	-30.9	-44.7	27	15.9
350	29	8,188	-38.2	-48.1	26	17.7
300	29	9,228	-46.2		27	20.9
250	29	10,417	-54.2		27	25.0
200	29	11,831	-58.7		26	28.0
175	29	12,672	-58.0		26	27.9
150	29	13,643	-57.8		26	27.8
125	28	14,791	-59.3		26	21.0
100	28	16,184	-60.7		26	16.4
80	28	17,572	-61.0		26	9.3
70	28	18,401	-61.4		27	5.9
60	28	19,359	-60.4		26	4.2
50	28	20,501	-58.3		28	2.2
40	28	21,912	-56.7		28	1.0
30	28	23,740	-55.6		06	1.0
25	28	24,905	-54.8		05	1.7
20	27	26,338	-53.2		07	2.0
15	27	28,201	-50.8		03	.3
10	22	30,856	-46.9		29	2.8
7						

DODGE CITY, KANS. 920 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	6.8	-2.1	29	.7
1000						
950						
900	30	974	9.2	-.2	24	1.9
850	30	1,450	10.9	-3.5	25	5.4
800	30	1,954	9.3	-6.0	26	7.9
750	30	2,486	6.0	-9.6	26	9.1
700	30	3,047	2.2	-14.5	26	10.2
650	30	3,641	-1.8	-18.5	26	11.8
600	30	4,272	-6.6	-22.1	27	13.2
550	30	4,945	-11.8	-26.1	27	15.0
500	30	5,666	-17.6	-30.2	26	16.3
450	30	6,447	-23.1	-38.0	26	17.9
400	30	7,298	-29.6	-45.4	26	21.1
350	30	8,240	-36.6	-50.4	26	24.1
300	30	9,287	-44.7		27	26.5
250	30	10,485	-52.9		27	29.5
200	30	11,904	-58.8		27	31.7
175	30	12,743	-58.5		27	33.0
150	30	13,711	-58.7		26	29.8
125	30	14,851	-60.4		26	26.1
100	30	16,235	-62.5		27	19.5
80	30	17,608	-63.3		27	11.9
70	29	18,431	-63.1		26	8.3
60	29	19,384	-61.2		26	5.1
50	28	20,521	-59.4		27	3.3
40	27	21,924	-57.3		28	1.3
30	26	23,749	-55.3		06	1.4
25	26	24,915	-54.7		09	.4
20	26	26,348	-53.0		25	.1
15	24	28,211	-50.5		32	.4
10	20	30,869	-46.2		28	3.6
7	5	33,199	-43.0			

EL PASO, TEXAS 880 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	11.6	-10.4	27	1.5
1000						
950						
900						
850	30	1,482	16.9	-6.1	27	3.5
800	30	1,995	13.4	-8.9	27	5.7
750	30	2,534	9.4	-11.8	27	7.6
700	30	3,101	4.8	-14.7	26	10.2
650	30	3,700	.5	-18.6	25	12.4
600	30	4,337	-3.8	-22.8	25	14.8
550	30	5,018	-8.3	-27.3	25	15.8
500	30	5,750	-13.9	-31.8	25	16.9
450	30	6,541	-19.8	-35.6	26	18.9
400	30	7,403	-26.4	-41.3	26	20.9
350	30	8,358	-33.4	-46.5	26	23.6
300	30	9,419	-41.6	-50.9	26	27.6
250	30	10,632	-50.4		26	32.4
200	30	12,062	-58.0		26	37.2
175	30	12,898	-60.7		26	36.7
150	30	13,854	-62.4		26	34.5
125	30	14,970	-65.6		26	29.7
100	29	16,311	-68.6		26	21.1
80	29	17,646	-69.1		26	13.4
70	29	18,446	-68.1		26	9.6
60	29	19,380	-64.8		26	6.6
50	29	20,501	-61.8		27	1.6
40	29	21,894	-58.5		32	1.5
30	29	23,714	-55.8		06	1.2
25	29	24,879	-54.3		36	.2
20	28	26,317	-52.3		28	1.6
15	28	28,191	-49.1		27	4.3
10	22	30,900	-43.7		27	10.4
7						

ELY, NEV. 806 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	-.4	-7.8	22	1.5
1000						
950						
900						
850						
800	29	1,972	2.9	-7.1	21	1.5
750	30	2,490	1.0	-9.7	29	1.5
700	30	3,041	-3.0	-12.6	29	4.3
650	30	3,624	-6.6	-16.1	28	6.4
600	30	4,245	-10.5	-20.2	27	9.0
550	30	4,909	-15.0	-25.3	27	11.2
500	30	5,623	-20.0	-31.4	27	13.6
450	30	6,396	-25.4	-35.5	27	15.6
400	30	7,240	-31.9	-40.9	27	17.4
350	30	8,174	-38.6	-45.1	27	19.1
300	30	9,212	-46.3		26	22.1
250	30	10,403	-54.0		26	25.6
200	30	11,814	-59.2		27	26.6
175	29	12,644	-58.2		27	24.6
150	29	13,614	-58.7		26	23.0
125	28	14,763	-59.2		26	20.3
100	27	16,160	-60.3		26	15.0
80	27	17,550	-59.7		25	10.9
70	26	18,386	-59.3		25	7.7
60	26	19,352	-59.3		25	5.1
50	25	20,496	-58.4		26	2.8
40	25	21,904	-57.3		25	1.1
30	25	23,729	-55.8		33	.4
25	23	24,895	-55.0		03	.9
20	22	26,323	-53.7		06	.6
15	22	28,185	-50.9		02	.7
10	19	30,854	-46.8		30	2.4
7	5	33,275	-41.8			

EMPALME, MEXICO 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	12	14.9	3.3	01	1.3
1000	28	95	21.0	5.2	36	1.7
950	28	540	22.1	2.8	35	3.5
900	28	1,007	19.7	.1	32	2.4
850	28	1,496	16.6	-2.7	26	2.8
800	28	2,009	14.1	-5.8	24	4.4
750	28	2,550	11.2	-9.1	25	6.7
700	28	3,122	7.5	-12.4	26	8.4
650	27	3,728	3.6	-15.2	26	9.8
600	27	4,373	-.7	-18.7	26	11.9
550	27	5,061	-5.6	-23.4	26	13.1
500	27	5,800	-11.3	-27.1	26	15.8
450	27	6,600	-17.0	-30.2	26	18.6
400	27	7,473	-23.4	-34.7	26	21.5
350	27	8,438	-30.8	-40.9	26	26.2
300	27	9,510	-39.4	-48.5	26	29.4
250	27	10,733	-48.8		26	33.9
200	27	12,168	-58.1		26	36.3
175	27	13,002	-62.2		26	37.5
150	27	13,947	-65.3		25	34.7
125	25	15,049	-68.6		26	29.9
100	25	16,375	-72.0		26	21.7
80	25	17,687	-72.3		26	13.8
70	25	18,475	-70.7		26	8.8
60	25	19,396	-67.5		29	4.2
50	24	20,507	-64.1		34	2.4
40	24	21,891	-59.2		06	2.3
30	22	23,713	-55.0		07	1.9
25	22	24,883	-53.3		02	.7
20	22	26,330	-50.6		28	2.9
15	21	28,225	-46.8		26	8.2
10	14	30,946	-40.7			
7						

* FAIRBANKS, ALASKA 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	-9.2	-14.9	34	2.0
1000	11	156	-10.4	-18.8	36	2.3
950	30	479	-7.4	-14.8	07	1.6
900	30	899	-9.8	-15.8	15	.7
850	30	1,338	-12.7	-17.5	21	1.7
800	30	1,798	-15.1	-19.5	23	2.1
750	30	2,284	-17.3	-22.2	22	2.1
700	30	2,798	-20.5	-26.4	21	2.1
650	30	3,343	-23.7	-29.6	22	2.2
600	30	3,924	-27.2	-33.4	22	1.9
550	30	4,546	-31.1	-36.9	21	1.9
500	30	5,215	-35.8	-41.2	21	1.5
450	30	5,940	-41.0	-43.4	23	1.8
400	30	6,732	-46.3		25	1.8
350	30	7,612	-51.0		25	1.7
300	30	8,605	-53.6		26	3.4
250	30	9,784	-50.8		25	4.5
200	30	11,248	-48.2		24	4.0
175	30	12,130	-47.6		24	4.0
150	30	13,149	-47.1		23	4.3
125	30	14,357	-47.2		22	3.6
100	30	15,834	-47.5		21	3.4
80	30	17,307	-48.1		20	3.2
70	30	18,187	-48.5		19	2.8
60	30	19,201	-48.8		17	2.3
50	30	20,397	-49.3		15	2.3
40	30	21,860	-49.9		13	2.6
30	28	23,741	-50.3		12	3.5
25	27	24,936	-50.1		11	3.9
20	24	26,391	-50.1		12	4.2
15	17	28,284	-49.7		11	5.6
10	9	30,973	-47.5			
7						

FLINT, MICH. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	236	2.2	-2.2	22	.2
1000						
950	29	549	2.2	-4.4	33	.4
900	29	985	.8	-6.7	28	2.2
850	29	1,443	-.4	-9.5	29	5.0
800	29	1,927	-2.1	-12.1	29	7.5
750	29	2,438	-3.9	-15.0	29	10.4
700	29	2,980	-6.3	-18.8	29	12.1
650	29	3,557	-9.2	-21.0	29	14.2
600	29	4,172	-12.9	-24.1	29	15.7
550	29	4,830	-17.3	-28.8	29	18.3
500	29	5,538	-22.0	-32.5	29	19.9
450	29	6,304	-27.3	-36.9	29	22.4
400	29	7,142	-33.4	-42.2	28	24.9
350	29	8,070	-39.8	-45.5	28	28.4
300	29	9,105	-46.8		28	31.4
250	29	10,298	-52.4		28	32.6
200	29	11,729	-55.6		28	31.5
175	29	12,583	-54.6		28	29.5
150	29	13,572	-54.0		28	25.4
125	29	14,739	-55.1		28	21.2
100	29	16,159	-56.7		28	14.8
80	28	17,572	-58.3		28	9.5
70	28	18,412	-58.5		29	5.8
60	28	19,383	-57.7		29	3.3
50	28	20,538	-56.0		31	1.4
40	28	21,960	-55.4		04	1.3
30	24	23,794	-54.5		07	3.1
25	24	24,964	-53.7		07	3.8
20	23	26,400	-52.4		08	3.8
15	19	28,281	-49.8		08	3.9
10	10	31,023	-43.6			
7						

FORT WORTH, TEXAS [illegible]92 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	15.8	10.1	18	2.0
1000						
950	30	548	16.1	9.0	19	5.7
900	30	1,008	15.9	6.5	22	7.7
850	30	1,493	14.8	.3	24	8.1
800	30	2,003	12.3	-3.4	25	8.3
750	30	2,541	9.2	-6.6	26	8.3
700	30	3,109	5.1	-11.0	27	9.0
650	30	3,709	.9	-15.8	27	10.4
600	30	4,347	-3.8	-19.5	27	11.4
550	30	5,028	-8.5	-24.9	27	13.4
500	30	5,760	-13.6	-29.1	27	16.2
450	30	6,553	-19.0	-34.4	27	19.0
400	30	7,418	-25.6	-38.9	27	21.1
350	30	8,375	-33.1	-44.5	27	23.1
300	30	9,438	-40.9	-50.3	27	26.0
250	30	10,654	-49.8		27	31.6
200	30	12,088	-57.3		27	36.0
175	30	12,927	-59.9		27	35.3
150	30	13,885	-62.0		27	33.4
125	28	15,009	-64.1		27	28.3
100	24	16,362	-66.8		27	21.0
80	22	17,712	-67.6		27	13.3
70	22	18,516	-66.5		27	9.1
60	21	19,457	-64.1		26	6.7
50	21	20,583	-60.4		29	2.5
40	21	21,985	-57.4		03	1.3
30	21	23,814	-54.9		06	2.3
25	21	24,985	-53.2		05	2.6
20	20	26,431	-51.3		32	.6
15	17	28,320	-48.0		27	4.3
10	15	31,023	-42.8		27	8.3
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1972

GLASGOW, MONT.
932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	1.5	-3.4	08	.7
1000						
950						
900	30	977	2.8	-4.4	27	1.5
850	30	1,439	.9	-8.2	28	4.9
800	30	1,924	-1.3	-11.6	29	6.0
750	30	2,436	-4.3	-14.9	28	7.2
700	30	2,976	-7.6	-19.2	28	8.2
650	30	3,550	-11.0	-23.2	28	10.2
600	30	4,160	-14.6	-27.0	27	11.2
550	30	4,814	-18.9	-30.8	27	11.3
500	30	5,517	-24.0	-36.1	27	13.0
450	30	6,277	-29.6	-41.2	27	14.4
400	30	7,106	-36.1	-46.0	27	16.4
350	30	8,022	-43.1	-50.9	27	18.3
300	30	9,041	-50.6		27	21.2
250	30	10,212	-56.4		27	21.6
200	30	11,627	-56.3		27	17.9
175	30	12,478	-55.4		27	16.6
150	30	13,464	-54.0		27	14.8
125	30	14,634	-54.3		26	13.0
100	30	16,063	-54.6		27	10.5
80	30	17,491	-54.8		27	7.8
70	30	18,345	-55.2		27	6.6
60	29	19,330	-55.4		26	4.4
50	29	20,495	-54.8		26	1.5
40	29	21,923	-54.4		08	.5
30	29	23,769	-53.9		10	2.0
25	29	24,942	-53.3		[illegible]	2.8
20	29	26,383	-52.2		09	5.0
15	28	28,254	-50.5		09	5.6
10	26	30,918	-46.4		09	6.5
7	[illegible]	33,258	-43.9			
5						

GRAND JUNCTION, COLO.
849 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,472	6.2	-8.6	15	2.4
1000						
950						
900						
850	12	1,505	6.1	-8.2	13	3.9
800	30	1,961	7.9	-9.5	19	3.6
750	30	2,489	4.2	-12.4	23	4.7
700	30	3,046	-.3	-14.9	25	5.9
650	30	3,634	-5.1	-16.6	26	7.9
600	30	4,256	-10.1	-19.4	26	9.5
550	30	4,921	-14.9	-24.2	26	10.8
500	30	5,635	-20.0	-30.1	25	12.4
450	30	6,409	-24.9	-35.3	26	14.7
400	30	7,255	-31.3	-40.7	26	16.8
350	30	8,190	-38.1	-45.7	26	19.3
300	30	9,231	-46.0		26	23.5
250	30	10,424	-53.3		27	27.3
200	30	11,843	-57.5		27	28.4
175	30	12,686	-57.6		26	28.0
150	30	13,660	-57.6		26	25.2
125	30	14,808	-58.5		26	21.4
100	30	16,204	-60.8		25	16.2
80	30	17,588	-61.6		25	11.4
70	30	18,417	-60.9		26	7.5
60	30	19,376	-61.0		26	3.9
50	30	20,517	-58.6		26	2.1
40	29	21,925	-56.9		28	.8
30	29	23,754	-55.5		06	.9
25	28	24,918	-54.2		09	1.0
20	28	26,357	-52.2		06	1.2
15	25	28,225	-50.3		04	.7
10	14	30,892	-45.6			
7						
5						

* GREAT FALLS, MONT.
885 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,118	.7	-5.1	22	3.4
1000						
950						
900						
850	29	1,440	1.3	-9.2	25	6.0
800	29	1,926	-1.5	-10.8	27	6.6
750	29	2,437	-4.9	-13.4	27	7.2
700	29	2,976	-8.4	-17.0	27	8.1
650	29	3,548	-11.4	-20.6	27	9.2
600	29	4,157	-15.4	-26.1	27	10.2
550	29	4,808	-19.9	-30.3	26	12.4
500	29	5,509	-24.7	-34.1	26	13.2
450	29	6,268	-30.0	-39.1	26	14.7
400	29	7,096	-36.1	-43.3	26	17.6
350	29	8,012	-43.0		26	19.7
300	29	9,031	-50.5		26	20.8
250	29	10,206	-55.5		26	21.9
200	29	11,623	-56.5		26	18.8
175	28	12,469	-55.3		26	17.7
150	28	13,455	-54.0		26	15.7
125	28	14,625	-54.3		26	12.9
100	28	16,053	-54.8		25	11.4
80	27	17,484	-54.8		25	8.4
70	27	18,337	-55.3		25	7.4
60	26	19,318	-55.8		25	4.8
50	26	20,481	-55.2		24	1.8
40	26	21,907	-54.7		18	.5
30	26	23,750	-54.5		08	2.4
25	25	24,925	-53.6		08	2.6
20	25	26,363	-52.9		10	4.0
15	23	28,225	-51.0		09	5.8
10	21	30,884	-46.4		08	5.9
7	20	33,281	-41.4		09	5.8
5	13	35,567	-37.7			

GREEN BAY, WIS.
991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	.4	-3.5	01	1.5
1000	6	227	-1.3	-5.9		
950	30	550	1.5	-6.5	04	2.2
900	30	984	-.1	-8.8	02	1.8
850	30	1,440	-1.9	-11.3	31	2.4
800	30	1,922	-3.0	-14.9	30	4.3
750	30	2,431	-4.8	-17.2	30	6.9
700	30	2,971	-7.4	-20.7	30	8.9
650	30	3,545	-10.4	-22.4	29	10.9
600	30	4,158	-13.9	-26.2	29	12.8
550	30	4,813	-18.1	-29.7	29	14.1
500	30	5,519	-22.8	-32.2	29	15.9
450	30	6,283	-28.1	-38.4	29	17.8
400	30	7,118	-34.2	-43.7	29	19.7
350	30	8,043	-40.8	-48.0	29	21.3
300	30	9,073	-48.0		28	24.7
250	30	10,259	-53.5		28	25.9
200	30	11,686	-55.4		28	26.9
175	30	12,540	-54.6		28	24.7
150	30	13,527	-54.4		28	22.4
125	30	14,694	-55.3		28	19.2
100	30	16,118	-55.5		28	13.9
80	29	17,533	-56.9		28	9.3
70	29	18,378	-57.2		29	6.3
60	29	19,354	-57.0		29	4.2
50	29	20,512	-55.5		31	1.9
40	28	21,938	-54.7		01	.9
30	28	23,782	-54.1		07	2.6
25	28	24,954	-53.5		08	3.5
20	26	26,396	-52.4		08	4.0
15	26	28,266	-50.0		[illegible]	4.4
10	22	30,930	-46.6		08	3.9
7	13	33,310	-41.5			
5						

GREENSBORO, N. C.
985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	275	7.9	4.6	25	.4
1000						
950	30	578	10.6	2.0	27	3.0
900	30	1,028	9.5	-1.0	27	5.1
850	30	1,500	7.2	-2.7	27	7.1
800	30	1,997	4.6	-7.1	27	8.0
750	30	2,521	2.3	-12.4	28	9.2
700	30	3,075	-.4	-16.1	28	12.2
650	30	3,664	-3.8	-20.0	28	14.2
600	30	4,291	-7.7	-22.9	28	15.6
550	30	4,963	-12.3	-26.0	28	18.0
500	30	5,684	-17.3	-30.3	28	19.9
450	30	6,466	-22.7	-34.6	28	22.1
400	30	7,319	-29.0	-40.5	28	23.8
350	30	8,263	-36.2	-45.6	28	25.7
300	30	9,312	-44.2	-47.2	28	29.5
250	30	10,513	-52.1		28	32.9
200	30	11,938	-56.7		29	35.0
175	30	12,784	-57.5		29	34.5
150	30	13,755	-59.0		29	31.1
125	30	14,893	-61.5		28	25.6
100	29	16,273	-63.5		28	20.4
80	29	17,641	-63.9		28	13.3
70	28	18,462	-63.7		28	8.7
60	28	19,412	-62.1		30	4.7
50	28	20,545	-59.6		31	2.8
40	28	21,949	-57.4		03	1.5
30	27	23,775	-55.6		07	3.0
25	26	24,939	-54.2		08	3.2
20	24	26,381	-51.9		07	1.7
15	23	28,255	-49.4		32	2.0
10	17	30,924	-45.0		28	5.3
7						
5						

GUADALUPE IS., MEXICO
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	23	14.3	11.7	34	7.4
1000	20	139	13.2	8.7	33	8.0
950	20	571	14.3	-3.4	32	5.7
900	20	1,027	14.0	-9.2	31	3.6
850	20	1,507	13.5	-13.0	29	4.5
800	20	2,015	11.4	-13.7	28	4.4
750	20	2,550	8.4	-15.7	26	5.2
700	20	3,117	5.4	-18.2	26	7.1
650	20	3,718	1.9	-21.6	26	7.7
600	20	4,358	-2.4	-24.8	26	8.2
550	20	5,042	-7.2	-28.8	26	9.2
500	20	5,778	-12.3	-33.7	26	10.9
450	20	6,574	-18.1	-36.1	25	12.0
400	20	7,443	-24.7	-40.4	24	12.9
350	20	8,404	-31.9	-44.7	24	15.9
300	20	9,472	-40.2	-49.4		
250	20	10,691	-49.5			
200	20	12,124	-57.9			
175	20	12,961	-60.4			
150	19	13,924	-62.6			
125	19	15,043	-65.4			
100	17	16,390	-68.3			
80	15	17,730	-67.7			
70	15	18,536	-66.2			
60	13	19,470	-64.9			
50	13	20,586	-62.2			
40	11	21,983	-57.5			
30	11	23,814	-54.5			
25	10	24,983	-53.0			
20	[illegible]	26,433	-50.7			
15	8	28,321	-46.8			
10						
7						
5						
4						
3						

■ GUAM, MARIANA IS.
1000 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	24.1	21.4	08	3.3
1000	12	121	24.2	21.5	08	3.6
950	30	558	21.9	19.3	08	10.0
900	30	1,027	19.0	16.0	08	8.2
850	30	1,517	16.5	11.5	[illegible]	6.0
800	30	2,032	14.7	5.4	08	4.9
750	30	2,576	12.5	-2.9	08	4.1
700	30	3,152	9.8	-8.5	06	3.2
650	30	3,764	6.7	-12.7	05	2.4
600	30	4,417	3.2	-17.0	02	2.1
550	30	5,116	-.7	-21.6	01	3.2
500	30	5,871	-5.3	-27.2	35	3.9
450	30	6,690	-10.2	-31.9	33	4.4
400	30	7,587	-16.4	-36.5	32	5.9
350	30	6,580	-23.4	-41.5	31	6.7
300	30	9,687	-31.5	-48.0	28	8.9
250	30	10,951	-41.3		27	11.2
200	30	12,426	-53.4		25	13.0
175	30	13,273	-60.0		25	12.8
150	30	14,218	-67.6		25	10.5
125	29	15,301	-74.0		26	5.9
100	29	16,581	-80.1		29	.7
80	29	17,843	-79.2		01	1.0
70	29	18,610	-74.9		29	1.3
60	28	19,519	-69.5		26	3.3
50	28	20,620	-65.1		26	3.4
40	28	21,997	-59.8		06	.4
30	28	23,823	-53.6		08	5.6
25	28	25,003	-51.1		08	10.4
20	28	26,467	-47.4		09	14.6
15	26	28,386	-44.2		08	17.4
10	8	31,117	-40.5			
7						
5						
4						
3						

HILO, HAWAII
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	20.3	17.8	25	1.3
1000	30	152	19.9	16.8	17	.4
950	30	594	16.9	14.7	10	3.8
900	30	1,053	13.9	12.1	10	4.5
850	30	1,534	11.0	9.6	10	3.1
800	30	2,039	8.7	6.5	11	2.3
750	30	2,572	6.5	-2.1	12	2.3
700	30	3,136	5.0	-12.1	13	1.5
650	30	3,738	2.8	-16.5	19	1.3
600	30	4,382	-.8	-19.9	26	2.5
550	30	5,072	-4.7	-23.5	27	5.1
500	30	5,815	-9.5	-28.5	28	8.1
450	30	6,621	-14.9	-31.4	28	10.6
400	30	7,501	-21.2	-37.2	28	13.7
350	30	8,476	-28.3	-40.5	28	18.2
300	30	9,559	-36.6	-50.3	28	22.4
250	30	10,797	-46.1		28	28.9
200	30	12,247	-56.5		28	34.7
175	29	13,083	-62.1		28	37.7
150	29	14,023	-67.5		29	36.3
125	29	15,108	-72.4		28	28.0
100	29	16,407	-76.2		28	20.0
80	28	17,693	-75.1		28	11.9
70	28	18,474	-71.6		29	6.2
60	28	19,391	-67.8		26	2.4
50	28	20,503	-63.0		19	.7
40	28	21,883	-60.5		12	1.4
30	28	23,699	-55.2		08	3.4
25	28	24,871	-52.4		06	3.7
20	28	26,324	-49.5		08	4.9
15	25	28,224	-45.9		10	5.8
10	22	30,949	-42.7			
7	7	33,367	-38.5			
5						
4						
3						

HUNTINGTON W. VA.
987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	8.4	3.3	18	.9
1000						
950	30	565	9.6	2.1	24	4.6
900	30	1,013	7.9	-.1	26	8.2
850	30	1,483	5.3	-3.8	27	9.3
800	30	1,977	3.0	-5.4	28	10.5
750	30	2,497	.5	-9.4	[illegible]	11.3
700	30	3,048	-2.4	-13.3	28	12.7
650	30	3,633	-5.9	-16.7	28	14.4
600	30	4,256	-9.6	-19.9	28	16.3
550	30	4,923	-13.8	-25.7	27	18.3
500	30	5,640	-18.6	-29.6	27	21.0
450	30	6,417	-24.1	-35.3	28	22.3
400	30	7,266	-30.4	-41.6	28	23.3
350	30	8,205	-37.1	-44.1	28	25.6
300	30	9,250	-44.9	-45.2	[illegible]	27.6
250	30	10,448	-52.5		28	30.9
200	30	11,873	-56.4		28	35.6
175	30	12,721	-56.3		28	32.3
150	30	13,700	-57.0		28	28.5
125	30	14,848	-59.3		28	24.1
100	29	16,239	-61.2		28	17.7
80	29	17,623	-61.5		28	11.6
70	29	18,451	-61.2		28	7.6
60	29	19,410	-60.2		29	5.3
50	28	20,552	-58.1		29	3.0
40	28	21,964	-56.4		01	1.2
30	28	23,797	-54.9		05	2.0
25	28	24,966	-53.8		05	2.0
20	27	26,404	-52.3		05	1.8
15	18	28,291	-49.3		32	2.3
10	6	30,999	-44.0			
7						
5						
4						
3						

* INTERNATIONAL FALLS, MINN.
974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	-2.1	-7.1	06	.8
1000						
950	30	556	-.6	-7.0	19	1.2
900	30	987	-2.1	-9.8	25	1.7
850	30	1,439	-4.4	-12.1	29	1.5
800	30	1,916	-6.2	-15.5	30	3.0
750	30	2,419	-8.4	-18.3	29	4.2
700	30	2,951	-10.8	-23.6	29	5.8
650	30	3,518	-13.4	-25.5	29	6.9
600	30	4,124	-16.7	-27.3	29	9.1
550	30	4,773	-20.3	-30.2	29	11.3
500	30	5,473	-24.8	-33.8	29	13.6
450	30	6,231	-29.9	-38.1	29	15.5
400	30	7,061	-35.8	-44.2	28	17.4
350	30	7,979	-42.4	-48.2	[illegible]	18.6
300	30	9,001	-49.5		28	20.7
250	30	10,179	-55.6		28	20.6
200	30	11,602	-55.0		28	17.4
175	30	12,457	-53.8		28	15.7
150	30	13,450	-53.3		28	15.0
125	30	14,624	-53.2		28	13.3
100	30	16,060	-53.8		28	10.4
80	30	17,494	-54.1		28	7.6
70	30	18,349	-54.9		29	5.9
60	30	19,335	-54.9		29	3.5
50	30	20,501	-54.4		30	1.1
40	30	21,932	-54.1		08	1.6
30	29	23,782	-53.3		08	3.0
25	29	24,957	-52.8		09	4.5
20	28	26,401	-52.4		09	5.5
15	28	28,270	-50.3		09	6.6
10	26	30,934	-46.5		09	8.2
7	25	33,329	-41.6		08	6.6
5	19	35,619	-38.0		08	5.2
4	14	37,154	-35.1			
3	8	39,168	-32.5			

JACKSON, MISS.
1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	13.5	11.7	17	1.3
1000	26	149	13.8	10.1	15	1.1
950	29	575	14.6	7.1	21	4.1
900	29	1,032	13.8	.5	24	5.9
850	29	1,513	13.0	-5.5	26	6.6
800	29	2,021	10.8	-8.7	27	7.2
750	29	2,556	8.1	-13.3	27	8.4
700	29	3,121	4.4	-15.7	27	9.6
650	29	3,719	.3	-20.6	27	11.0
600	29	4,356	-4.2	-23.8	27	12.1
550	29	5,036	-9.4	-26.3	27	14.2
500	29	5,766	-14.8	-31.9	27	16.4
450	29	6,557	-20.4	-34.6	27	18.0
400	29	7,420	-26.7	-41.2	27	21.1
350	29	8,377	-33.7	-46.5	27	23.6
300	29	9,440	-41.6	-52.7	28	26.7
250	27	10,643	-50.1		28	30.6
200	27	12,078	-57.7		27	35.7
175	27	12,916	-60.0		27	34.4
150	27	13,876	-61.7		27	32.3
125	27	14,999	-64.4		27	27.8
100	27	16,353	-66.8		27	20.9
80	26	17,689	-67.4		27	14.1
70	26	18,495	-66.6		27	9.3
60	26	19,433	-64.1		28	4.7
50	26	20,558	-61.2		33	1.4
40	24	21,955	-57.7		03	2.0
30	24	23,784	-55.0		07	2.9
25	24	24,955	-53.0		05	1.4
20	24	26,402	-50.5		30	1.6
15	23	28,293	-47.2		28	6.3
10	15	30,993	-43.0		27	11.1
7						

JOHN F. KENNEDY INT. AP NY
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	6.9	-.5	34	2.0
1000	30	139	6.1	-2.3	34	3.2
950	30	558	4.3	-5.2	33	4.4
900	30	997	2.2	-6.3	31	5.9
850	30	1,457	.2	-8.9	29	8.8
800	30	1,941	-1.5	-11.8	29	12.1
750	30	2,453	-3.6	-15.3	28	13.6
700	30	2,996	-6.2	-17.9	28	15.7
650	30	3,573	-9.2	-20.1	28	18.0
600	30	4,188	-12.7	-22.5	28	21.2
550	30	4,847	-16.9	-27.2	28	22.7
500	30	5,556	-21.7	-32.4	28	24.3
450	30	6,324	-26.9	-37.5	28	27.4
400	30	7,164	-32.8	-43.1	28	30.7
350	30	8,094	-39.4	-47.7	28	35.0
300	30	9,131	-46.2		28	39.0
250	30	10,325	-52.5		28	40.1
200	30	11,756	-55.0		28	37.1
175	30	12,611	-54.3		28	33.2
150	30	13,599	-54.8		28	27.3
125	30	14,763	-55.9		28	24.3
100	30	16,176	-57.5		28	15.2
80	30	17,581	-59.0		28	10.9
70	30	18,419	-59.1		28	7.3
60	30	19,387	-58.2		28	4.1
50	30	20,539	-56.8		34	.6
40	30	21,957	-55.8		08	2.8
30	29	23,792	-54.9		09	4.3
25	29	24,960	-54.1		08	6.3
20	26	26,398	-52.4		07	3.2
15	26	28,268	-50.2		09	3.8
10	14	30,969	-44.5			
7						

JOHNSTON IS., PACIFIC AREA
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	25.0	21.3	09	5.8
1000	30	119	23.6	20.0	09	6.0
950	30	566	20.0	17.9	10	6.7
900	30	1,032	17.1	14.3	10	5.6
850	30	1,518	14.7	11.0	11	3.4
800	30	2,030	12.4	6.1	12	1.7
750	30	2,570	10.7	-3.3	23	.5
700	30	3,142	8.3	-7.3	28	2.1
650	30	3,751	4.9	-8.6	28	3.3
600	30	4,400	1.1	-11.4	27	3.6
550	30	5,094	-3.3	-14.9	27	5.2
500	30	5,841	-8.3	-18.9	27	6.8
450	30	6,652	-13.3	-24.8	27	8.8
400	30	7,539	-19.1	-28.9	26	12.7
350	29	8,525	-25.7	-35.1	26	15.8
300	29	9,623	-33.2	-42.8	27	21.2
250	29	10,879	-42.8		26	25.1
200	29	12,345	-54.7		27	28.3
175	29	13,187	-61.1		27	28.9
150	29	14,129	-67.8		27	27.0
125	26	15,205	-73.9		28	21.9
100	26	16,492	-77.8		28	14.2
80	24	17,770	-78.2		28	7.5
70	24	18,542	-73.2		28	5.2
60	23	19,458	-69.1		27	3.1
50	23	20,561	-64.2		24	1.2
40	21	21,944	-60.0		05	1.4
30	21	23,766	-54.8		09	3.3
25	19	24,942	-51.8		08	5.6
20	19	26,401	-48.2		08	8.8
15	16	28,307	-44.8		08	13.0
10	14	31,037	-41.1			
7	7	33,426	-40.5			

KEY WEST, FLA.
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	23.2	19.4	10	2.9
1000	30	144	22.4	18.8	09	3.3
950	30	590	19.4	15.1	10	3.2
900	30	1,053	16.8	9.1	12	1.8
850	30	1,539	14.1	4.6	19	1.3
800	30	2,049	12.0	-3.0	24	2.5
750	30	2,587	9.4	-9.3	25	3.2
700	30	3,155	6.4	-12.8	27	4.1
650	30	3,760	3.5	-15.8	27	5.0
600	30	4,405	-.2	-17.3	26	5.3
550	30	5,096	-4.4	-22.9	27	7.2
500	30	5,839	-9.6	-25.6	27	7.1
450	30	6,645	-15.1	-30.5	28	8.7
400	30	7,524	-21.6	-35.7	28	11.3
350	30	8,495	-29.3	-42.9	28	14.6
300	30	9,574	-37.8	-51.0	28	15.8
250	30	10,807	-46.9		28	19.6
200	30	12,256	-55.6		27	22.4
175	30	13,098	-60.1		27	24.0
150	30	14,049	-64.9		27	22.5
125	29	15,152	-69.9		27	18.1
100	29	16,466	-74.0		27	12.5
80	27	17,770	-74.4		28	5.8
70	27	18,551	-72.3		27	2.2
60	25	19,463	-67.6		02	1.1
50	25	20,574	-62.3		06	3.2
40	25	21,966	-57.9		07	3.2
30	23	23,802	-53.4		08	2.1
25	19	24,977	-50.6		14	.4
20	15	26,434	-47.7			
15	6	28,307	-45.9			
10						
7						

+ KOROR, CAROLINE IS.
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	27.7	24.5	06	2.9
1000	30	97	26.5	22.4	06	3.2
950	30	549	23.4	19.1	07	5.5
900	30	1,020	20.3	15.1	07	5.3
850	30	1,512	17.5	11.7	07	4.4
800	30	2,030	15.3	6.8	07	4.1
750	30	2,575	12.8	1.5	07	4.1
700	30	3,152	9.8	-4.0	07	4.0
650	29	3,764	6.7	-8.3	07	4.1
600	29	4,417	2.9	-13.4	07	4.1
550	29	5,116	-1.0	-18.9	08	4.8
500	29	5,870	-5.3	-23.6	07	5.0
450	29	6,690	-10.0	-29.1	[illegible]	4.6
400	29	7,589	-15.7	-33.8	08	3.9
350	29	8,585	-22.6	-39.1	09	2.5
300	29	9,695	-30.9	-47.0	11	2.8
250	29	10,961	-41.3		14	2.9
200	29	12,436	-53.5		15	4.1
175	29	13,282	-60.5		15	3.2
150	29	14,225	-67.9		13	2.5
125	29	15,302	-75.1		09	3.1
100	29	16,575	-79.9		08	3.3
80	29	17,841	-77.2		31	3.4
70	29	18,618	-72.2		28	7.4
60	29	19,534	-68.6		27	9.7
50	29	20,638	-64.4		27	10.2
40	29	22,014	-60.6		27	6.6
30	28	23,824	-56.3		09	4.1
25	27	24,993	-52.6		09	13.6
20	27	26,443	-50.3		09	19.9
15	25	28,342	-45.1		10	25.2
10	13	31,090	-38.0			
7	5	33,573	-33.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	4	26.7	23.9	07	3.7
1000	30	95	26.1	23.5	07	4.3
950	30	547	22.9	21.2	08	5.3
900	30	1,018	20.1	17.3	08	4.7
850	31	1,511	17.7	13.9	09	3.9
800	31	2,028	15.3	9.8	10	3.1
750	31	2,574	12.4	5.7	11	1.8
700	31	3,150	9.2	2.4	15	1.0
650	30	3,762	5.8	-1.5	19	.6
600	30	4,413	2.1	-5.8	26	.7
550	30	5,112	-1.8	-8.5	29	.5
500	30	5,865	-5.9	-14.2	26	1.4
450	30	6,684	-10.6	-21.3	24	1.5
400	30	7,581	-16.1	-26.7	25	2.8
350	30	8,573	-23.1	-32.8	25	4.4
300	30	9,684	-31.4	-40.9	25	7.4
250	30	10,948	-41.6	-50.8	26	8.8
200	30	12,420	-54.3	-62.2	26	10.5
175	30	13,262	-61.5		25	11.0
150	30	14,200	-69.0		26	10.2
125	29	15,271	-76.2		27	7.2
100	26	16,539	-80.7		30	4.6
80	24	17,799	-78.7		28	5.6
70	24	18,568	-74.4		27	9.3
60	23	19,478	-70.5		27	11.0
50	23	20,571	-66.3		27	9.5
40	21	21,938	-62.6		27	6.5
30	21	23,741	-56.8		08	6.4
25	20	24,904	-54.2		08	12.9
20	20	26,345	-51.4		09	20.9
15	17	28,239	-45.7		09	24.6
10	6	30,982	-40.7			
7						

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	5	16.5	15.6	10	1.3
1000	30	128	18.6	13.9	13	2.5
950	30	568	17.0	10.8	18	4.9
900	30	1,029	15.4	4.9	21	5.3
850	30	1,512	13.7	-2.8	22	5.3
800	30	2,021	12.2	-9.6	24	5.9
750	30	2,559	9.3	-14.7	26	5.9
700	30	3,126	5.9	-17.4	27	6.8
650	30	3,728	1.8	-20.8	27	7.5
600	30	4,368	-2.8	-24.4	27	9.4
550	30	5,050	-7.9	-27.6	27	11.6
500	30	5,784	-12.9	-33.1	27	13.5
450	30	6,578	-18.5	-37.4	27	16.1
400	29	7,445	-25.0	-42.1	27	19.3
350	29	8,405	-32.3	-45.9	27	22.2
300	29	9,471	-40.4	-52.5	27	25.0
250	29	10,692	-48.4		27	29.7
200	29	12,132	-57.0		27	32.8
175	29	12,971	-60.1		27	32.7
150	29	13,925	-63.4		27	30.6
125	29	15,037	-66.5		27	26.7
100	28	16,378	-69.8		27	19.4
80	28	17,703	-70.8		26	13.2
70	28	18,497	-69.1		27	7.3
60	28	19,424	-66.3		28	4.6
50	28	20,540	-61.9		35	1.3
40	27	21,930	-58.4		06	2.1
30	27	23,757	-54.9		08	2.7
25	26	24,923	-53.4		06	1.1
20	24	26,372	-50.3		27	2.3
15	22	28,255	-47.0		28	6.2
10	18	30,955	-42.6		27	12.1
7						

LANDER, WYO. 825 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	1,697	1.0	-6.0	26	1.3
1000						
950						
900						
850						
800	30	1,948	2.8	-9.4	31	1.0
750	30	2,468	-.4	-12.1	29	2.1
700	30	3,016	-4.2	-14.4	29	4.4
650	30	3,596	-7.8	-17.2	29	7.5
600	30	4,214	-11.6	-22.0	27	10.4
550	30	4,876	-15.9	-26.5	27	12.4
500	30	5,587	-21.3	-30.9	26	13.1
450	30	6,355	-26.9	-36.2	26	14.0
400	30	7,193	-33.4	-42.6	26	15.4
350	30	8,119	-40.8	-46.9	26	18.4
300	30	9,147	-48.5		26	21.8
250	30	10,326	-55.8		26	25.6
200	30	11,731	-59.1		27	23.7
175	30	12,572	-57.5		27	22.2
150	30	13,547	-56.8		26	18.9
125	30	14,703	-57.2		26	17.9
100	30	16,110	-58.3		26	13.3
80	30	17,513	-58.6		26	8.6
70	30	18,353	-58.5		25	6.5
60	30	19,322	-58.6		25	4.5
50	30	20,470	-57.8		26	2.9
40	30	21,881	-56.9		01	.1
30	30	23,709	-55.5		10	.9
25	30	24,874	-54.7		08	1.6
20	29	26,308	-53.4		09	3.1
15	27	28,172	-51.2		08	3.1
10	24	30,826	-47.0		09	1.1
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* LIHUE KAUAI, HAWAII 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	36	22.0	18.3	07	3.7
1000	30	159	20.9	16.4	07	4.7
950	30	601	17.4	15.3	08	6.9
900	30	1,062	14.1	12.4	09	6.4
850	30	1,543	11.1	9.3	10	5.4
800	30	2,048	9.1	2.4	11	4.7
750	30	2,583	8.3	-7.6	12	4.0
700	30	3,150	5.8	-10.2	12	2.5
650	30	3,753	2.4	-14.2	12	.7
600	29	4,397	-1.4	-16.9	25	1.9
550	29	5,085	-5.2	-19.0	27	4.2
500	29	5,827	-9.7	-24.7	27	7.0
450	29	6,633	-15.2	-30.0	27	9.4
400	29	7,512	-21.5	-34.4	27	12.2
350	29	8,485	-28.6	-39.4	28	16.6
300	29	9,567	-36.9	-47.1	27	21.4
250	29	10,802	-46.6		28	27.3
200	29	12,252	-56.5		28	33.5
175	29	13,088	-62.0		28	36.6
150	29	14,030	-67.0		28	35.1
125	29	15,119	-71.3		28	27.6
100	29	16,428	-74.2		28	17.8
80	28	17,728	-73.6		28	9.8
70	28	18,513	-71.0		28	5.4
60	27	19,436	-66.8		27	2.8
50	27	20,551	-62.9		26	.6
40	27	21,940	-58.6		09	2.2
30	27	23,767	-54.2		08	2.3
25	26	24,945	-51.6		07	2.7
20	26	26,404	-48.4		07	.9
15	26	28,314	-45.3		31	.8
10	26	31,046	-41.3		16	.7
7	13	33,527	-38.3			

LITTLE ROCK, ARK. 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	79	12.5	8.8	19	1.2
1000	25	145	11.8	5.9	15	.7
950	30	559	12.9	5.1	21	5.5
900	30	1,012	11.7	2.9	23	7.2
850	30	1,490	10.8	-3.0	25	8.8
800	30	1,994	8.9	-5.1	26	10.0
750	30	2,526	6.4	-9.3	27	10.5
700	30	3,088	2.5	-11.4	27	11.9
650	30	3,682	-1.8	-15.3	27	12.9
600	30	4,314	-6.0	-21.4	28	14.3
550	30	4,989	-10.8	-25.8	28	15.2
500	30	5,715	-15.9	-30.4	27	18.1
450	30	6,501	-21.4	-35.2	27	21.0
400	30	7,358	-27.5	-39.9	27	23.2
350	30	8,309	-34.5	-44.5	27	26.1
300	30	9,365	-42.4	-49.1	27	28.5
250	30	10,575	-50.7		28	33.7
200	28	12,008	-56.5		27	38.6
175	27	12,850	-58.7		27	36.8
150	27	13,816	-60.5		27	32.3
125	27	14,946	-62.5		27	27.2
100	27	16,313	-64.7		27	21.0
80	26	17,679	-65.9		27	12.8
70	26	18,492	-64.5		27	9.4
60	26	19,438	-62.6		28	5.6
50	26	20,570	-59.7		30	2.3
40	26	21,974	-57.5		07	1.6
30	26	23,804	-54.6		05	2.3
25	26	24,975	-53.1		05	2.3
20	26	26,422	-50.6		04	1.0
15	23	28,313	-47.1		27	2.0
10	16	31,042	-41.7			
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MCGRATH, ALASKA 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	103	-10.5	-13.0	25	.3
1000	12	144	-8.8	-14.2	25	.7
950	30	471	-8.9	-13.0	18	.5
900	30	[illegible]	-10.7	-13.7	18	1.8
850	30	1,326	-12.7	-16.4	20	2.6
800	30	1,787	-14.4	-18.6	21	3.0
750	30	2,275	-16.9	-21.3	22	2.8
700	30	2,789	-19.8	-24.1	23	3.0
650	30	3,336	-23.0	-28.0	23	3.0
600	30	3,918	-26.6	-31.5	25	3.1
550	30	4,542	-30.3	-36.7	26	3.3
500	30	5,214	-34.8	-40.9	26	3.5
450	30	5,942	-39.7	-44.3	27	3.5
400	30	6,738	-45.2		27	3.9
350	30	7,623	-50.0		27	5.4
300	30	8,621	-52.5		28	8.0
250	30	9,802	-51.0		27	9.4
200	30	11,264	-48.3		26	8.0
175	30	12,144	-48.1		25	8.3
150	29	13,160	-47.7		25	7.3
125	29	14,364	-47.8		24	5.7
100	29	15,839	-47.3		22	5.7
80	29	17,314	-47.8		22	4.3
70	29	18,194	-48.5		20	3.6
60	29	19,208	-48.7		19	3.0
50	29	20,406	-49.1		17	2.5
40	29	21,868	-49.9		15	2.9
30	28	23,751	-50.1		11	3.2
25	27	24,946	-50.0		11	4.2
20	27	26,405	-49.8		11	5.2
15	25	28,288	-48.8		10	6.3
10	16	30,985	-46.5			
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+ MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	3	28.2	24.5	07	2.6
1000	30	103	26.5	20.9	08	3.1
950	30	555	23.3	19.1	08	3.8
900	30	1,026	20.8	15.8	09	3.4
850	30	1,520	18.1	12.6	10	2.6
800	30	2,038	15.7	8.9	10	2.1
750	30	2,584	12.9	5.0	10	1.4
700	30	3,161	9.8	.6	09	.6
650	30	3,774	6.4	-3.1	09	.8
600	30	4,427	2.7	-6.3	18	.6
550	30	5,126	-.9	-11.1	22	.6
500	30	5,882	-4.9	-16.3	22	1.0
450	30	6,704	-9.5	-21.0	22	2.0
400	30	7,605	-14.8	-27.9	24	3.2
350	30	8,606	-21.4	-35.8	26	3.7
300	30	9,721	-29.9	-43.8	26	6.1
250	30	10,993	-40.1	-52.9	26	8.6
200	30	12,475	-52.6		26	9.5
175	30	13,325	-59.6		26	8.5
150	30	14,271	-67.1		27	7.4
125	30	15,353	-74.0		28	6.5
100	30	16,636	-78.5		30	4.2
80	30	17,911	-75.8		27	7.5
70	30	18,692	-71.3		27	10.1
60	30	19,614	-66.5		27	11.5
50	30	20,728	-62.8		27	11.3
40	29	22,114	-59.1		27	7.2
30	28	23,941	-54.1		10	4.9
25	28	25,117	-51.6		09	13.2
20	28	26,577	-48.0		09	20.5
15	25	28,489	-43.3		09	24.2
10	21	31,263	-36.8		09	28.3
7	6	33,721	-33.0			

* MEDFORD, OREG. 971 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	401	3.6	.6	07	.2
1000						
950	30	582	5.1	.2	24	.4
900	30	1,023	3.3	-1.4	22	1.4
850	30	1,484	.5	-4.2	23	2.5
800	30	1,969	-2.1	-8.4	24	3.7
750	30	2,480	-4.5	-14.1	26	5.8
700	30	3,020	-7.5	-18.3	26	7.7
650	30	3,594	-10.2	-23.2	27	10.1
600	30	4,208	-13.2	-27.5	27	12.7
550	30	4,865	-17.2	-31.8	27	14.4
500	30	5,573	-21.9	-36.0	27	15.7
450	30	6,340	-27.5	-39.7	27	17.3
400	30	7,177	-33.7	-44.7	27	20.0
350	30	8,103	-40.6	-48.9	27	22.1
300	30	9,133	-48.3		27	23.8
250	30	10,315	-55.2		27	24.9
200	29	11,732	-58.2		27	22.6
175	29	12,573	-57.7		27	21.0
150	29	13,548	-57.2		26	18.1
125	29	14,699	-57.9		26	16.8
100	29	16,105	-58.3		26	13.2
80	28	17,511	-57.9		25	9.2
70	27	18,355	-57.0		25	7.0
60	27	19,332	-56.8		24	5.0
50	27	20,489	-56.1		23	3.8
40	27	21,909	-55.5		22	.4
30	22	23,737	-55.0		04	.8
25	21	24,902	-54.7		08	1.7
20	19	26,337	-53.7		06	2.2
15	15	28,227	-50.7		06	3.6
10	11	30,907	-45.3		07	4.0
7	10	33,313	-39.1			

MERIDA, MEXICO 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	11	22.4	20.6	10	1.1
1000	30	115	23.1	21.3	12	4.6
950	30	562	21.5	18.3	13	10.1
900	30	1,032	20.3	10.1	13	9.2
850	30	1,524	18.2	6.0	12	5.2
800	30	2,040	14.6	5.4	10	2.5
750	30	2,583	11.7	-1.8	12	.6
700	30	3,157	8.9	-7.7	28	.9
650	30	3,766	5.3	-13.4	33	1.9
600	30	4,416	2.0	-18.7	32	4.4
550	30	5,112	-2.1	-22.7	32	6.1
500	30	5,863	-7.0	-27.7	31	6.4
450	30	6,676	-12.5	-32.9	32	6.8
400	30	7,564	-18.9	-37.7	30	7.5
350	30	8,547	-26.2	-42.1	29	9.2
300	30	9,641	-34.4	-49.3	28	12.2
250	30	10,891	-43.8		28	15.1
200	28	12,356	-53.7		28	16.3
175	28	13,205	-58.8		27	15.6
150	28	14,159	-64.8		27	14.5
125	28	15,256	-70.8		27	13.4
100	26	16,559	-75.8		25	7.9
80	26	17,844	-76.4		29	4.1
70	26	18,617	-74.5		32	1.0
60	24	19,527	-69.5		01	1.7
50	24	20,633	-63.4		03	3.4
40	23	22,025	-57.0		06	3.9
30	22	23,869	-52.3		06	2.1
25	22	25,055	-49.8		12	1.3
20	22	26,524	-46.9		12	.9
15	20	28,449	-43.7		13	2.1
10	12	31,214	-38.5			
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MIAMI, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	4	20.6	16.7	05	.6
1000	30	149	21.7	16.8	09	1.4
950	30	592	18.8	13.4	11	2.7
900	30	1,055	15.8	9.8	12	1.7
850	30	1,539	13.1	3.7	17	.7
800	30	2,047	11.4	-3.3	25	1.5
750	30	2,584	8.9	-9.2	27	2.7
700	30	3,152	6.1	-14.4	28	3.8
650	30	3,755	2.9	-17.0	27	4.9
600	30	4,399	-.9	-20.2	27	5.7
550	30	5,087	-5.4	-23.5	27	6.9
500	30	5,829	-10.2	-28.8	28	8.8
450	30	6,632	-15.7	-32.5	28	10.9
400	30	7,509	-22.2	-38.7	28	13.4
350	30	8,479	-29.5	-44.5	28	15.5
300	30	9,557	-37.9	-51.1	29	16.4
250	30	10,789	-46.9		28	19.9
200	30	12,238	-55.7		28	22.5
175	30	13,082	-59.2		28	23.6
150	30	14,038	-63.6		28	25.5
125	29	15,136	-68.5		28	20.5
100	29	16,458	-73.1		28	16.8
80	29	17,761	-73.7		29	10.0
70	29	18,546	-71.3		29	6.5
60	29	19,465	-67.5		31	3.0
50	29	20,577	-62.5		01	1.5
40	29	21,968	-58.5		04	3.2
30	28	23,797	-54.0		08	1.5
25	28	24,974	-51.5		35	.5
20	27	26,434	-48.3		26	3.0
15	27	28,347	-44.3		27	7.8
10	23	31,090	-40.2		27	11.5
7	7	33,542	-37.1			

MIDLAND, TEXAS 913 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	27	874	12.6	3.1	17	2.0
1000						
950						
900	27	998	14.8	3.7	17	3.0
850	27	1,482	15.1	-.2	21	5.5
800	27	1,995	13.7	-7.7	24	5.8
750	27	2,534	10.2	-12.4	26	7.4
700	27	3,103	5.7	-17.0	26	8.5
650	27	3,704	1.3	-19.7	26	11.1
600	27	4,342	-3.5	-23.1	26	13.2
550	27	5,023	-8.4	-27.7	26	15.2
500	27	5,755	-13.9	-32.7	26	17.1
450	27	6,546	-19.7	-37.9	26	18.3
400	27	7,408	-26.7	-43.8	26	19.8
350	27	8,361	-33.8	-47.9	26	24.2
300	27	9,421	-42.0	-50.1	27	27.5
250	26	10,632	-50.4		27	32.4
200	26	12,062	-58.0		27	35.7
175	26	12,[illegible]	-60.4		27	35.5
150	26	13,854	-62.1		27	33.3
125	26	14,974	-65.3		27	27.7
100	26	16,320	-68.1		27	21.6
80	24	17,665	-68.2		27	14.7
70	24	18,470	-66.8		27	8.1
60	24	19,407	-64.4		26	5.5
50	23	20,530	-61.4		28	1.8
40	22	21,926	-58.5		35	1.6
30	21	23,750	-55.3		05	1.8
25	19	24,917	-53.7		01	1.6
20	19	26,359	-51.4		29	1.4
15	19	28,241	-48.3		27	4.4
10	19	30,940	-43.1		27	11.3
7	6	33,384	-39.1			

MONTERREY, MEXICO 961 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	423	19.3	17.1	13	.7
1000						
950	30	546	20.0	17.0	12	2.1
900	30	1,012	18.6	13.6	13	4.9
850	30	1,503	18.5	6.1	15	5.1
800	30	2,022	17.0	-.5	17	2.6
750	30	2,569	14.0	-7.0	24	1.9
700	30	3,147	10.5	-10.9	27	4.8
650	30	3,759	6.1	-14.1	28	6.5
600	30	4,409	1.1	-17.9	28	9.8
550	30	5,101	-4.6	-20.7	27	12.3
500	30	5,843	-10.1	-26.0	26	14.3
450	30	6,647	-15.5	-31.6	26	14.7
400	30	7,525	-21.7	-38.8	27	18.6
350	30	8,497	-29.0	-43.8	26	21.6
300	30	9,578	-37.6	-50.7	27	24.1
250	30	10,812	-46.7		26	27.6
200	30	12,259	-56.5		26	28.8
175	30	13,098	-61.1		26	29.7
150	30	14,045	-66.0		26	27.3
125	28	15,146	-70.0		26	23.2
100	28	16,460	-74.3		26	18.5
80	27	17,754	-74.9		25	11.1
70	25	18,532	-73.4		25	6.4
60	23	19,445	-68.8		24	2.3
50	23	20,550	-62.8		02	1.1
40	22	21,937	-59.0		07	3.1
30	22	23,758	-54.8		07	2.3
25	22	24,931	-52.5		06	1.1
20	21	26,384	-49.1		26	2.4
15	21	28,283	-46.1		26	6.2
10	16	30,997	-41.0			
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MONETT, MO. 962 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	438	10.4	7.0	17	3.3
1000						
950	28	553	11.0	5.5	18	3.8
900	30	998	11.5	3.5	22	8.3
850	30	1,475	10.0	.1	25	8.7
800	30	1,977	7.6	-3.9	26	8.2
750	30	2,506	4.6	-7.3	28	9.4
700	30	3,065	1.2	-12.1	28	10.6
650	30	3,657	-2.7	-15.3	28	12.0
600	29	4,285	-7.1	-19.4	28	14.3
550	29	4,957	-12.0	-23.9	28	15.9
500	29	5,679	-17.6	-29.4	28	18.3
450	29	6,459	-23.2	-34.2	28	19.3
400	29	7,310	-29.3	-39.1	28	21.8
350	29	8,254	-36.0	-42.5	28	25.1
300	29	9,305	-43.9	-46.0	27	27.9
250	29	10,507	-52.0		27	32.4
200	29	11,930	-58.1		27	37.7
175	28	12,768	-58.2		28	37.0
150	28	13,738	-58.6		27	29.5
125	27	14,880	-61.0		28	24.4
100	26	16,255	-63.3		28	18.6
80	26	17,626	-63.6		28	10.7
70	23	18,441	-62.9		27	7.7
60	21	19,398	-61.0		27	5.2
50	21	20,536	-58.6		30	1.2
40	21	21,944	-57.4		03	1.2
30	20	23,772	-55.1		08	1.8
25	19	24,941	-53.8		06	1.5
20	17	26,387	-51.9		07	.9
15	14	28,278	-48.5		33	2.1
10	9	31,006	-43.5			
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MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	57	13.1	10.7	18	.6
1000	30	148	14.6	10.1	18	1.5
950	30	583	14.4	7.5	22	3.7
900	30	1,039	12.5	2.5	24	4.9
850	30	1,517	10.6	-2.6	25	5.4
800	30	2,020	8.7	-8.1	27	6.1
750	30	2,552	6.6	-13.1	28	6.9
700	30	3,115	3.3	-15.6	28	7.8
650	30	3,712	-.4	-18.2	28	9.5
600	30	4,346	-4.8	-21.7	28	10.9
550	30	5,024	-9.7	-25.7	28	12.7
500	30	5,752	-15.0	-30.9	28	14.9
450	30	6,542	-20.2	-35.3	28	17.5
400	30	7,403	-26.5	-40.0	28	19.8
350	29	8,352	-33.6	-46.1	28	23.1
300	29	9,413	-41.4	-52.3	28	25.6
250	29	10,629	-49.7		28	31.0
200	29	12,064	-57.2		28	34.4
175	29	12,903	-59.5		28	34.2
150	28	13,873	-61.3		28	30.8
125	28	14,996	-64.6		28	25.7
100	28	16,349	-67.1		27	19.1
80	28	17,691	-68.3		28	13.7
70	28	18,495	-66.8		28	9.2
60	28	19,432	-64.0		30	4.4
50	27	20,559	-60.8		33	2.0
40	27	21,958	-57.6		05	2.1
30	27	23,790	-54.4		08	2.2
25	26	24,960	-52.5		08	1.3
20	26	26,412	-49.9		29	1.6
15	24	28,312	-46.4		28	4.4
10	12	31,049	-41.2			
7						

NASHVILLE, TENN. 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	180	10.9	6.7	17	.5
1000	7	202	7.0	-1.4		
950	30	567	11.5	4.2	23	4.2
900	30	1,018	9.5	1.2	25	6.3
850	30	1,491	7.6	-.3	26	7.9
800	30	1,990	5.8	-5.5	27	9.3
750	30	2,516	3.2	-8.8	27	10.5
700	30	3,072	-.2	-13.4	27	12.2
650	30	3,661	-4.1	-17.4	27	14.2
600	30	4,288	-8.0	-22.6	27	15.5
550	30	4,958	-12.6	-26.2	27	17.5
500	30	5,679	-17.4	-30.2	27	19.7
450	30	6,460	-22.9	-36.6	27	21.0
400	30	7,312	-29.3	-42.6	27	22.2
350	30	8,255	-36.1	-45.1	28	24.3
300	30	9,306	-43.8	-48.8	28	26.8
250	30	10,507	-52.3		28	32.6
200	30	11,931	-57.6		28	37.7
175	30	12,773	-58.2		28	36.0
150	30	13,741	-59.6		28	31.6
125	30	14,876	-61.6		28	26.3
100	30	16,250	-63.6		28	19.2
80	30	17,615	-64.5		27	12.3
70	30	18,432	-63.4		28	8.6
60	30	19,381	-62.5		28	5.0
50	30	20,512	-59.9		31	2.7
40	30	21,914	-57.7		35	1.5
30	30	23,740	-55.5		06	2.2
25	30	24,907	-54.1		06	2.0
20	29	26,342	-52.4		01	1.5
15	25	28,222	-49.5		29	2.3
10	17	30,879	-44.8		28	5.6
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1972

* NOME, ALASKA 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-12.9	-17.6	03	2.1
1000	24	100	-10.7	-16.9	06	2.0
950	30	469	-11.0	-16.0	09	1.2
900	30	883	-12.6	-16.8	05	.5
850	30	1,319	-13.5	-17.9	01	.4
800	30	1,778	-15.5	-20.6	32	.7
750	30	2,263	-17.7	-23.1	27	.6
700	30	2,777	-20.8	-26.6	26	1.1
650	30	3,321	-23.8	-30.3	25	1.5
600	30	3,902	-27.5	-33.9	25	2.1
550	30	4,522	-31.4	-37.8	25	2.8
500	30	5,192	-35.4	-41.7	26	2.9
450	30	5,919	-39.9	-44.1	26	4.2
400	30	6,714	-45.2		26	5.5
350	30	7,599	-49.7		26	6.5
300	30	8,597	-52.9		26	7.7
250	30	9,774	-52.3		26	7.8
200	30	11,229	-49.3		25	7.9
175	30	12,105	-49.1		25	8.4
150	30	13,119	-48.5		24	7.4
125	30	14,321	-47.8		24	6.8
100	30	15,796	-47.4		23	6.6
80	30	17,272	-47.3		21	5.2
70	30	18,156	-47.4		20	4.8
60	30	19,173	-48.2		20	4.3
50	30	20,372	-49.1		18	3.4
40	30	21,837	-49.4		15	3.6
30	27	23,721	-50.2		13	3.3
25	27	24,911	-50.5		13	4.1
20	27	26,367	-50.0		12	5.1
15	24	28,260	-49.1		11	5.8
10	15	30,914	-47.3			

NORTH PLATTE, NEBR. 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	847	2.2	-1.4	05	1.0
1000						
950						
900	30	978	4.1	-1.9	01	1.3
850	30	1,445	4.9	-2.2	32	2.4
800	30	1,939	3.7	-4.6	31	3.7
750	30	2,462	1.9	-8.4	30	5.7
700	30	3,016	-.9	-12.6	29	7.6
650	30	3,603	-4.9	-15.7	28	9.2
600	30	4,227	-9.5	-19.4	27	11.1
550	30	4,893	-14.3	-24.6	27	12.8
500	30	5,609	-19.4	-30.6	27	14.8
450	30	6,383	-25.0	-36.5	27	16.4
400	30	7,228	-31.8	-43.1	27	18.1
350	30	8,161	-39.1	-48.5	27	20.5
300	30	9,197	-46.6		27	25.0
250	30	10,388	-53.8		27	27.4
200	30	11,805	-56.9		27	27.5
175	30	12,651	-56.6		27	26.9
150	30	13,629	-56.9		27	26.2
125	30	14,780	-58.0		27	22.3
100	30	16,184	-58.9		27	15.8
80	30	17,581	-60.3		27	10.3
70	29	18,416	-59.6		27	6.3
60	29	19,382	-58.9		27	3.5
50	29	20,532	-56.7		29	1.2
40	28	21,949	-55.9		36	.7
30	28	23,786	-54.3		07	1.8
25	27	24,960	-53.2		08	2.3
20	25	26,404	-51.8		08	2.3
15	22	28,284	-48.6		08	1.5
10	5	30,926	-46.1			

OAKLAND, CALIF. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	10.1	6.5	30	.5
1000	30	149	10.4	4.3	30	1.0
950	30	575	9.2	-.5	32	2.7
900	30	1,023	8.0	-7.6	31	3.1
850	30	1,492	5.9	-11.1	29	3.4
800	30	1,986	3.9	-15.7	28	4.1
750	30	2,508	1.2	-19.0	27	5.1
700	30	3,059	-2.3	-21.1	28	6.6
650	30	3,644	-5.4	-25.4	28	8.7
600	30	4,268	-8.9	-28.1	28	10.5
550	30	4,936	-13.5	-30.2	28	11.8
500	30	5,654	-18.6	-33.8	27	13.4
450	30	6,431	-24.3	-38.1	28	15.5
400	30	7,279	-30.6	-43.0	28	18.0
350	30	8,217	-37.7	-49.3	27	20.4
300	30	9,258	-46.1		27	23.5
250	30	10,449	-54.3		28	27.3
200	30	11,854	-61.0		27	27.8
175	30	12,685	-60.2		27	25.7
150	30	13,648	-59.5		27	22.5
125	30	14,787	-60.3		26	19.8
100	30	16,173	-62.1		26	14.3
80	30	17,556	-60.9		26	11.4
70	30	18,387	-60.4		25	9.2
60	30	19,351	-59.4		25	6.3
50	29	20,492	-58.5		25	3.7
40	29	21,899	-57.3		26	1.3
30	29	23,723	-56.2		07	.3
25	27	24,883	-55.2		02	.6
20	25	26,310	-54.2		01	.7
15	23	28,180	-51.2		35	1.7
10	14	30,839	-46.9			

OMAHA, NEBR. 966 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	4.9	2.1	08	1.4
1000						
950	30	534	5.9	1.5	10	1.1
900	30	978	5.6	-.9	23	.7
850	30	1,445	4.8	-2.7	26	2.8
800	30	1,939	3.4	-5.9	27	5.0
750	30	2,461	1.3	-10.0	27	7.0
700	30	3,013	-1.9	-14.8	27	10.0
650	30	3,598	-5.8	-16.8	28	11.6
600	30	4,221	-10.0	-20.0	27	13.6
550	30	4,886	-14.7	-25.7	27	15.1
500	30	5,600	-20.0	-31.6	27	17.4
450	30	6,373	-25.4	-38.2	27	18.6
400	30	7,217	-31.8	-44.1	27	20.3
350	30	8,149	-38.9	-49.2	27	22.6
300	30	9,187	-46.8		27	25.1
250	30	10,376	-53.8		27	28.7
200	30	11,798	-56.8		27	30.1
175	30	12,646	-55.9		27	28.6
150	30	13,627	-56.0		27	26.4
125	30	14,781	-58.0		27	22.8
100	30	16,185	-59.0		27	16.8
80	30	17,584	-59.4		27	10.5
70	30	18,419	-59.8		27	7.1
60	30	19,384	-58.7		28	4.9
50	30	20,533	-57.1		29	2.6
40	29	21,951	-56.0		02	.7
30	29	23,785	-54.9		07	1.4
25	29	24,953	-54.2		06	1.5
20	28	26,391	-52.7		05	1.5
15	28	28,260	-50.0		08	1.3
10	16	30,934	-45.0		36	2.2

+ PAGO PAGO, AMERICAN SAMOA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	29.5	24.8	08	3.8
1000	30	98	27.6	21.5	08	3.9
950	30	552	24.0	19.2	07	5.3
900	30	1,024	20.6	15.6	07	5.5
850	30	1,516	17.9	11.5	07	5.7
800	30	2,034	15.6	7.8	07	4.9
750	30	2,580	13.0	3.5	06	4.5
700	30	3,157	9.9	-.3	06	4.4
650	30	3,770	6.7	-5.8	07	4.0
600	30	4,423	3.1	-11.0	06	4.2
550	30	5,123	-1.0	-16.0	06	4.0
500	30	5,877	-5.5	-21.3	06	4.2
450	30	6,696	-10.4	-25.6	06	4.1
400	30	7,593	-16.3	-32.2	06	3.2
350	30	8,588	-23.0	-38.8	06	2.2
300	30	9,695	-31.5	-46.7	08	1.3
250	30	10,958	-41.6		17	1.0
200	30	12,432	-53.8		19	1.9
175	30	13,277	-60.2		19	2.3
150	30	14,223	-67.3		18	3.7
125	30	15,303	-74.6		16	2.9
100	30	16,579	-80.3		12	2.3
80	29	17,848	-76.9		08	2.1
70	28	18,625	-72.6		08	3.1
60	28	19,540	-68.7		08	5.1
50	27	20,642	-64.2		08	5.9
40	27	22,021	-60.1		08	7.5
30	25	23,836	-55.1		09	10.8
25	25	25,009	-51.6		09	14.0
20	23	26,473	-47.9		09	17.4
15	18	28,391	-44.3		09	22.8
10	9	31,145	-38.9			

* PEORIA, ILL. 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	4.9	1.0	12	1.1
1000	7	219	1.7	-5.3		
950	30	548	6.2	-.7	20	.9
900	30	991	6.1	-3.8	25	3.8
850	30	1,459	4.4	-7.5	27	5.3
800	30	1,951	2.3	-9.8	28	6.7
750	30	2,470	.0	-11.3	28	8.9
700	30	3,020	-2.9	-16.1	28	10.5
650	30	3,604	-6.3	-19.8	28	12.3
600	30	4,225	-10.4	-23.6	28	14.0
550	30	4,889	-14.7	-28.1	28	16.2
500	30	5,604	-19.9	-33.0	28	17.7
450	30	6,377	-25.5	-38.7	28	19.5
400	30	7,221	-31.8	-44.2	28	21.6
350	30	8,154	-38.7	-47.1	28	24.6
300	30	9,193	-46.1		27	26.8
250	30	10,386	-53.0		27	31.5
200	30	11,808	-57.4		27	34.6
175	30	12,654	-56.6		28	31.4
150	29	13,627	-56.7		28	28.4
125	29	14,779	-57.8		28	23.1
100	29	16,179	-60.1		28	16.4
80	27	17,578	-60.8		28	10.3
70	27	18,409	-60.4		28	7.4
60	27	19,372	-59.4		28	4.5
50	27	20,519	-57.6		29	2.0
40	26	21,933	-56.4		02	.5
30	26	23,767	-54.7		06	1.7
25	25	24,935	-53.9		07	1.9
20	24	26,373	-52.7		07	2.8
15	22	28,237	-50.3		07	2.6
10	19	30,921	-45.2		06	1.0
7	14	33,321	-40.2		26	1.9
5	6	35,649	-35.7			

* PITTSBURGH, PA. 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	5.0	-.3	25	.6
1000						
950	30	554	5.4	-1.1	25	2.7
900	30	995	3.4	-3.7	26	6.1
850	30	1,457	1.7	-7.4	27	7.7
800	30	1,944	-.7	-9.5	28	9.6
750	30	2,458	-3.1	-12.0	28	11.9
700	30	3,001	-6.3	-15.7	29	13.9
650	30	3,578	-8.9	-18.9	29	16.0
600	30	4,194	-12.3	-22.0	28	18.2
550	30	4,854	-16.4	-26.1	28	20.5
500	30	5,565	-20.9	-32.0	28	22.0
450	30	6,335	-26.4	-37.0	28	24.4
400	30	7,176	-32.5	-43.1	28	25.9
350	30	8,106	-39.3	-45.4	28	28.2
300	30	9,142	-46.4		28	29.1
250	28	10,328	-52.9		28	32.3
200	28	11,755	-56.1		28	33.2
175	28	12,605	-55.6		28	30.7
150	28	13,588	-55.6		28	25.8
125	28	14,746	-57.0		28	22.6
100	28	16,152	-58.8		28	15.2
80	28	17,546	-60.4		28	10.3
70	28	18,379	-60.2		28	7.8
60	28	19,343	-59.2		28	4.9
50	28	20,489	-57.7		31	1.9
40	28	21,902	-56.6		05	1.6
30	27	23,730	-55.5		06	2.0
25	27	24,895	-54.6		06	2.3
20	27	26,328	-53.2		06	3.2
15	25	28,194	-51.0		07	2.3
10	18	30,878	-45.5		10	.5
7	9	33,347	-38.6			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	28.0	24.3	07	2.6
1000	30	82	26.7	21.3	07	2.8
950	30	534	23.3	18.7	09	4.8
900	30	1,005	20.1	15.5	09	5.2
850	30	1,496	17.4	11.6	10	4.5
800	30	2,013	15.4	7.9	10	3.1
750	30	2,559	12.6	3.7	10	2.4
700	30	3,135	9.4	-.4	10	2.1
650	30	3,747	6.1	-4.0	10	2.2
600	30	4,399	2.6	-7.4	09	1.5
550	30	5,098	-1.2	-12.0	07	1.3
500	30	5,853	-5.3	-18.7	07	1.2
450	30	6,673	-9.7	-24.0	05	1.7
400	30	7,573	-15.2	-30.9	34	1.4
350	30	8,573	-21.9	-37.0	31	1.8
300	30	9,685	-30.2	-44.6	23	2.7
250	30	10,955	-40.6	-53.2	20	4.1
200	30	12,434	-53.3		19	5.6
175	30	13,280	-60.4		19	6.1
150	30	14,223	-67.9		20	4.0
125	30	15,299	-75.4		26	.8
100	30	16,572	-80.1		36	1.1
80	30	17,839	-77.0		27	5.4
70	30	18,614	-72.9		27	9.3
60	29	19,529	-69.0		27	11.4
50	29	20,632	-64.4		27	11.2
40	29	22,010	-60.7		27	8.8
30	28	23,818	-56.5		09	3.3
25	27	24,982	-54.0		09	12.0
20	27	26,425	-50.8		09	19.4
15	26	28,318	-46.3		09	25.3
10	20	31,042	-39.8		09	29.6

PORTLAND, MAINE 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	1.3	-4.0	31	2.6
1000	29	129	2.0	-4.8	32	3.2
950	30	537	.5	-7.6	34	5.1
900	30	969	-1.9	-9.4	33	5.1
850	30	1,422	-4.2	-13.1	32	6.0
800	30	1,898	-6.2	-17.7	31	7.8
750	30	2,401	-8.3	-21.0	30	10.0
700	30	2,934	-11.0	-22.4	29	11.8
650	30	3,500	-13.5	-25.1	29	14.1
600	30	4,105	-16.9	-27.8	28	17.3
550	30	4,754	-20.7	-31.5	28	20.2
500	30	5,453	-25.0	-35.9	28	22.6
450	30	6,211	-29.9	-40.7	28	24.6
400	30	7,040	-35.7	-46.0	28	26.8
350	30	7,961	-41.2	-48.0	28	32.5
300	30	8,993	-46.9		28	33.8
250	30	10,190	-50.8		27	29.5
200	30	11,637	-52.0		28	25.9
175	30	12,502	-51.7		27	22.6
150	30	13,504	-51.3		27	19.4
125	30	14,685	-52.8		27	16.4
100	30	16,120	-54.7		27	12.2
80	30	17,545	-55.7		27	8.2
70	30	18,394	-56.3		27	5.7
60	30	19,374	-56.1		26	2.8
50	30	20,535	-55.2		19	.8
40	29	21,963	-54.9		07	1.5
30	28	23,805	-54.4		09	4.6
25	26	24,977	-53.8		09	4.6
20	26	26,415	-52.6		09	4.6
15	23	28,280	-50.1		09	4.5
10	17	30,962	-46.1			

* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	3.5	2.1	14	.7
1000	26	154	3.9	1.4	20	.8
950	30	549	2.5	-.2	19	4.5
900	30	984	-.3	-2.8	21	6.6
850	30	1,440	-3.0	-6.6	22	6.7
800	30	1,918	-5.3	-11.8	23	7.4
750	30	2,422	-8.2	-17.5	23	8.6
700	30	2,954	-11.5	-21.7	24	9.7
650	30	3,519	-14.7	-25.1	24	10.5
600	30	4,121	-18.3	-28.4	25	11.7
550	30	4,766	-22.4	-31.8	25	12.9
500	30	5,459	-27.3	-35.7	25	13.8
450	30	6,210	-32.2	-39.0	25	15.1
400	30	7,032	-37.8	-42.5	26	16.1
350	30	7,944	-43.6	-45.8	26	16.9
300	30	8,964	-49.4		27	19.2
250	30	10,147	-54.2		27	20.3
200	30	11,570	-55.7		27	18.6
175	30	12,423	-54.7		26	17.0
150	30	13,410	-54.0		26	16.6
125	30	14,581	-54.1		26	13.1
100	30	16,011	-54.6		26	9.3
80	29	17,437	-54.8		25	7.4
70	29	18,293	-54.5		24	5.8
60	28	19,283	-54.1		23	4.1
50	28	20,454	-53.9		23	2.3
40	27	21,886	-54.1		18	1.3
30	23	23,734	-54.2		12	1.7
25	22	24,903	-53.9		09	2.4
20	21	26,338	-53.2		08	3.9
15	18	28,207	-51.5		04	4.8
10	11	30,864	-47.4			
7	5	33,251	-43.5			

RAPID CITY, S. DAK. 902 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	1.9	-1.6	35	1.5
1000						
950						
900	19	1,013	1.7	-2.4	35	1.3
850	30	1,445	3.9	-3.5	30	2.3
800	30	1,936	1.4	-6.2	30	3.2
750	30	2,453	-1.4	-8.6	30	4.9
700	30	3,000	-4.6	-12.6	29	5.8
650	30	3,580	-8.0	-16.7	29	7.8
600	30	4,197	-12.0	-21.7	28	9.9
550	30	4,857	-16.5	-25.7	28	11.9
500	30	5,566	-21.6	-30.5	28	13.8
450	30	6,335	-27.0	-36.1	27	15.8
400	30	7,173	-33.4	-42.4	28	16.9
350	30	8,099	-40.9	-45.3	27	18.3
300	30	9,126	-49.1		27	20.9
250	30	10,303	-56.4		28	23.8
200	29	11,708	-57.8		27	24.0
175	29	12,553	-56.8		27	21.9
150	29	13,532	-56.2		27	20.1
125	28	14,685	-57.0		26	17.9
100	28	16,097	-57.1		26	14.5
80	28	17,506	-57.9		27	9.3
70	28	18,347	-58.2		27	6.6
60	28	19,317	-58.1		27	4.1
50	28	20,469	-56.9		28	1.7
40	28	21,886	-55.9		03	.6
30	26	23,717	-55.2		06	1.4
25	26	24,883	-54.7		09	1.8
20	24	26,314	-53.4		08	3.3
15	22	28,177	-51.0		08	3.7
10	15	30,846	-46.5		06	2.4
7	7	33,291	-40.3			

ST CLOUD, MINN. 979 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	.1	-3.4	05	1.1
1000						
950	30	559	1.6	-3.7	11	1.5
900	30	994	.4	-6.9	05	.7
850	30	1,452	-.9	-9.6	28	.7
800	30	1,934	-2.7	-12.5	29	2.8
750	30	2,444	-4.8	-13.8	30	4.5
700	30	2,984	-7.1	-15.1	29	5.9
650	30	3,559	-10.1	-18.3	28	7.5
600	30	4,173	-13.5	-21.5	28	9.5
550	30	4,829	-17.8	-26.2	28	11.5
500	30	5,536	-22.6	-32.0	28	12.8
450	30	6,300	-28.2	-36.8	28	14.1
400	30	7,134	-34.8	-42.5	28	15.6
350	30	8,056	-41.9	-47.3	28	16.2
300	30	9,081	-48.9		28	19.1
250	30	10,261	-54.7		28	21.5
200	30	11,680	-55.9		27	22.1
175	30	12,532	-54.8		27	20.2
150	30	13,519	-54.5		27	18.1
125	30	14,686	-55.0		27	16.5
100	30	16,110	-56.0		27	12.2
80	30	17,528	-56.8		27	8.4
70	30	18,373	-57.2		28	5.3
60	30	19,349	-57.1		28	3.6
50	30	20,506	-55.8		30	1.9
40	30	21,929	-55.1		07	.6
30	29	23,771	-54.5		09	3.0
25	29	24,940	-54.1		09	2.8
20	27	26,374	-53.0		09	4.9
15	26	28,236	-50.9		08	4.8
10	17	30,913	-46.4		09	6.5

* ST PAUL IS., ALASKA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	-4.0	-5.3	29	3.3
1000	28	125	-4.5	-6.4	29	4.6
950	30	514	-6.4	-8.0	28	7.0
900	30	935	-8.1	-11.0	28	8.0
850	30	1,378	-9.7	-14.2	28	9.5
800	30	1,845	-11.5	-15.9	28	10.9
750	30	2,337	-13.7	-18.7	28	11.4
700	30	2,859	-16.2	-22.6	28	12.8
650	30	3,415	-19.0	-24.4	28	13.7
600	30	4,007	-22.3	-28.1	28	13.7
550	30	4,642	-25.8	-32.3	28	14.8
500	30	5,327	-29.5	-36.1	28	17.7
450	30	6,072	-34.4	-39.3	28	18.4
400	30	6,887	-39.7	-40.3	28	21.1
350	30	7,791	-45.3	-40.9	27	21.6
300	30	8,805	-50.4		26	22.3
250	30	9,987	-53.0		26	22.0
200	30	11,424	-53.1		26	19.5
175	30	12,285	-52.2		26	17.9
150	30	13,284	-52.1		26	16.2
125	30	14,466	-51.5		26	13.7
100	30	15,915	-51.4		26	10.9
80	30	17,364	-51.3		25	8.2
70	30	18,233	-51.2		24	6.9
60	30	19,236	-50.9		24	5.7
50	29	20,427	-51.2		21	4.3
40	29	21,876	-51.7		18	2.7
30	29	23,742	-51.7		16	2.5
25	28	24,926	-51.8		14	2.9
20	26	26,376	-51.2		10	3.6
15	26	28,251	-50.2		10	4.3
10	19	30,902	-47.9		09	5.4
7	8	33,331	-44.2			

SALEM, ILL. 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	8.5	5.7	14	1.0
1000	9	198	4.1	-1.9		
950	30	550	10.3	1.8	22	2.6
900	30	999	8.7	-2.4	26	4.3
850	30	1,471	6.9	-5.4	27	6.2
800	30	1,967	4.6	-9.1	28	7.7
750	30	2,491	1.8	-11.7	28	9.3
700	30	3,044	-1.3	-16.2	28	10.9
650	30	3,631	-5.1	-19.3	28	12.6
600	30	4,255	-9.3	-23.1	28	14.4
550	30	4,922	-13.8	-27.7	28	16.4
500	30	5,639	-18.6	-33.1	28	18.8
450	30	6,417	-23.8	-39.6	28	19.9
400	30	7,266	-30.3	-44.9	28	23.1
350	30	8,206	-37.0	-47.3	27	24.4
300	30	9,252	-44.5	-48.8	28	28.2
250	30	10,451	-52.8		28	33.2
200	30	11,873	-57.3		28	35.4
175	30	12,717	-57.6		28	32.1
150	30	13,691	-57.8		28	25.5
125	30	14,836	-59.8		28	22.6
100	30	16,224	-61.4		27	14.9
80	30	17,607	-61.9		27	11.1
70	30	18,434	-61.5		27	7.9
60	30	19,391	-60.7		28	5.3
50	30	20,531	-58.4		29	2.6
40	30	21,942	-56.7		02	1.0
30	29	23,772	-54.9		04	1.7
25	29	24,940	-54.0		06	2.3
20	28	26,373	-52.6		08	2.6
15	26	28,240	-50.1		29	1.3
10	19	30,922	-45.0		29	3.3
7	7	33,259	-42.6			

SALEM, OREG. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	3.9	1.3	19	2.0
1000	28	168	5.1	2.4	21	1.8
950	30	575	3.6	.5	23	3.2
900	30	1,012	1.2	-2.3	24	5.1
850	30	1,470	-1.5	-6.2	24	6.9
800	30	1,951	-3.9	-10.8	24	8.2
750	30	2,458	-6.7	-16.4	25	8.8
700	30	2,994	-9.5	-21.2	26	9.5
650	30	3,563	-13.1	-25.7	26	11.1
600	30	4,169	-16.7	-29.4	26	12.3
550	30	4,817	-20.7	-34.3	26	14.4
500	30	5,517	-24.7	-38.8	27	16.3
450	30	6,276	-29.6	-41.0	27	18.6
400	30	7,106	-35.7	-45.7	27	20.4
350	30	8,025	-42.1	-49.1	27	21.4
300	30	9,050	-48.9		26	23.9
250	30	10,232	-54.5		27	22.8
200	30	11,650	-57.0		27	21.1
175	30	12,497	-56.4		26	20.4
150	30	13,478	-55.6		27	17.3
125	30	14,638	-56.3		26	16.4
100	30	16,055	-56.2		25	12.9
80	28	17,467	-55.9		25	9.0
70	28	18,317	-55.9		24	7.7
60	28	19,299	-55.3		24	5.8
50	28	20,463	-55.4		23	3.2
40	27	21,885	-55.2		21	1.5
30	25	23,724	-54.9		11	1.8
25	25	24,890	-54.7		10	1.8
20	23	26,324	-53.6		09	2.8
15	21	28,189	-51.6		07	2.9
10	10	30,864	-47.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

[illegible]

SALT LAKE CITY, UTAH
869 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	4.9	-.9	15	1.3
1000						
950						
900						
850	30	1,470	6.7	-3.9	18	.9
800	30	1,966	4.0	-7.4	25	1.8
750	30	2,487	.5	-9.5	26	3.3
700	30	3,037	-3.5	-12.8	27	4.5
650	30	3,619	-7.4	-15.9	26	6.5
600	30	4,238	-11.5	-21.0	26	8.6
550	30	4,900	-15.8	-24.5	25	11.5
500	30	5,611	-20.7	-31.0	26	12.4
450	30	6,382	-26.3	-36.6	26	13.4
400	30	7,223	-32.4	-42.0	26	16.1
350	30	8,153	-39.8	-45.0	26	18.0
300	30	9,187	-47.3		26	21.8
250	30	10,373	-54.5		26	23.8
200	30	11,785	-58.8		26	24.9
175	30	12,625	-58.1		26	25.3
150	30	13,599	-57.2		26	22.7
125	29	14,752	-57.9		26	18.6
100	28	16,149	-59.6		26	14.5
80	28	17,545	-59.7		25	10.2
70	28	18,383	-58.6		25	7.8
60	28	19,350	-59.2		25	4.4
50	28	20,495	-58.2		26	2.1
40	27	21,905	-56.6		28	.8
30	25	23,735	-55.3		07	1.1
25	25	24,900	-54.5		09	1.3
20	24	26,335	-52.7		07	2.4
15	23	28,205	-50.2		07	3.1
10	23	30,881	-45.7		17	.8
7	7	33,276	-41.7			
5						
4						

SAN DIEGO, CALIF.
1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	124	11.5	9.2	01	.2
1000	20	133	11.8	7.8	35	.9
950	29	557	12.8	3.1	31	1.3
900	29	1,011	13.1	-4.4	30	2.9
850	29	1,489	11.0	-6.5	29	4.9
800	29	1,993	8.5	-10.9	28	5.9
750	29	2,523	6.1	-13.1	27	6.5
700	29	3,085	2.8	-16.6	27	8.1
650	29	3,681	-.3	-20.2	27	10.0
600	29	4,317	-4.4	-23.3	27	11.7
550	29	4,996	-9.1	-26.7	27	13.9
500	29	5,726	-14.1	-30.7	26	15.3
450	29	6,517	-19.9	-35.5	26	16.9
400	29	7,379	-26.6	-40.2	26	19.9
350	29	8,331	-34.2	-44.9	26	22.0
300	29	9,389	-42.5	-46.6	26	24.4
250	29	10,595	-52.1		26	27.0
200	29	12,009	-60.8		25	31.5
175	29	12,837	-62.1		25	33.9
150	29	13,791	-61.8		25	30.3
125	29	14,915	-63.6		25	27.7
100	29	16,275	-66.4		25	20.7
80	29	17,630	-65.2		25	14.3
70	29	18,448	-63.7		25	9.5
60	28	19,394	-63.3		26	6.3
50	28	20,521	-61.1		27	2.8
40	28	21,917	-58.1		33	.9
30	28	23,738	-56.2		02	.4
25	28	24,901	-54.6		29	.7
20	27	26,338	-52.1		27	1.1
15	26	28,215	-48.8		27	4.6
10	23	30,921	-43.2		27	11.7
7	7	33,341	-38.4			
5						
4						

SAN JUAN, P. R.
1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	24.3	19.3	11	2.5
1000	30	143	23.5	18.3	09	4.7
950	30	590	20.1	16.0	09	7.0
900	30	1,054	17.0	11.9	09	7.1
850	30	1,540	13.8	7.1	09	6.6
800	30	2,050	12.1	-.3	09	5.8
750	30	2,588	9.7	-5.6	08	5.1
700	30	3,158	7.3	-12.4	07	3.6
650	30	3,764	4.0	-16.0	06	2.3
600	30	4,411	.7	-20.5	03	1.2
550	30	5,103	-3.7	-24.5	33	1.2
500	30	5,849	-8.4	-28.6	30	1.9
450	30	6,659	-13.6	-32.9	28	4.5
400	30	7,543	-19.8	-38.8	28	7.8
350	30	8,524	-26.7	-44.2	28	11.8
300	30	9,616	-34.4	-50.0	27	18.5
250	30	10,868	-43.4		27	24.3
200	29	12,335	-53.8		27	24.1
175	29	13,182	-59.9		27	24.0
150	29	14,129	-66.6		27	22.2
125	29	15,217	-72.4		28	16.4
100	29	16,511	-77.3		29	10.1
80	29	17,787	-77.6		31	6.3
70	29	18,556	-75.2		32	3.7
60	29	19,463	-69.5		34	1.5
50	29	20,571	-62.7		04	2.5
40	27	21,961	-57.6		07	4.2
30	24	23,798	-52.0		10	4.3
25	24	24,985	-49.6		10	5.0
20	24	26,457	-46.9		11	5.8
15	24	28,381	-43.3		10	8.4
10	16	31,139	-38.2			
7						
5						
4						

* SAULT STE MARIE, MICH.
990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	-2.0	-7.3	07	1.3
1000	6	227	-3.5	-13.2		
950	30	550	-1.3	-9.1	05	2.3
900	30	980	-2.5	-11.8	03	2.0
850	30	1,432	-4.4	-13.8	36	2.6
800	30	1,908	-6.4	-15.8	33	3.6
750	30	2,411	-8.5	-19.3	32	4.7
700	30	2,944	-10.9	-22.4	31	6.3
650	30	3,511	-13.3	-23.2	30	8.8
600	30	4,116	-16.3	-27.0	30	11.6
550	30	4,767	-19.9	-31.6	30	14.1
500	30	5,467	-24.6	-36.1	29	17.6
450	30	6,226	-29.8	-41.4	30	19.3
400	30	7,056	-35.6	-45.7	30	22.0
350	30	7,975	-42.0	-47.2	30	26.0
300	30	9,003	-47.8		29	28.4
250	30	10,192	-52.8		29	27.8
200	30	11,629	-53.5		28	25.4
175	30	12,490	-52.7		28	23.0
150	30	13,488	-52.2		28	20.5
125	30	14,666	-52.9		28	17.3
100	29	16,107	-53.4		28	12.8
80	28	17,536	-54.9		29	8.6
70	28	18,389	-55.5		29	5.8
60	27	19,371	-55.1		30	3.3
50	25	20,538	-54.3		31	1.4
40	25	21,970	-53.9		06	1.3
30	25	23,818	-53.7		07	3.5
25	25	24,992	-53.0		09	4.9
20	24	26,432	-51.7		08	5.7
15	23	28,311	-49.7		08	6.6
10	23	30,990	-45.3		08	6.6
7	22	33,397	-40.7		08	4.8
5	13	35,707	-36.3			
4	5	37,406	-31.6			

* SHEMYA, ALASKA
1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	1.9	.4	26	3.8
1000	28	153	.5	-1.2	26	3.7
950	29	557	-2.0	-3.0	25	6.2
900	29	986	-3.2	-6.1	26	6.9
850	29	1,437	-4.6	-8.7	27	7.1
800	29	1,913	-6.4	-12.0	27	8.5
750	29	2,416	-8.6	-14.7	27	9.6
700	29	2,949	-11.1	-17.0	27	10.9
650	29	3,516	-13.7	-20.7	27	13.2
600	29	4,121	-16.7	-24.9	27	14.4
550	29	4,770	-20.5	-28.3	27	15.9
500	29	5,469	-25.2	-33.1	27	17.1
450	29	6,226	-30.4	-39.2	27	18.7
400	29	7,054	-36.3	-43.4	28	19.1
350	29	7,970	-43.1	-44.7	27	21.4
300	29	8,989	-50.1		27	23.5
250	29	10,162	-56.6		26	23.0
200	28	11,569	-59.5		26	21.9
175	28	12,407	-58.3		26	20.2
150	28	13,381	-56.6		26	20.0
125	28	14,537	-56.8		26	18.1
100	28	15,952	-56.3		26	15.3
80	28	17,372	-55.6		25	12.9
70	28	18,224	-55.2		25	11.7
60	27	19,205	-54.7		25	8.1
50	27	20,373	-54.2		24	7.0
40	26	21,811	-53.9		22	5.1
30	25	23,660	-53.7		22	1.8
25	24	24,836	-53.5		17	1.5
20	21	26,273	-52.9		11	2.3
15	19	28,129	-51.1		11	3.0
10	12	30,831	-46.3		08	5.1
7	8	33,263	-42.2			
5						
4						

* SHREVEPORT, LA.
1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	14.5	12.3	14	1.1
1000	26	139	14.6	10.8	12	1.3
950	30	561	15.2	8.2	18	5.1
900	30	1,019	14.7	2.3	21	6.8
850	30	1,501	13.5	-3.7	23	7.5
800	30	2,010	11.4	-9.2	25	7.3
750	30	2,546	8.4	-12.8	26	7.7
700	30	3,111	4.5	-16.3	27	8.5
650	30	3,710	.6	-19.7	27	10.0
600	30	4,347	-4.0	-22.1	27	12.1
550	30	5,027	-9.0	-26.3	27	13.8
500	30	5,757	-14.4	-32.1	27	15.8
450	30	6,547	-19.9	-35.9	27	17.7
400	30	7,410	-26.1	-39.8	27	21.2
350	30	8,365	-33.3	-44.4	27	24.0
300	30	9,427	-41.4	-50.0	27	27.9
250	30	10,642	-49.6		27	32.4
200	29	12,071	-57.5		27	35.8
175	29	12,908	-60.3		27	35.0
150	29	13,864	-62.3		27	31.3
125	29	14,983	-65.0		27	28.9
100	26	16,326	-67.4		27	21.7
80	25	17,660	-68.3		27	14.9
70	25	18,465	-66.6		27	10.9
60	25	19,403	-64.2		28	5.3
50	25	20,528	-61.0		28	2.1
40	25	21,927	-57.7		05	2.5
30	24	23,755	-54.9		06	1.8
25	24	24,924	-53.6		04	1.5
20	24	26,366	-51.4		32	.9
15	22	28,248	-47.8		28	4.0
10	20	30,948	-42.9		27	10.8
7	6	33,335	-37.9			

SPOKANE, WASH.
930 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	1.9	-3.3	20	3.2
1000						
950						
900	30	984	2.9	-4.6	22	5.7
850	30	1,446	.8	-8.4	23	7.3
800	30	1,930	-2.3	-11.3	23	7.4
750	30	2,439	-5.9	-13.3	24	7.3
700	30	2,976	-9.2	-16.8	25	7.9
650	30	3,546	-12.9	-21.0	25	8.4
600	30	4,151	-17.1	-24.7	25	9.7
550	30	4,798	-21.4	-29.7	25	11.7
500	30	5,495	-26.1	-34.9	25	13.3
450	30	6,249	-31.3	-39.5	25	14.8
400	30	7,074	-37.1	-44.7	25	16.3
350	30	7,988	-43.0	-46.1	26	18.7
300	30	9,009	-49.6		26	20.5
250	29	10,177	-54.8		26	20.9
200	29	11,601	-55.4		26	19.5
175	29	12,454	-54.3		26	17.2
150	28	13,446	-53.7		26	14.2
125	28	14,616	-54.5		26	12.0
100	28	16,047	-54.3		25	11.1
80	28	17,477	-54.2		24	7.3
70	28	18,333	-54.5		25	5.8
60	28	19,321	-54.7		25	4.1
50	28	20,487	-54.6		23	2.3
40	28	21,917	-54.4		16	.7
30	25	23,759	-54.0		10	2.1
25	23	24,931	-53.6		09	3.4
20	22	26,371	-52.7		09	4.5
15	15	28,241	-50.2		09	6.0
10	8	30,927	-45.9			
7						

* SWAN ISLAND, W. I.
1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	10	25.9	22.2	10	5.0
1000	29	115	25.7	22.4	10	5.5
950	29	565	22.0	19.5	10	7.4
900	29	1,034	19.2	14.3	11	7.5
850	29	1,524	16.3	9.3	11	6.9
800	29	2,038	13.4	4.9	11	5.9
750	29	2,579	10.3	-1.0	11	4.8
700	29	3,150	8.2	-9.4	10	3.5
650	29	3,759	5.3	-14.4	08	2.3
600	29	4,408	1.8	-19.4	06	1.4
550	29	5,105	-1.9	-23.1	36	2.2
500	29	5,856	-6.2	-27.4	35	2.9
450	29	6,672	-11.9	-31.7	34	4.4
400	29	7,562	-18.3	-36.7	32	6.5
350	29	8,548	-25.6	-42.2	31	8.3
300	29	9,644	-33.8	-48.7	30	10.5
250	29	10,898	-43.1		29	11.8
200	29	12,367	-53.7		28	13.5
175	28	13,213	-59.6		28	13.1
150	28	14,162	-66.3		28	10.9
125	27	15,249	-73.2		28	8.9
100	27	16,536	-78.1		30	5.2
80	27	17,806	-78.8		31	3.1
70	27	18,571	-75.9		31	1.8
60	27	19,473	-71.1		31	1.1
50	27	20,573	-63.7		36	1.3
40	26	21,965	-58.1		06	2.6
30	24	23,805	-52.0		08	3.1
25	24	24,992	-49.9		10	4.2
20	24	26,459	-47.6		10	5.9
15	19	28,367	-44.5		09	8.2
10	15	31,118	-38.6			
7						

TAMPA, FLA.
1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	■	17.7	15.7	08	1.1
1000	30	154	19.1	15.3	10	1.9
950	30	594	17.2	9.8	14	1.7
900	30	1,054	14.9	4.1	22	2.0
850	30	1,536	12.7	-3.6	25	3.2
800	30	2,043	10.9	-9.8	26	4.3
750	30	2,578	8.0	-12.5	27	4.6
700	30	3,143	4.6	-15.8	28	5.3
650	30	3,744	1.6	-20.5	28	6.3
600	30	4,384	-2.2	-23.8	28	7.6
550	30	5,069	-6.7	-27.0	27	9.1
500	30	5,806	-11.5	-29.6	28	10.5
450	30	6,606	-17.1	-34.7	28	13.2
400	30	7,478	-23.6	-38.6	28	14.2
350	30	8,443	-30.9	-45.5	28	16.9
300	30	9,516	-39.1	-50.8	29	19.5
250	30	10,741	-48.1		29	23.2
200	30	12,184	-56.3		29	26.2
175	30	13,025	-59.5		29	26.3
150	30	13,983	-62.9		28	24.5
125	30	15,093	-67.5		28	22.0
100	30	16,422	-71.8		28	18.7
80	30	17,736	-72.0		28	11.1
70	30	18,526	-70.2		29	7.7
60	30	19,448	-67.4		32	2.7
50	30	20,561	-62.2		03	1.5
40	30	21,952	-58.8		05	3.1
30	29	23,780	-54.3		13	1.0
25	29	24,953	-52.4		26	.9
20	27	26,410	-48.7		27	2.9
15	25	28,319	-44.8		27	7.5
10	17	31,060	-40.3		27	14.8
7						

TOPEKA, KANS.
981 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	8.3	4.6	07	1.0
1000						
950	30	535	9.4	3.1	18	1.9
900	30	984	9.2	1.7	22	4.2
850	30	1,457	8.4	-2.4	25	5.9
800	30	1,957	6.4	-5.1	26	7.7
750	30	2,483	3.2	-8.2	26	8.9
700	30	3,039	-.5	-12.2	27	10.0
650	30	3,627	-4.4	-15.6	27	11.9
600	30	4,253	-8.7	-20.9	27	14.3
550	30	4,921	-13.5	-25.6	27	16.4
500	30	5,639	-18.7	-30.9	27	18.3
450	30	6,416	-24.0	-35.8	27	20.2
400	30	7,265	-30.4	-42.0	28	21.2
350	30	8,203	-37.6	-46.9	27	22.8
300	30	9,246	-45.6		27	27.8
250	30	10,441	-53.2		27	31.5
200	30	11,859	-58.2		27	35.1
175	30	12,701	-57.5		27	33.3
150	30	13,676	-57.4		28	27.2
125	30	14,823	-59.3		28	22.8
100	30	16,216	-61.1		28	16.7
80	29	17,600	-62.3		27	9.9
70	29	18,425	-61.9		27	7.6
60	29	19,382	-60.3		28	5.2
50	29	20,525	-58.1		29	2.5
40	29	21,936	-56.7		36	.3
30	28	23,766	-55.2		07	1.1
25	27	24,932	-54.4		09	.7
20	27	26,367	-52.8		06	1.4
15	23	28,230	-50.5		01	.9
10	11	30,923	-45.5			
7						

TRUK, CAROLINE IS.
+ 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	27.8	24.1	05	4.3
1000	30	97	27.0	21.6	06	4.7
950	30	549	23.6	19.1	07	6.7
900	30	1,021	20.7	15.6	[illegible]	6.2
850	30	1,513	17.7	12.3	09	5.0
800	30	2,031	15.2	8.2	10	3.6
750	30	2,576	12.8	4.7	09	2.9
700	30	3,153	9.8	.2	09	2.1
650	30	3,766	6.6	-4.3	08	2.1
600	30	4,419	2.9	-8.3	08	1.9
550	30	5,119	-.8	-14.0	05	1.5
500	30	5,875	-4.9	-19.5	06	2.1
450	30	6,697	-9.5	-24.9	05	2.3
400	30	7,597	-15.2	-30.5	03	1.5
350	30	8,595	-21.8	-37.5	31	1.2
300	30	9,709	-30.2	-45.6	25	.9
250	30	10,980	-40.4	-53.7	17	2.6
200	30	12,460	-52.9		16	5.7
175	29	13,309	-60.0		17	4.6
150	29	14,254	-67.7		17	3.0
125	28	15,329	-75.4		16	1.2
100	28	16,602	-80.1		02	.8
80	28	17,870	-76.6		27	4.9
70	28	18,647	-72.8		27	8.2
60	27	19,563	-68.5		27	9.9
50	26	20,670	-64.0		27	10.3
40	26	22,050	-60.6		27	9.0
30	26	23,865	-55.2		09	4.7
25	26	25,033	-53.4		09	13.7
20	25	26,481	-49.9		09	21.2
15	25	28,381	-45.2		10	25.2
10	19	31,136	-39.0		09	30.0
7	11	33,629	-32.8			
5						

* TUCSON, ARIZ.
923 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	11.2	-7.9	16	2.5
1000						
950						
900	30	1,003	17.0	-6.0	20	.9
850	30	1,488	14.6	-8.6	30	1.8
800	30	1,996	10.9	-10.7	27	2.8
750	30	2,530	7.2	-13.7	24	5.5
700	30	3,094	3.9	-18.0	24	8.2
650	30	3,691	.2	-20.1	25	10.0
600	30	4,328	-4.1	-23.9	25	12.3
550	30	5,008	-8.7	-28.0	25	14.9
500	30	5,739	-13.8	-30.9	26	17.1
450	30	6,530	-19.6	-34.9	26	19.6
400	30	7,394	-26.2	-40.3	26	21.3
350	30	8,348	-33.5	-46.9	26	23.7
300	30	9,409	-41.9	-47.6	26	26.9
250	30	10,620	-50.7		26	32.4
200	30	12,047	-58.3		26	37.2
175	30	12,883	-60.3		26	37.3
150	30	13,842	-61.5		26	33.5
125	28	14,962	-64.1		26	29.0
100	26	16,319	-66.8		25	20.9
80	24	17,670	-67.3		25	14.1
70	22	18,475	-65.8		26	11.1
60	18	19,418	-63.8		27	6.0
50	18	20,543	-60.9		29	2.5
40	17	21,942	-58.2		36	1.0
30	17	23,766	-55.2		04	1.7
25	17	24,935	-53.6		35	.9
20	17	26,377	-51.5		28	2.0
15	17	28,260	-47.9		27	5.6
10	16	30,972	-41.9		27	10.9
7	13	33,429	-36.2		27	15.6
5	6	35,836	-30.1			

* VANDENBERG AFB, CALIF.
1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	9.2	6.2	34	1.6
1000	29	141	9.5	6.0	35	2.1
950	29	569	11.6	1.8	36	4.7
900	29	1,021	10.8	-1.9	35	4.4
850	29	1,496	9.0	-7.3	34	3.9
800	29	1,996	6.8	-11.1	31	4.1
750	29	2,523	4.5	-13.8	29	5.4
700	29	3,082	1.4	-15.7	28	7.0
650	29	3,674	-2.2	-19.4	28	8.1
600	29	4,305	-6.2	-22.6	27	9.8
550	29	4,980	-10.7	-25.8	27	11.7
500	29	5,706	-15.8	-30.2	27	13.2
450	29	6,491	-21.5	-35.1	27	15.5
400	29	7,348	-28.0	-40.6	27	17.6
350	29	8,295	-35.6	-46.4	27	20.1
300	29	9,346	-43.9		27	22.8
250	29	10,545	-53.1		26	26.5
200	29	11,955	-61.1		26	27.6
175	29	12,782	-61.8		26	26.9
150	29	13,737	-61.3		26	25.1
125	29	14,867	-62.4		26	22.3
100	29	16,238	-64.0		26	17.1
80	29	17,606	-63.4		26	11.5
70	29	18,429	-62.0		26	9.6
60	29	19,385	-61.4		26	5.5
50	29	20,517	-60.6		26	4.3
40	29	21,917	-57.7		28	1.1
30	29	23,740	-56.0		33	.9
25	29	24,903	-55.1		35	.9
20	29	26,332	-53.3		31	1.2
15	25	28,203	-49.9		28	3.6
10	19	30,894	-45.5		27	7.5
7	12	33,307	-40.3			
5						

VICTORIA, TEXAS
1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	33	18.7	16.4	13	1.3
1000	29	114	20.3	16.8	14	2.4
950	30	554	18.8	13.0	17	7.3
900	30	1,017	17.2	7.1	18	8.9
850	30	1,504	15.6	.1	19	7.7
800	30	2,017	14.0	-7.8	21	5.7
750	30	2,558	11.6	-12.9	23	4.5
700	30	3,130	7.6	-16.6	26	5.1
650	30	3,736	3.2	-18.9	28	7.1
600	30	4,378	-1.7	-22.1	28	8.9
550	30	5,064	-6.8	-25.1	27	10.9
500	30	5,800	-12.0	-30.3	27	13.6
450	30	6,599	-17.2	-35.0	27	17.0
400	30	7,470	-23.9	-38.9	27	20.3
350	30	8,434	-31.1	-46.0	27	23.4
300	30	9,506	-39.3	-52.6	27	26.6
250	30	10,733	-47.7		27	30.7
200	30	12,177	-56.6		27	32.9
175	30	13,016	-60.8		27	34.0
150	30	13,967	-64.1		27	32.4
125	30	15,072	-68.0		27	27.3
100	29	16,399	-71.5		27	19.9
80	28	17,711	-72.6		27	12.8
70	28	18,499	-70.6		27	8.3
60	28	19,423	-66.6		28	3.6
50	28	20,537	-62.4		34	1.7
40	27	21,927	-58.6		04	1.9
30	27	23,754	-54.4		05	1.8
25	27	24,927	-52.7		03	1.4
20	25	26,373	-50.3		30	1.7
15	24	28,265	-46.8		28	6.2
10	15	30,987	-42.1		26	14.4
7	6	33,455	-36.6			
5						

* WAKE IS., PACIFIC AREA
1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	23.6	18.7	06	8.1
1000	30	141	22.3	16.0	07	9.2
950	30	585	18.5	14.8	07	9.9
900	30	1,047	15.0	12.5	07	8.7
850	30	1,529	11.6	9.5	07	6.9
800	30	2,035	10.4	-1.8	07	5.8
750	30	2,572	10.1	-10.7	07	4.0
700	30	3,143	8.0	-14.7	06	2.0
650	30	3,751	4.9	-17.6	35	1.4
600	30	4,399	1.2	-20.8	31	2.3
550	30	5,093	-3.2	-24.4	30	2.9
500	30	5,840	-8.1	-27.8	29	4.3
450	30	6,650	-13.8	-32.3	29	6.2
400	30	7,533	-20.2	-37.9	28	10.0
350	30	8,512	-26.9	-43.3	28	13.9
300	30	9,605	-33.7	-48.4	28	20.6
250	30	10,860	-42.8	-54.1	28	25.2
200	30	12,331	-53.2		27	28.3
175	30	13,180	-59.2		27	27.4
150	30	14,131	-65.9		27	23.8
125	30	15,220	-72.3		28	19.2
100	29	16,513	-76.9		28	12.9
80	27	17,794	-77.7		28	6.4
70	27	18,564	-74.4		29	2.9
60	27	19,474	-69.5		25	1.4
50	27	20,579	-62.8		17	.6
40	27	21,966	-59.0		08	2.7
30	26	23,796	-53.8		08	4.2
25	25	24,975	-50.8		07	5.4
20	24	26,433	-47.6		08	6.1
15	23	28,348	-44.4		08	7.1
10	18	31,096	-38.6		09	7.0
7	5	33,532	-36.0			
5						

*See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1972

Standard pressure surface (mb.)	* WALLOPS IS., VA. NASA 1016 MB						WASHINGTON DULLES INT. AP 1007 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	8.4	5.0	01	1.0	30	85	5.2	1.6	34	.6
1000	30	137	8.8	3.1	30	1.3	26	154	6.6	.2	31	.8
950	30	562	9.0	-.1	29	3.9	30	562	7.5	-1.7	28	2.4
900	30	1,008	6.8	-2.4	29	5.0	30	1,006	5.8	-4.6	27	4.7
850	30	1,476	4.2	-4.9	28	7.2	30	1,472	3.2	-6.6	28	7.4
800	30	1,968	1.8	-7.3	28	9.4	30	1,961	1.0	-8.0	28	10.5
750	30	2,486	-.8	-10.0	28	12.5	30	2,479	-1.4	-11.0	29	12.6
700	30	3,034	-3.6	-14.0	28	14.7	30	3,026	-4.1	-14.9	28	14.1
650	30	3,617	-6.4	-16.6	28	17.0	30	3,608	-6.8	-17.6	28	16.4
600	30	4,239	-10.1	-20.2	28	18.6	30	4,229	-10.4	-22.2	28	18.4
550	30	4,904	-14.3	-25.0	28	20.1	30	4,893	-14.7	-26.8	28	20.7
500	30	5,620	-19.2	-30.1	28	22.1	30	5,608	-19.6	-31.8	28	22.2
450	30	6,395	-24.7	-35.4	28	23.9	30	6,382	-25.0	-36.1	28	23.9
400	30	7,242	-30.7	-41.6	28	26.5	30	7,228	-31.3	-42.3	28	26.4
350	30	8,180	-37.3	-45.4	28	29.5	30	8,164	-38.0	-46.0	28	29.1
300	30	9,225	-45.2		27	33.7	30	9,205	-45.8		28	32.4
250	30	10,420	-53.1		27	34.6	29	10,404	-53.0		28	34.3
200	30	11,843	-57.3		28	36.7	28	11,831	-56.5		28	35.4
175	30	12,688	-56.9		28	32.4	27	12,675	-55.8		28	32.3
150	30	13,665	-57.3		28	28.6	26	13,661	-56.3		28	28.8
125	30	14,812	-59.4		28	23.3	26	14,812	-58.6		28	23.6
100	29	16,198	-61.5		28	17.2	26	16,208	-60.6		28	17.8
80	28	17,578	-61.6		28	10.7	26	17,593	-61.4		28	11.6
70	28	18,405	-61.9		28	7.4	26	18,421	-61.2		28	7.4
60	28	19,362	-60.4		29	5.0	26	19,380	-60.2		28	4.9
50	28	20,505	-57.9		29	2.5	26	20,525	-57.8		29	1.9
40	27	21,918	-56.9		06	1.0	23	21,933	-56.8		02	1.1
30	27	23,746	-55.7		05	2.2	21	23,763	-55.4		05	2.5
25	26	24,911	-54.4		06	2.9	20	24,928	-54.4		07	3.2
20	26	26,347	-52.4		06	2.0	20	26,363	-52.8		07	3.0
15	24	28,216	-49.9		03	1.0	17	28,232	-50.3		04	1.0
10	18	30,889	-44.9		28	4.4	15	30,897	-45.3		30	2.6
7	13	33,317	-38.8		28	7.6						

Standard pressure surface (mb.)	WAYCROSS, GA. 1013 MB						WINNEMUCCA, NEV. 869 MB						WINSLOW, ARIZ. 850 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	44	13.6	11.7	28	.4	30	1,312	.9	-6.7	23	.8	30	1,487	3.9	-11.4	22	2.4
1000	30	149	15.2	11.4	24	.8												
950	30	584	14.9	6.1	25	3.4												
900	30	1,040	12.7	2.3	25	5.1												
850	30	1,518	10.4	-2.4	26	5.8	30	1,489	4.9	-6.9	27	1.1	18	1,507	5.1	-9.9	23	1.5
800	30	2,021	8.4	-9.3	26	6.7	30	1,981	1.7	-9.1	27	3.4	30	1,986	8.5	-9.1	26	5.6
750	30	2,552	6.3	-15.0	27	8.0	30	2,497	-2.2	-11.3	26	4.8	30	2,515	5.0	-11.4	26	7.4
700	30	3,114	3.5	-18.5	27	8.5	30	3,041	-5.9	-15.2	26	6.6	30	3,074	.7	-14.0	25	8.6
650	30	3,711	-.2	-23.6	28	9.5	30	3,618	-9.2	-19.8	26	8.4	30	3,665	-3.4	-18.5	25	9.8
600	30	4,346	-4.5	-25.3	28	10.9	30	4,233	-12.8	-24.5	26	10.7	30	4,293	-7.3	-23.3	25	11.7
550	30	5,025	-9.2	-29.0	27	12.9	30	4,891	-17.2	-29.2	27	12.5	30	4,965	-11.7	-27.2	26	14.4
500	30	5,755	-14.2	-32.7	28	14.8	30	5,600	-21.9	-32.7	27	14.9	30	5,687	-17.0	-31.3	26	16.6
450	30	6,546	-19.7	-36.7	27	17.7	30	6,368	-27.0	-36.9	27	15.8	30	6,470	-22.4	-35.6	26	19.2
400	30	7,409	-26.2	-40.3	27	21.0	30	7,206	-33.3	-42.1	27	17.6	30	7,324	-28.9	-40.2	27	21.0
350	30	8,365	-32.9	-45.7	27	23.6	30	8,134	-40.2	-44.6	26	19.9	30	8,269	-35.6	-45.4	26	24.7
300	30	9,428	-41.3	-51.3	27	25.5	30	9,165	-47.8		27	20.6	30	9,321	-43.4		27	28.2
250	30	10,644	-49.5		28	30.0	30	10,349	-55.0		27	21.2	30	10,525	-52.1		27	30.6
200	30	12,080	-57.1		28	33.7	30	11,758	-58.7		27	20.5	30	11,946	-58.7		27	32.4
175	30	12,921	-58.8		28	31.4	30	12,598	-58.3		27	19.2	30	12,782	-59.7		27	30.3
150	30	13,883	-61.4		28	29.4	30	13,569	-58.0		27	17.7	30	13,745	-60.1		26	27.6
125	30	15,004	-65.1		28	24.5	30	14,717	-58.8		26	16.3	28	14,880	-62.4		26	25.3
100	30	16,353	-68.2		28	19.4	30	16,116	-59.2		26	11.1	28	16,248	-65.3		26	19.0
80	30	17,688	-69.2		28	13.5	30	17,516	-59.1		25	9.1	27	17,601	-65.2		26	14.3
70	30	18,489	-68.0		28	9.8	30	18,353	-58.9		24	7.1	26	18,418	-64.0		26	9.7
60	29	19,421	-65.0		29	5.5	30	19,322	-58.6		24	5.4	25	19,365	-63.2		27	6.5
50	29	20,542	-61.2		31	2.0	30	20,470	-57.8		24	2.5	24	20,492	-60.6		26	3.0
40	29	21,939	-58.3		06	2.1	26	21,880	-57.2		22	1.3	23	21,891	-58.5		30	1.1
30	27	23,764	-55.1		07	2.5	22	23,708	-56.0		27	.5	21	23,709	-56.4		03	1.0
25	27	24,933	-53.4		05	1.1	21	24,866	-55.3		02	.5	21	24,870	-55.3		04	1.1
20	26	26,382	-50.3		30	1.8	19	26,297	-53.8		08	1.3	19	26,299	-53.3		30	.5
15	25	28,277	-46.4		27	6.3	15	28,156	-50.8		07	1.9	15	28,163	-50.7		27	3.7
10	18	30,983	-42.2		27	14.9	7	30,844	-45.2				6	30,881	-44.6			
7	6	33,378	-38.5															

Standard pressure surface (mb.)	YAKUTAT, ALASKA 1006 MB						+ YAP, CAROLINE IS. 1009 MB						YUCCA FLAT, NEV. 879 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	-3.4	-5.7	08	1.7	30	14	28.5	23.6	08	4.5	29	1,198	6.3	-11.5	26	.9
1000	23	96	-.5	-4.3	10	2.1	30	95	26.9	20.9	08	5.2						
950	30	470	-1.9	-6.7	13	2.8	30	547	23.3	18.3	07	7.7						
900	30	898	-4.9	-9.4	14	2.6	30	1,018	20.3	14.0	07	7.8						
850	30	1,345	-8.1	-12.4	14	2.9	30	1,510	17.4	10.2	08	6.3	29	1,474	11.0	-6.0	27	1.7
800	30	1,813	-11.3	-15.5	15	3.0	30	2,026	15.5	3.7	08	5.1	29	1,977	7.7	-7.9	23	3.5
750	30	2,305	-14.7	-19.8	17	3.5	30	2,572	13.1	-.8	07	4.8	29	2,505	3.9	-10.3	25	4.3
700	30	2,824	-18.3	-23.3	18	3.8	30	3,148	10.1	-7.0	07	3.5	29	3,061	.1	-13.5	25	5.2
650	30	3,373	-22.1	-27.2	18	4.3	30	3,762	7.3	-10.7	08	4.2	29	3,651	-3.7	-16.7	25	6.7
600	30	3,957	-26.2	-32.9	19	5.0	30	4,415	3.5	-15.3	[illegible]	4.3	29	4,278	-8.0	-21.6	26	9.2
550	30	4,581	-30.4	-36.8	21	6.3	30	5,116	-.6	-19.5	07	4.3	29	4,948	-12.6	-26.7	26	11.8
500	30	5,252	-35.1	-40.5	22	7.2	30	5,871	-5.3	-24.4	07	4.6	29	5,668	-17.9	-31.1	26	13.8
450	30	5,979	-40.2	-41.2	23	6.0	30	6,691	-9.9	-29.5	06	4.4	29	6,448	-23.3	-35.6	26	15.2
400	30	6,773	-45.2	-45.0	24	7.1	30	7,589	-15.9	-35.1	06	4.0	29	7,299	-29.6	-40.8	26	16.9
350	30	7,660	-48.8		25	8.8	30	8,585	-22.7	-40.5	02	1.7	29	8,241	-36.8	-45.2	26	19.5
300	30	8,666	-50.5		26	10.5	30	9,695	-31.0	-47.1	28	1.2	29	9,287	-44.6		26	23.1
250	30	9,856	-50.0		27	10.0	30	10,960	-41.4		23	2.1	29	10,485	-53.1		26	26.5
200	30	11,322	-47.6		27	8.0	30	12,436	-53.5		21	4.5	29	11,897	-60.6		27	29.6
175	30	12,205	-47.6		27	7.5	30	13,281	-60.3		21	4.6	29	12,728	-60.4		27	27.2
150	30	13,223	-47.8		27	6.0	30	14,225	-68.0		22	3.2	28	13,692	-59.3		27	23.9
125	30	14,425	-48.4		27	5.1	30	15,301	-75.2		30	.3	28	14,830	-60.9		27	22.9
100	30	15,895	-48.6		25	2.6	30	16,574	-80.4		07	2.8	28	16,215	-61.5		26	17.2
80	30	17,361	-49.0		20	1.2	30	17,835	-78.3		32	1.7	26	17,593	-61.5		26	10.0
70	30	18,238	-49.0		18	1.2	30	18,606	-74.0		29	4.3	26	18,422	-61.4		25	8.9
60	30	19,249	-49.4		15	1.8	30	19,517	-69.3		28	7.4	26	19,383	-59.7		26	4.7
50	30	20,443	-49.9		12	2.0	29	20,620	-64.5		27	8.0	26	20,524	-59.5		25	1.9
40	30	21,901	-50.5		11	2.6	29	21,997	-60.9		27	4.9	24	21,926	-57.3		30	1.2
30	30	23,775	-50.8		10	4.0	29	23,810	-55.1		09	4.5	23	23,749	-56.1		27	.7
25	30	24,963	-50.8		10	4.7	29	24,981	-52.9		09	12.1	22	24,911	-55.2		31	.9
20	27	26,424	-50.4		10	6.0	29	26,430	-49.9		09	18.2	21	26,340	-53.9		34	1.2
15	20	28,323	-48.7		10	7.1	27	28,332	-45.8		09	23.4	16	28,215	-50.3		29	.5
10	12	30,990	-46.5				25	31,078	-38.9		09	26.8	9	30,891	-46.0			
7							13	33,542	-34.0									

Note: All observations scheduled at 1200, G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. APRIL 1972

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Apr.									
1	----	----	----	----	1.43	1.25	1.07	----	0.87
2	----	----	----	----	1.38	(1.12)	.95	0.81	.68
3	0.92	1.01	1.13	1.27	----	----	----	----	----
4	.74	.86	.99	----	----	----	(.96)	.86	.76
5	----	----	----	(1.24)	----	----	----	----	----
7	----	----	----	1.29	1.44	1.24	1.10	.99	.91
10	.97	1.08	1.18	(1.31)	----	----	----	----	----
12	----	----	----	----	----	1.05	.85	.76	.68
13	.73	.83	.94	1.07	----	----	----	----	----
14	----	----	----	----	----	----	.95	.87	.76
15	----	.82	(.90)	----	(1.21)	.97	.88	.77	.66
16	.97	1.06	1.17	1.30	1.45	1.23	1.06	.98	.86
17	----	(.95)	(1.06)	(1.14)	----	(1.19)	(.99)	----	(.73)
19	.73	.82	.92	1.10	----	1.14	1.01	.85	.76
20	.76	.86	1.00	1.12	----	----	----	----	----
21	.80	.90	1.02	1.15	1.37	1.20	1.04	.95	.89
22	.88	.96	1.08	1.22	1.37	1.15	----	.94	.86
23	.90	.99	1.09	1.25	1.38	1.18	.99	.86	.75
24	.70	.80	.94	1.12	1.36	1.17	1.00	.85	.74
25	.78	.86	1.00	1.20	----	----	----	----	----
26	.75	.82	.96	1.10	1.34	.94	.65	.45	.32
27	.79	.86	.98	1.12	1.26	1.02	.85	.71	.59
28	.71	.81	.95	1.10	1.30	1.10	.96	.83	.75
29	.76	.86	.99	1.14	1.35	1.15	1.01	.90	.79
30	.77	.86	.98	1.14	D(1.21)	D(1.01)	D(.58)	D(.43)	D(.18)
Averages	0.80	0.89	1.02	1.17	1.37	1.13	0.96	0.84	0.74
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Apr.									
2	HM0.84	HM0.92	----	HS1.20	----	----	----	----	----
3	----	----	----	----	1.33	1.20	1.03	0.93	0.83
5	----	----	----	----	1.29	----	----	----	----
13	----	----	----	HS1.16	1.30	----	.63	.50	----
16	----	----	----	1.04	1.32	----	----	----	----
17	HS .70	HS .80	HS .94	HS1.11	HS1.17	----	----	----	----
23	----	----	.90	1.10	----	----	----	----	----
24	.62	.72	.87	----	----	----	----	----	----
25	HM .60	HM .70	HM .82	HM1.00	----	----	----	----	----
Averages	0.69	0.79	0.88	1.10	1.28	----	0.83	0.72	0.83

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Apr.									
1	0.90	----	----	1.22	----	----	----	----	----
2	.90	0.99	1.13	1.28	1.43	1.27	1.10	0.98	0.88
3	.88	.99	----	1.25	1.41	1.22	----	.95	---
5	.80	.96	----	1.24	----	1.16	----	----	----
6	.87	----	----	----	----	1.21	----	.96	----
7	.89	.97	1.11	----	----	----	1.14	1.01	.89
8	.85	----	----	----	1.50	1.27	----	----	----
9	.87	.99	1.11	1.27	----	1.24	----	----	----
10	----	----	1.08	1.26	----	----	----	----	----
12	----	----	----	----	----	1.20	1.01	.90	.80
13	----	.91	----	1.17	1.42	1.20	1.07	.94	.83
14	----	----	----	----	1.46	1.17	.97	.78	.71
15	.89	1.01	1.13	1.29	1.47	1.30	1.14	1.04	.93
16	.91	1.02	1.15	1.32	1.50	1.26	1.08	.94	.84
17	.92	1.01	1.11	1.27	----	1.29	1.14	.99	.89
19	D .62	D .74	D .90	D 1.10	1.39	1.17	.98	.85	.73
20	D .58	D .72	D .87	D 1.04	1.40	1.16	.98	.83	.71
21	.80	.92	1.07	1.24	1.44	1.19	.98	.88	.79
22	.78	.89	1.02	1.22	1.45	1.23	1.07	.95	.82
23	.90	1.02	1.14	1.31	1.49	1.25	1.14	1.00	.88
24	.84	.96	1.07	1.21	1.43	1.18	1.01	.88	.78
25	.95	1.02	1.14	1.26	1.39	1.14	.89	.76	.63
26	.60	.74	.93	1.14	1.45	1.24	1.07	.92	.79
27	.75	.86	.98	1.14	1.39	1.15	.98	.83	.70
28	.79	.91	1.05	1.21	1.42	1.21	1.05	.89	.76
29	.80	.93	1.07	1.24	1.42	1.23	----	.84	----
30	.77	.92	1.05	1.25	1.42	1.25	----	----	----
Averages	0.82	0.93	1.06	1.22	1.44	1.22	1.04	0.91	0.80
	MADISON, WIS.								
	Air mass								
	DATA NOT RECEIVED IN TIME FOR PUBLICATION								

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

APRIL 1972

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	622	590	579	582	599	394	654	607	613	579	430	566	593	326	598	695	678	419	708	680	712	714	712	711	709	735	714	723	732	722		623
AMES IOWA	144	605	386	508	454	272	174	551	518	555	365	84	644	82	442	584	647	529	129	128	104	358	---	---	699	496	71	212	355	199		368
ANNETTE ALASKA	347	381	389	169	154	239	289	318	276	261	283	473	83	379	387	508	148	63	354	353	361	305	184	---	251	61	445	567	549	355		308
APALACHICOLA FLORIDA	568	592	594	487	576	574	533	296	486	490	592	609	622	604	470	318	647	622	521	635	638	---	209	565	556	621	656	525	206	566		527
ARGONNE NAT. LAB.	334	331	224	520	506	352	107	518	505	423	272	135	484	165	345	101	575	524	253	461	50	131	376	225	614	596	555	106	263	261		344
ASTORIA OREGON	329	507	343	84	173	68	257	294	478	183	205	253	261	153	---	360	446	523	266	141	518	611	269	---	---	577	351	---	498	476		339
ATLANTA GEORGIA	340	584	478	262	565	554	228	541	609	531	116	419	489	493	573	416	604	560	445	520	344	421	628	618	619	619	592	479	435	441		484
BARROW ALASKA	327	371	294	373	381	262	293	273	291	310	365	295	323	397	414	426	385	443	456	457	385	469	471	494	523	470	336	533	411	364		386
BETHEL ALASKA	362	291	364	408	478	500	484	342	402	419	366	530	495	569	405	394	409	462	518	569	569	501	415	---	522	629	626	441	---	438		461
BISMARCK N.DAK.	636	353	631	645	603	316	111	438	383	558	84	76	139	662	675	608	212	411	611	316	---	250	402	432	670	95	162	346	185	153		385
BLUE HILL MASS.	520	328	350	203	516	215	99	417	408	486	95	484	68	---	98	479	441	567	447	38	640	368	138	251	401	586	386	611	612	637		376
BOISE IDAHO	399	582	579	330	59	345	444	461	626	419	235	61	622	490	632	321	513	496	695	623	439	698	662	293	524	699	722	697	507	733		497
BROOKINGS SOUTH DAK.	326	518	528	536	500	324	270	272	471	407	42	104	150	382	549	552	516	113	218	404	170	236	419	221	575	273	92	94	131	244		321
BROWNSVILLE TEXAS	657	656	452	253	265	549	502	297	380	496	613	629	664	611	570	631	462	609	644	662	262	673	200	---	---	179	351	519	582	597		502
BURLINGTON VERMONT	540	103	466	133	513	292	567	594	601	524	166	493	38	136	46	254	359	277	266	212	680	431	244	173	687	689	574	484	659	696		396
CAPE HATTERAS N.C.	423	562	617	506	603	561	560	37	612	533	253	154	487	395	566	603	647	672	---	618	153	221	428	540	197	697	680	647	346	582		470
CARIBOU MAINE	452	459	192	---	348	437	417	377	507	474	527	519	349	317	277	413	369	567	135	---	534	586	221	---	575	---	---	344	462	426		411
CHARLESTON S.C.	532	604	555	383	555	578	508	269	654	597	190	380	520	591	597	599	596	617	558	478	220	303	621	381	206	566	641	595	388	443		491
CLEVELAND OHIO	156	333	376	445	468	383	155	482	583	470	511	525	427	347	265	138	624	596	211	168	420	234	499	326	659	628	666	---	375	417		410
COLUMBIA MISSOURI	269	606	161	634*	542	507	109	582	374	283	98	424	580	430	219	297	673	617	---	136	174	654	356	550	682	563	146	309	572	318		409
DAVIS CALIFORNIA	325	602	533	339	120	421	587	573	556	608	439	148	671	645	614	593	653	677	684	664	658	605	674	655	686	678	667	699	719	709		573
DODGE CITY KANSAS	699	616	662	592	665	305	712	573	590	661	537	418	650	703	166	745	695	655	594	---	780	780	771	775	240	256	410	565	171	220		559
EL CENTRO CALIF. NPF	537	563	555	473	522	479	587	592	549	420	260	551	622	643	625	623	646	635	574	646	640	636	638	647	643	648	659	647	656	639		585
EL PASO TEXAS	646	657	627	608	644	649	636	664	661	585	538	598	335	577	657	639	644	463	660	671	709	701	713	682	692	707	706	721	715	701		640
ELY NEVADA	398	368	438	341	255	596	426	629	512	196	178	524	329	665	659	603	448	422	602	691	526	686	629	623	505	715	712	699	708	728		527
EPPLEY NEWPORT R.I.	529	396	396	123	558	338	55	402	451	437	80	402	48	308	85	380	510	602	519	42	646	313	301	168	504	632	470	639	620	649		387
FAIRBANKS ALASKA	398	388	---	252	352	348	377	418	336	429	427	334	296	353	476	482	332	282	291	439	529	534	538	462	412	246	442	571	581	---		404
FLAMING GORGE UTAH	332	314	549	359	342	379	499	673	357	332	415	353	257	222	670	526	289	387	388	559	357	563	716	624	243	368	658	753	435	686		453
FORT WORTH TEXAS	491	510	505	533	488	482	537	604	569	172	379	564	501	340	469	622	608	346	379	402	550	637	628	614	469	181	73	172	385	284		450
FRESNO CALIFORNIA	326	573	541	306	94	602	609	628	442	519	324	397	647	641	634	613	628	590	662	656	652	653	648	588	676	671	669	678	705	696		569
GENEVA NEW YORK	481	395	303	72	364	114	520	613	601	325	399	471	197	370	285	109	635	574	216	85	652	57	259	334	691	569	691	625	683	627		411
GLASGOW MONTANA	447	437	491	540	503	386	362	512	572	542	497	110	422	574	475	162	446	280	605	608	564	425	649	657	397	627	653	646	574	72		475
GLOUCESTER POINT VA	467	338	591	247	626	589	231	213	647	544	407	170	352	239	413	509	503	671	671	577	505	56	587	500	104	703	689	602	544	395		456
GRAND JUNCTION COLO.	551	238	547	519	399	295	581	609	583	194	307	474	299	395	620	683	601	523	615	604	669	701	708	682	425	300	618	672	542	696		522
GREAT FALLS MONTANA	368	279	527	373	409	543	506	503	611	451	436	406	227	561	520	154	430	593	657	492	509	676	661	455	379	642	673	678	190	285		473
GREENSBORO N.C.	467	434	584	403	587	577	203	295	648	325	433	113	304	258	511	426	579	661	587	521	66	106	636	518	391	684	674	584	558	609		461
INDIANAPOLIS INDIANA	245	230	217	598	570	481	48	593	596	329	430	103	555	246	121	347	635	627	187	148	63	444	506	401	675	640	629	449	126	455		390
ITHACA NEW YORK	550	292	267	49	326	134	564	507	607	381	340	423	124	324	137	113	545	596	231	49	639	76	222	279	660	606	620	627	660	561		384
LAKE CHARLES LA.	599	592	438	311	228	247	443	500	609	216	452	353	538	477	406	649	635	585	361	577	255	677	633	636	641	605	---	381	498	564		486
LAKELAND FLORIDA	343	632	617	479	445	551	602	497	142	600	598	597	481	608	598	599	614	573	605	537	522	586	430	333	462	643	577	491	287	467		517
LANDER WYOMING	485	492	591	450	369	535	496	601	531	291	357	608	187	622	652	536	380	217	434	667	612	659	660	586	371	282	635	671	649	477		503
LAS VEGAS NEVADA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
LITTLE ROCK ARKANSAS	668	579	136	629	565	353	383	545	633	279	183	399	424	224	369	596	667	604	303	278	243	662	650	660	671	488	130	52	367	372		437
LOS ANGELES CALIF.	441	487	547	461	275	621	601	599	581	373	---	650	665	667	671	678	459	469	440	661	669	661	654	657	670	656	661	641	655	603		582
LOS ANGELES CALIF. U	439	478	491	436	281	557	553	542	547	328	178	584	622	614	621	630	464	351	385	641	655	637	637	603	627	638	651	635	624	584		534
MADISON WISCONSIN	402	363	271	542	582	334	222	623	408	515	295	169	543	171	415	278	614	453	122	603	57	94	373	476	680	649	531	287	352	202		388
MANHATTAN KANSAS	608	540	490	599	574	454	538	360	528	394	129	396	533	578	134	646	618	578	154	99	154	643	542	646	303	30	176	348	279	185		408
MATANUSKA ALASKA	---	---	166	355	423	472	440	478	235	491	479	250	380	551	---	---	98	327	495	576	580	588	---	---	390	572	605	614	594	474		443
MEDFORD OREGON	105	438	307	471	412	407	368	301	356	524	226	361	362	579	598	546	592	582	599	558	576	624	321	374	591	627	636	469	670	639		474
MIAMI FLORIDA	66	583	559	520	473	566	571	530	289	512	506	503	583	580	596	609	557	588	493	578	605	576	603	407	414	519	568	456*	378	256		502
MIDLAND TEXAS	626	579	611	480	602	619	643	629	567	638	477	655	501	670	710	695	437	658	425	686	709	725	678	---	---	688	686	573	658	614		616
NASHVILLE TENNESSEE	463	584	349	481	547	508	103	412	613	406	152	230	200	298	326	586	607	615	524	230	282	641	628	569	465	676	643	373	294	485		443
NEW YORK CENTRAL PRK	---	---	---	---	474	459	46	411	634	345	388	434	24	530	51	216	543	606	586	29	703	46	605	137	431	627	476	660	620	619		412
NORTH OMAHA NEBRASKA	424	593	580	592	527	440	329	348	517	555	352	180	630	80	487	651	629	577	128	87	161	623	569	462	612	104	34	152	310	166		397
OAK RIDGE TENNESSEE	276	288	316	359	519	549	72	356	623	395	120	358	268	213	349	495	514	627	502	394	315	462	627	---	467	667	660	424	464	488		420

SOLAR RADIATION TOTALS–Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

APRIL 1972

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	575	538	556	562	523	491	576	577	560	532	330	538	477	516	296	619	590	453	265	139	504	624	596	610	320	125	247	628	298	543		474
PALMER AAFS ALASKA	331	362	156	314	376	353	372	383	218	459	371	242	324	468	418	198	118	308	449	493	497	508	482	381	417	481	528	534	482	396		381
PAGE ARIZONA	515	516	503	478	401	527	582	582	495	332	491	583	555	372	---	607	497	597	375	628	620	644	572	648	632	664	650	660	---	634		549
PHOENIX ARIZONA	498	574	537	446	514	464	586	585	563	456	555	420	517	622	627	631	633	553	610	630	641	649	650	---	636	653	656	660	652	656		582
PORTLAND MAINE	509	401	105	302	527	280	461	502	456	508	272	533	119	251	153	387	447	437	342	105	626	494	173	418	368	549	392	591	507	629		395
RAPID CITY S.DAK.	512	250	432	493	438	263	388	477	375	401	471	504	167	293	441	565	454	98	128	309	542	499	619	634	397	97	81	121	204	173		361
RENO NEVADA	146	524	436	284	301	401	471	557	426	430	261	372	503	576	553	482	428	579	568	564	572	576	396	490	581	600	585	601	621	612		483
RICHLAND 25 NW WASH.	441	537	517	358	300	538	528	491	563	506	345	404	590	365	480	497	433	644	556	473	544	639	559	580	565	659	679	704	682	667		520
RIVERSIDE CALIFORNIA	547	600	580	537	457	660	662	616	674	324	309	627	483	720	721	725	683	400	396	731	727	732	714	642	680	753	742	738	707	724		620
RUSTON LOUISIANA	---	---	---	370	585	374	463	582	582	---	421	478	552	430	349	653	639	569	460	330	150	685	676	657	659	---	148	138	468	443		474
SAINT CLOUD MINN.	300	478	567	541	526	431	600	332	146	472	127	35	128	105	605	621	396	140	500	592	113	278	317	661	677	570	223	301	167	349		377
SALT LAKE CITY	483	291	574	414	215	512	496	623	616	151	273	297	225	657	599	585	365	294	207	640	517	671	679	530	345	692	703	699	673	688		490
SAN ANTONIO TEXAS	618	615	431	504	184	344	518	627	292	380	375	519	590	481	614	684	631	406	475	412	588	698	680	662	627	105	184	355	567	482		488
SANTA MARIA CALIF.	376	560	456	446	147	604	607	617	589	554	246	592	653	611	641	607	604	573	656	667	643	667	608	591	676	676	665	629	688	698		578
SAULT STE MARIE MICH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
SEATTLE TACOMA WASH.	216	514	465	124	125	253	289	244	547	413	369	129	423	161	489	425	349	390	414	193	654	637	338	305	455	584	624	588	598	470		393
SEATTLE WASH. U	172	445	438	122	214	253	243	288	447	399	335	198	349	128	398	293	264	343	353	172	422	545	349	365	271	383	485	442	472	393		333
SPOKANE WASHINGTON	361	528	512	197	185	456	481	255	505	409	259	165	314	390	487	360	390	429	520	491	438	606	560	292	419	599	603	185	535	598		417
STERLING VIRGINIA	567	---	511	284	628	547	41	307	650	525	---	532	183	324	184	307	592	660	602	188	641	78	531	154	485	707	695	507	660	288		442
SWAN ISLAND W.I.	582	381	617	612	626	581	606	632	607	506	567	665	653	652	633	616	655	655	606	572	598*	655	666	641	630	553	612	586	543	638		605
TAMPA FLORIDA	361	647	622	612	567	598	637	583	228	613	621	608	484	644	652	632	659	632	609	640	646	658	374	382	637	664	634	562	225	512		565
TUCSON ARIZONA	532	618	605	564	603	575	569	635	619	499	470	468	614	640	678	687	652	391	679	679	684	689	702	697	701	704	701	705	698	671		624
UPPER MARLBORO MD.	435	401	482	240	595	526	47	369	627	447	301	476	162	328	208	340	601	638	598	244	633	61	549	179	417	680	674	480	638	362		425
WAKE ISLAND PACIFIC	512	645	619	618	528	561	535	642	512	405	524	552	549	541	688	489	660	651	699*	---	612	655	676	525	581	443	681	538	620	695		585

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

U Indicates Urban sites

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

APRIL 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-109	- 76	- 11	- 81	-111	-109	- 70	- 79	- 51	-118	- 65	- 8	-111	-126	-119	- 58	- 72	- 65	-142	-112	- 45	75	202	222	193	207	260	257	202	204		21

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	5.99	17.37	12.19	15.54	13.61	9.44	7.31	16.56	16.05	15.44	12.19	3.65	18.99	3.14	13.41	18.28	18.99	14.93	5.38	5.18	4.26	11.98	14.93	14.02	19.91	15.13	3.14	7.21	11.27	7.11		11.75

These data are from an L - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

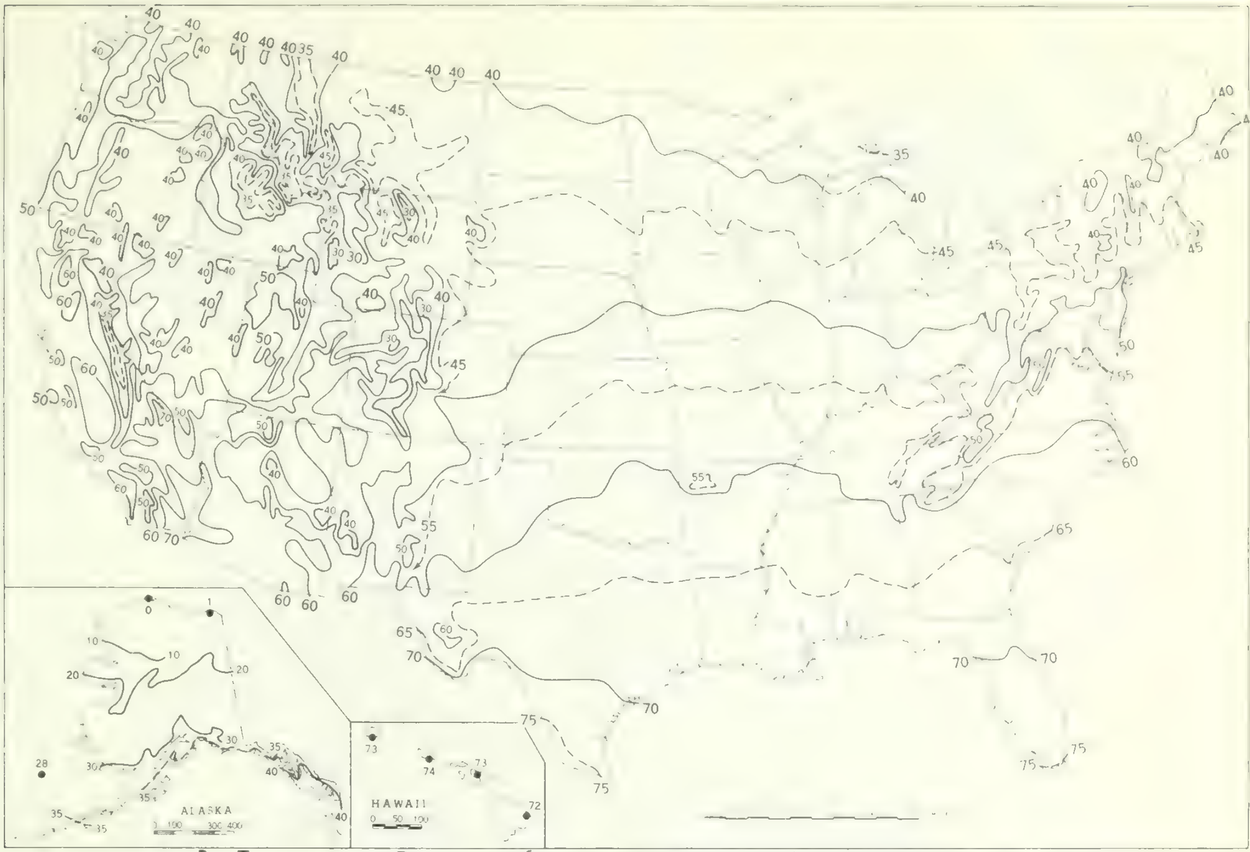
Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. **The code λ s** designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), April



B. Temperature Departure from 30 - Year Mean (°F 1931-60), April 1972

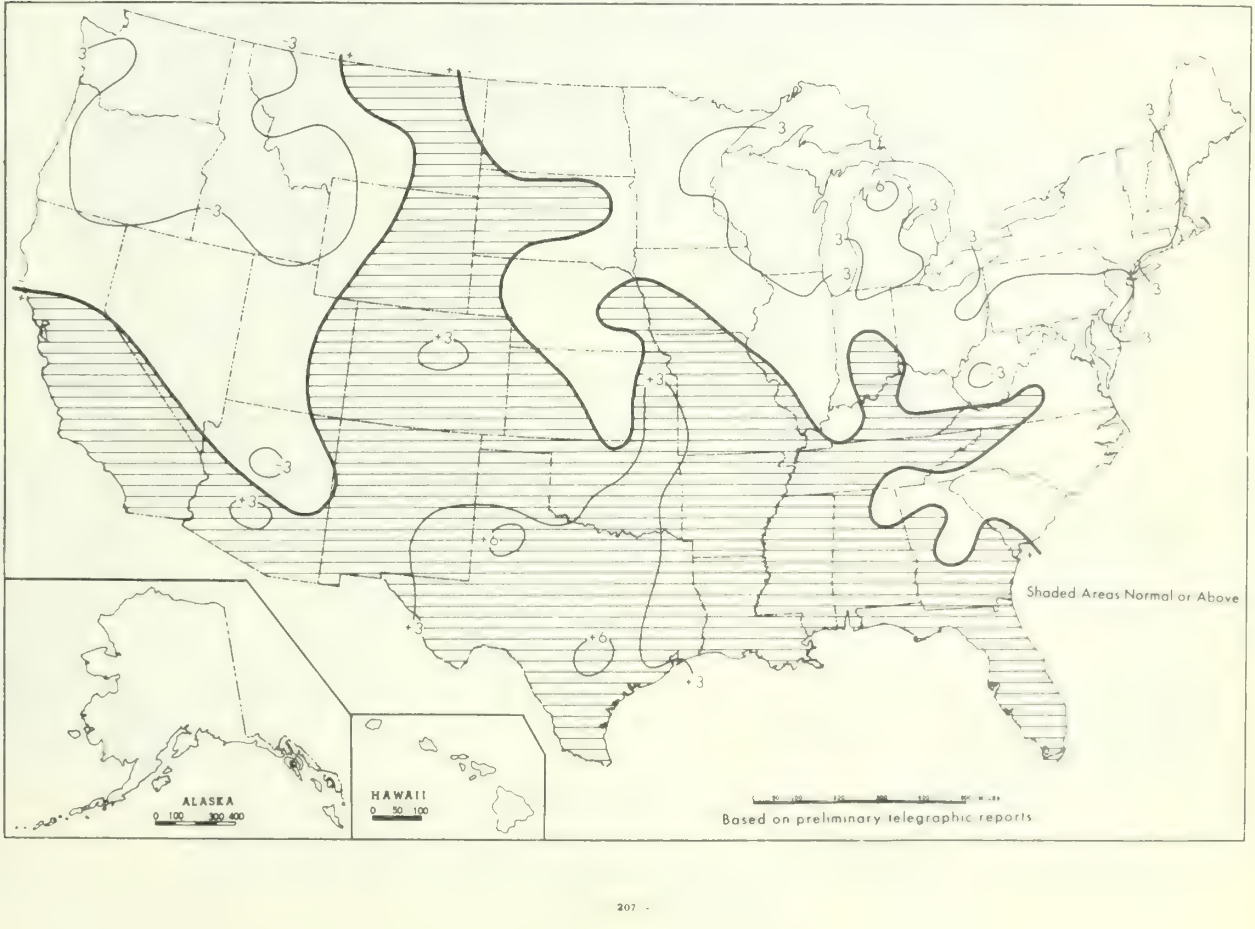
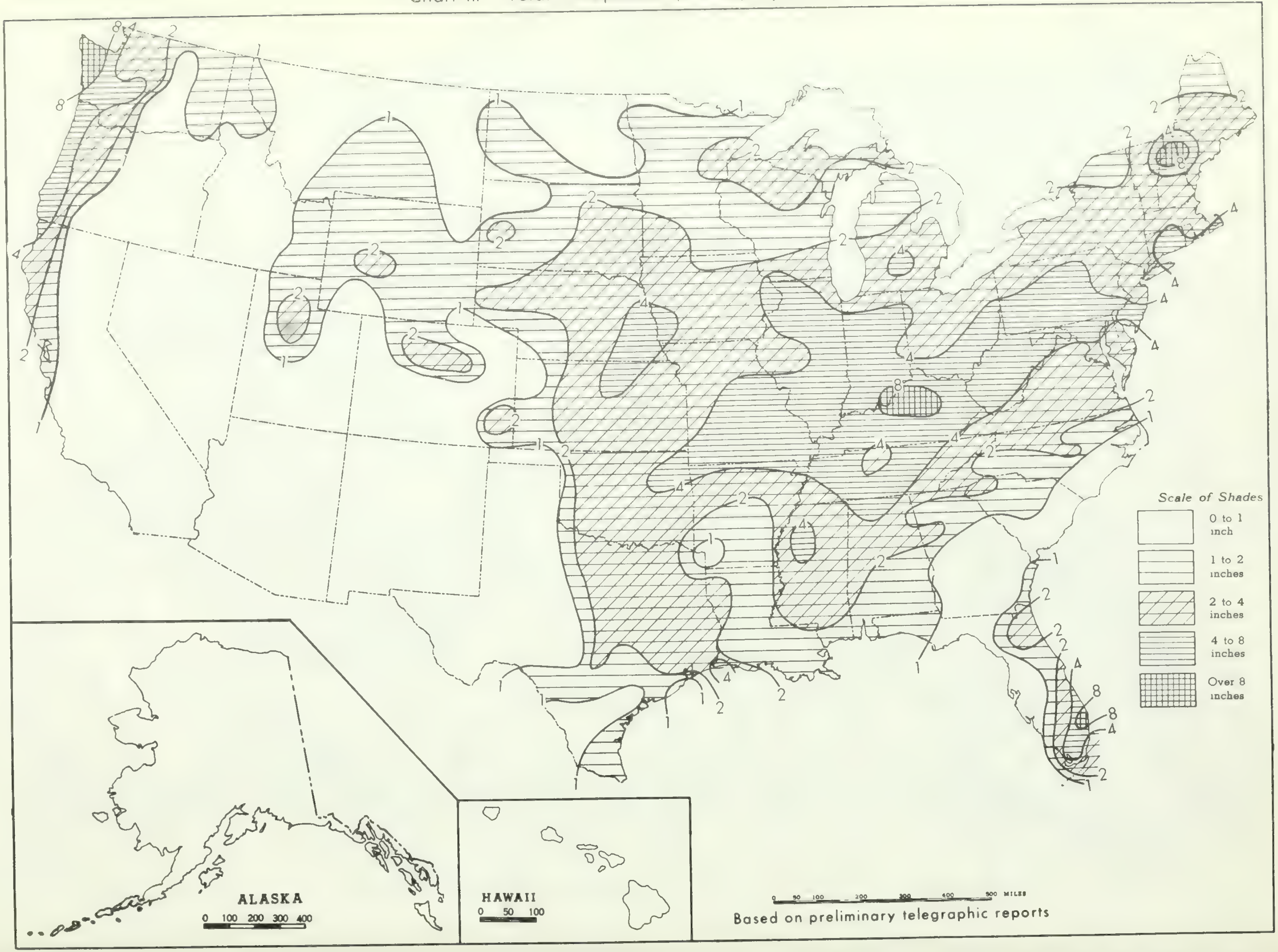

-3
3
+3
+6
6
ALASKA
0 100 300 400
HAWAII
0 50 100
Shaded Areas Normal or Above
Based on preliminary telegraphic reports

Chart II. Total Precipitation (Inches), April 1972



Based on preliminary telegraphic reports

Chart III. Percentage of Normal Precipitation, April 1972

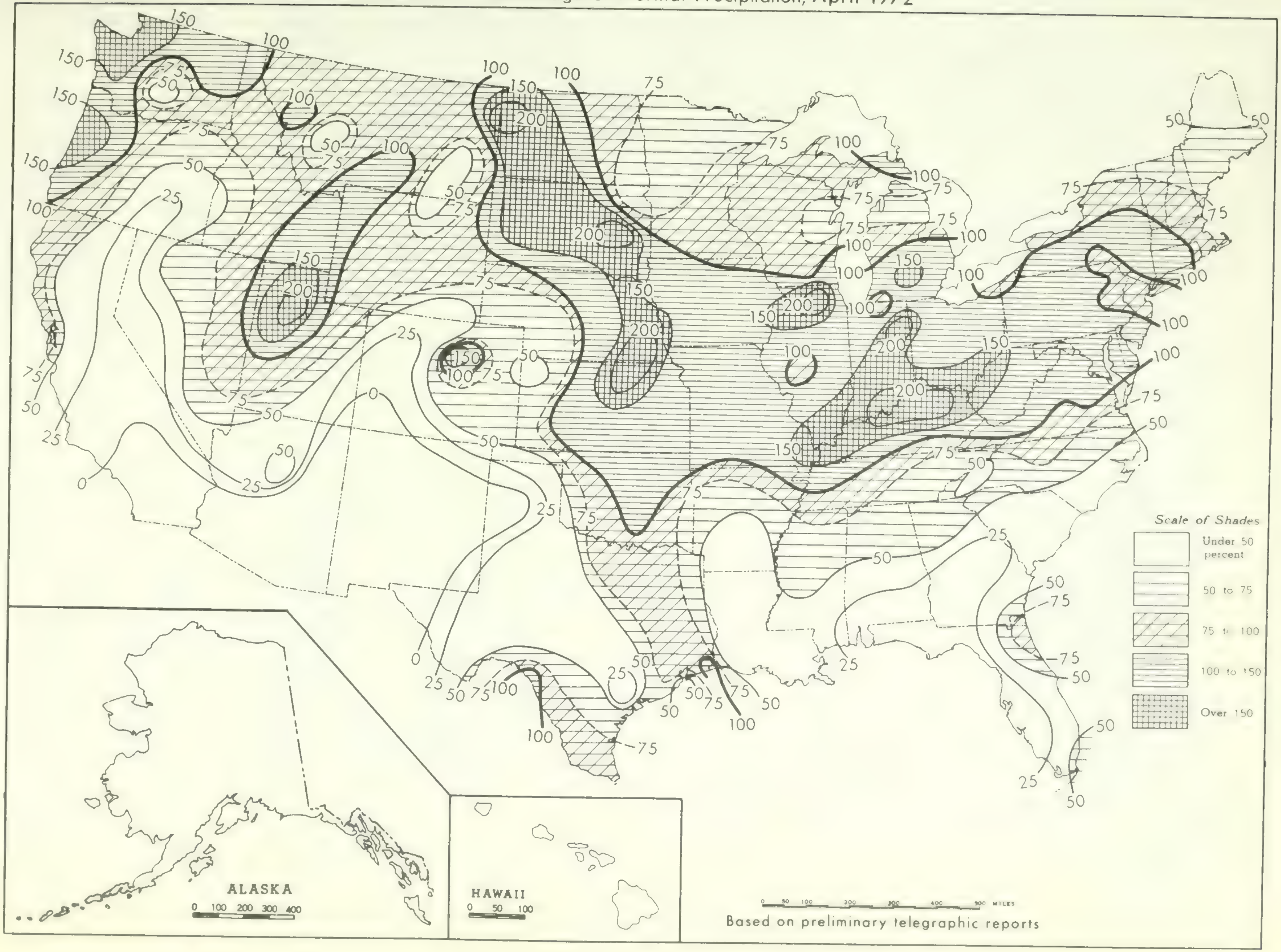
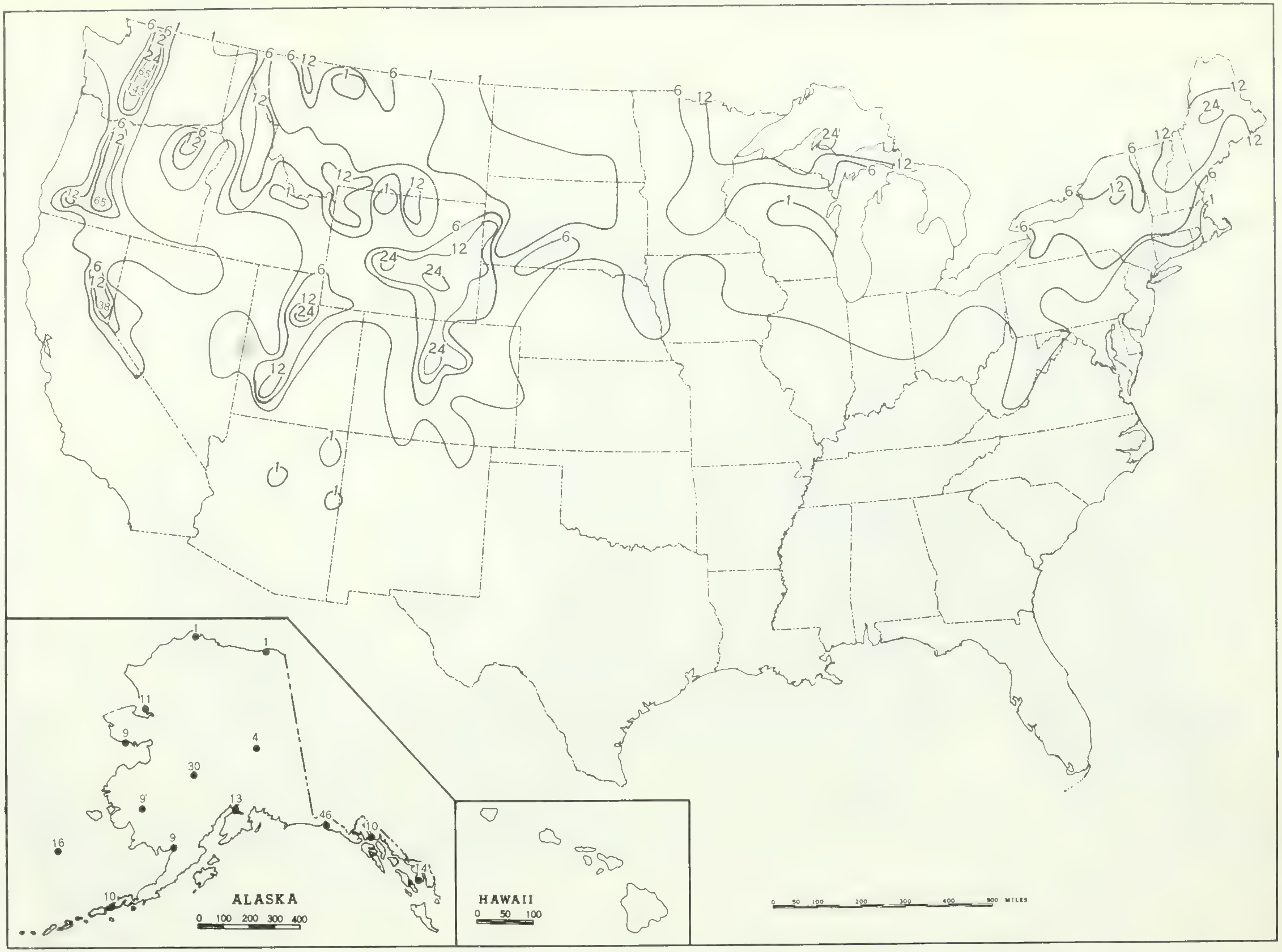
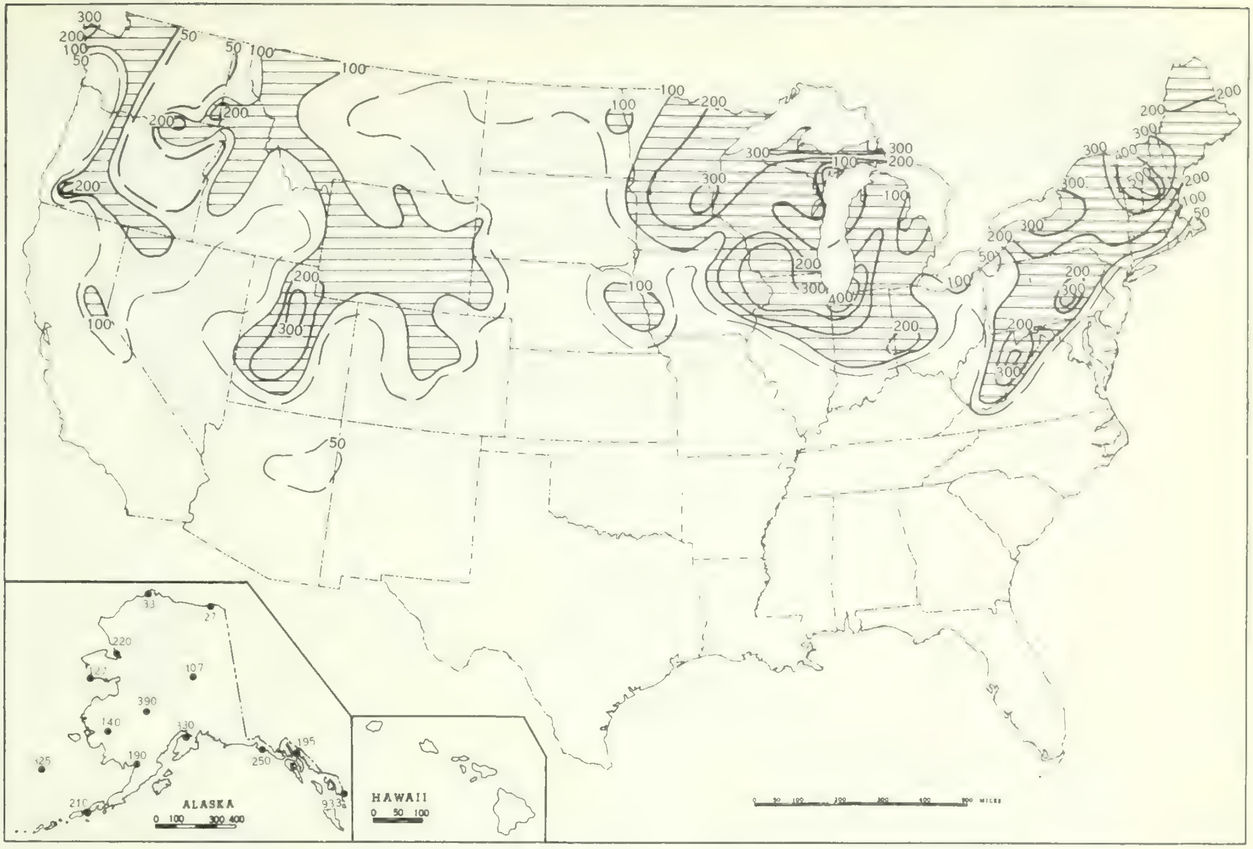


Chart IV. Total Snowfall (Inches), April 1972

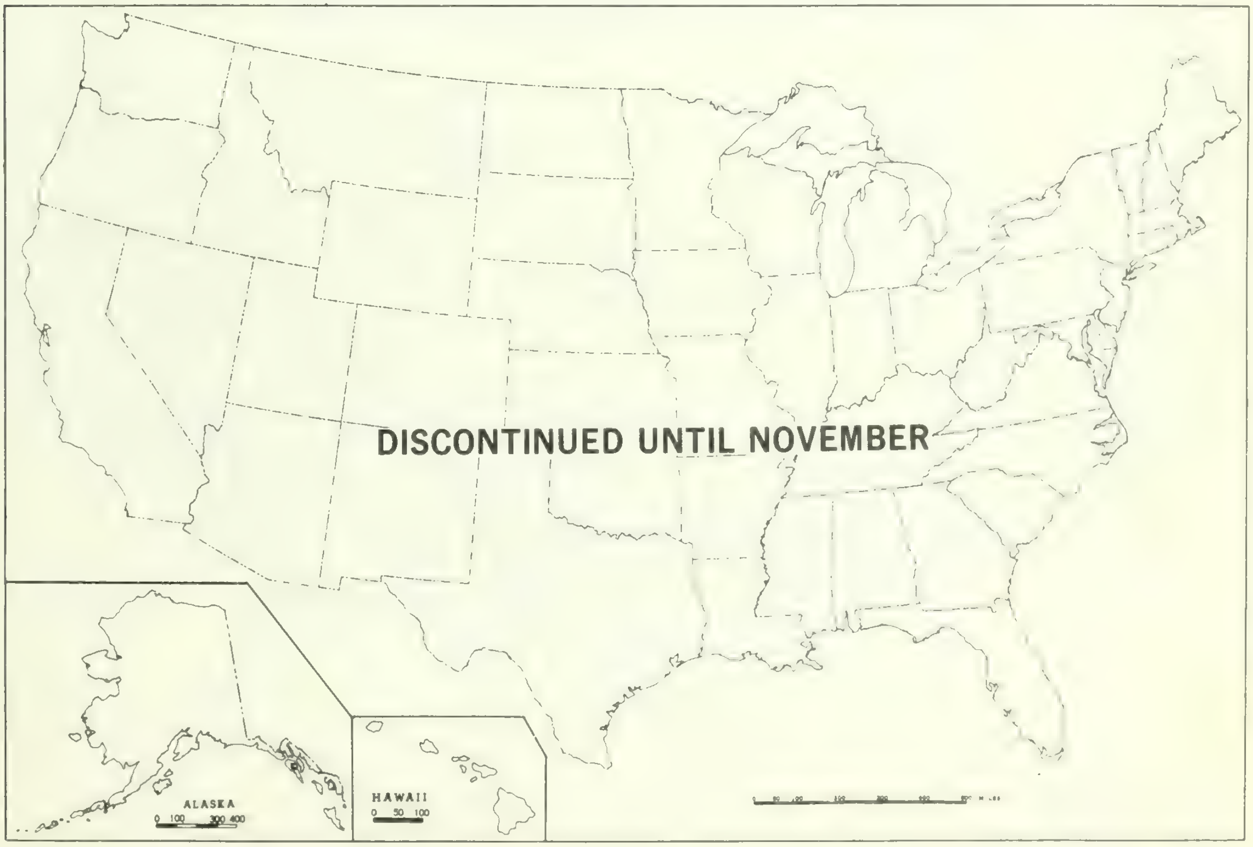


This is the total of unmelted snowfall recorded during the month at **National Weather Service** and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the Far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, April 1972

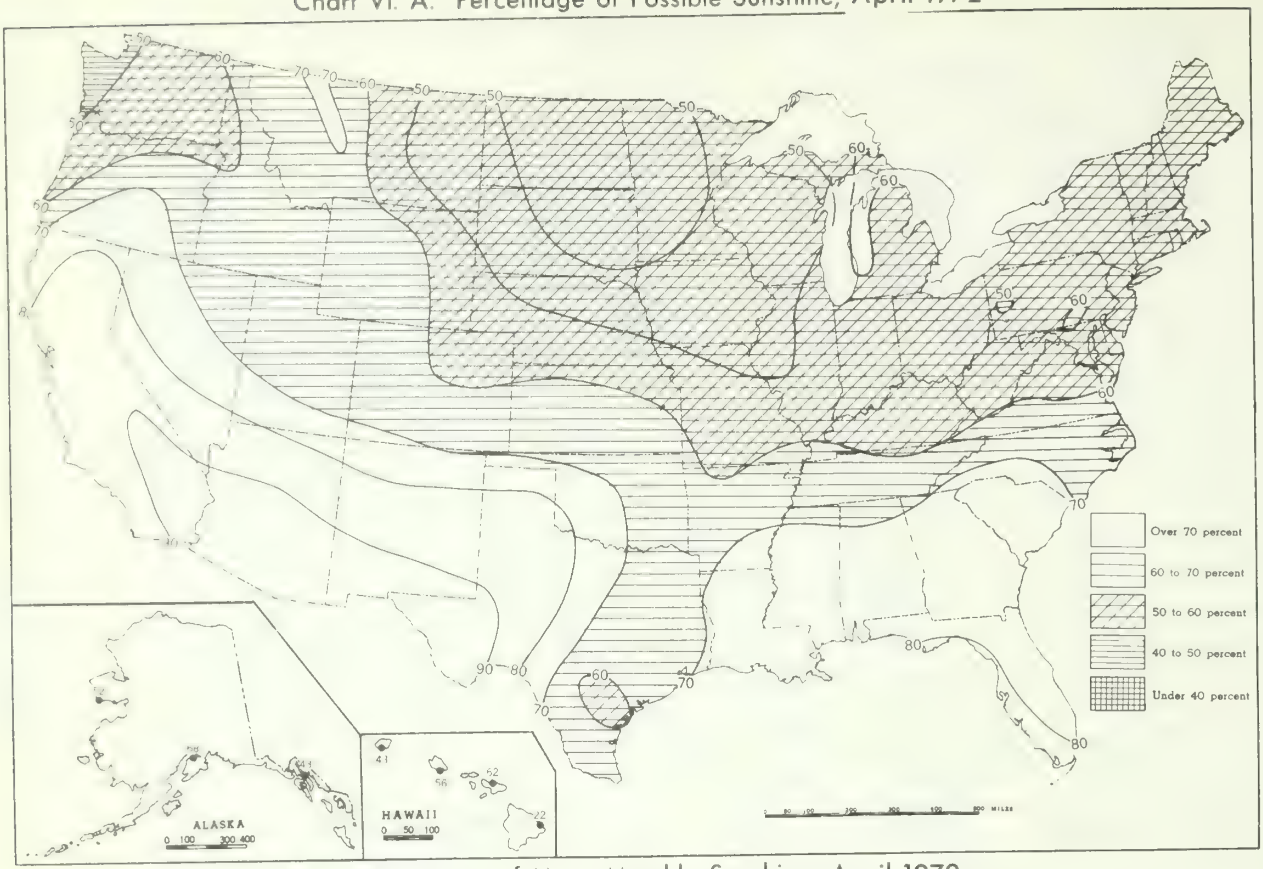


B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., April 1972

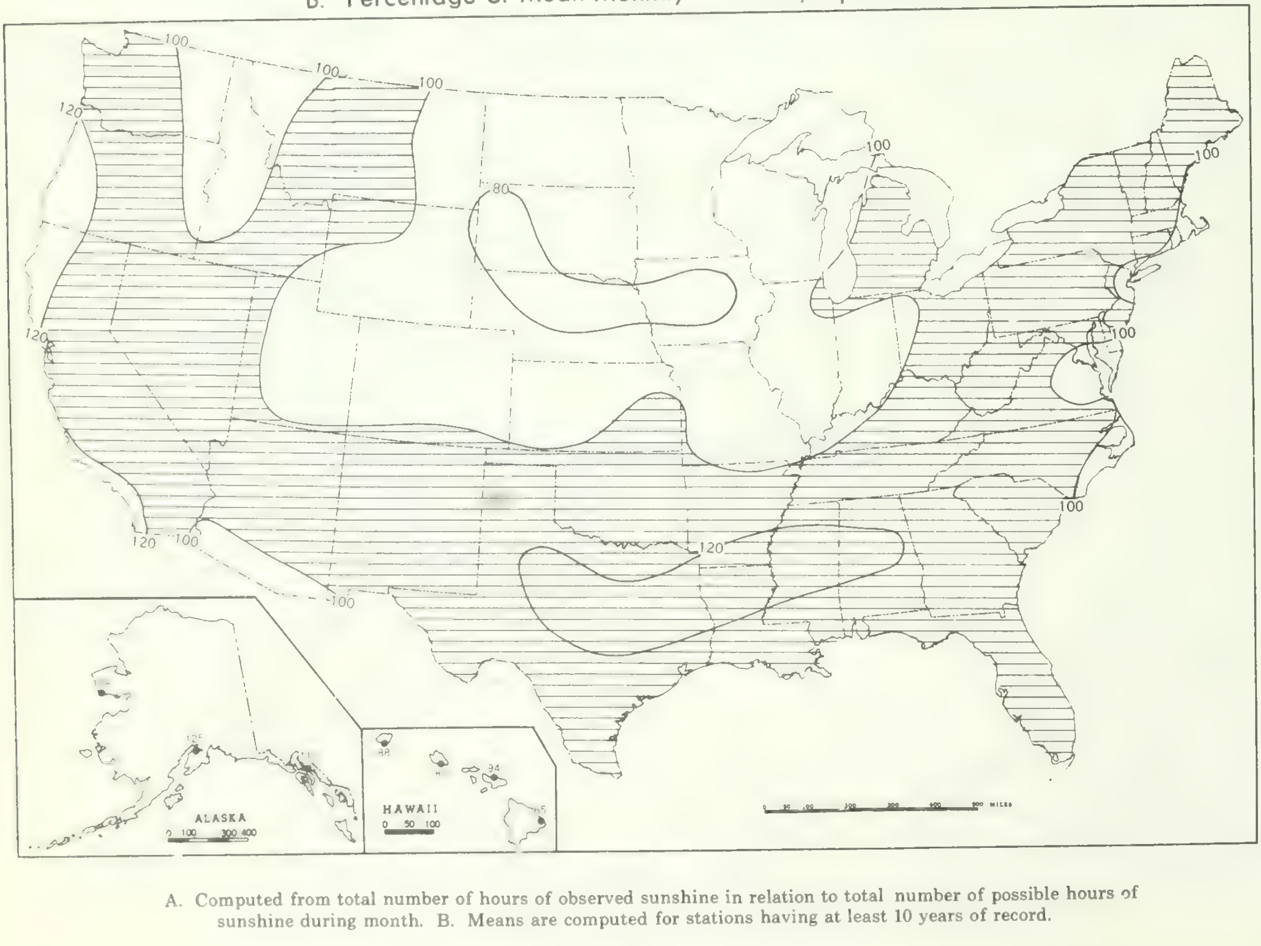


A. Amount of mean monthly snowfall is computed for **National Weather Service** stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. e.s.t., of the Monday nearest the end of the month.
It is based on reports from **National Weather Service** and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, April 1972

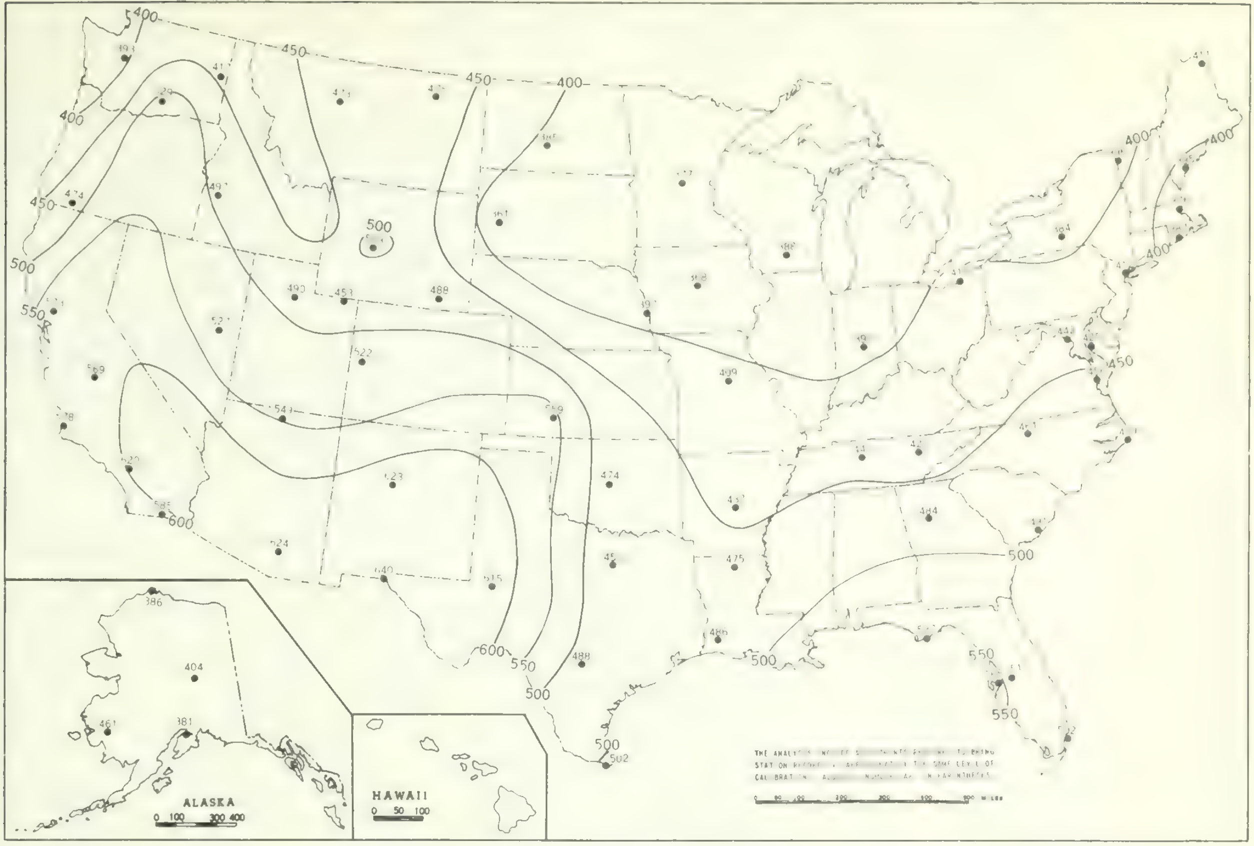


B. Percentage of Mean Monthly Sunshine, April 1972

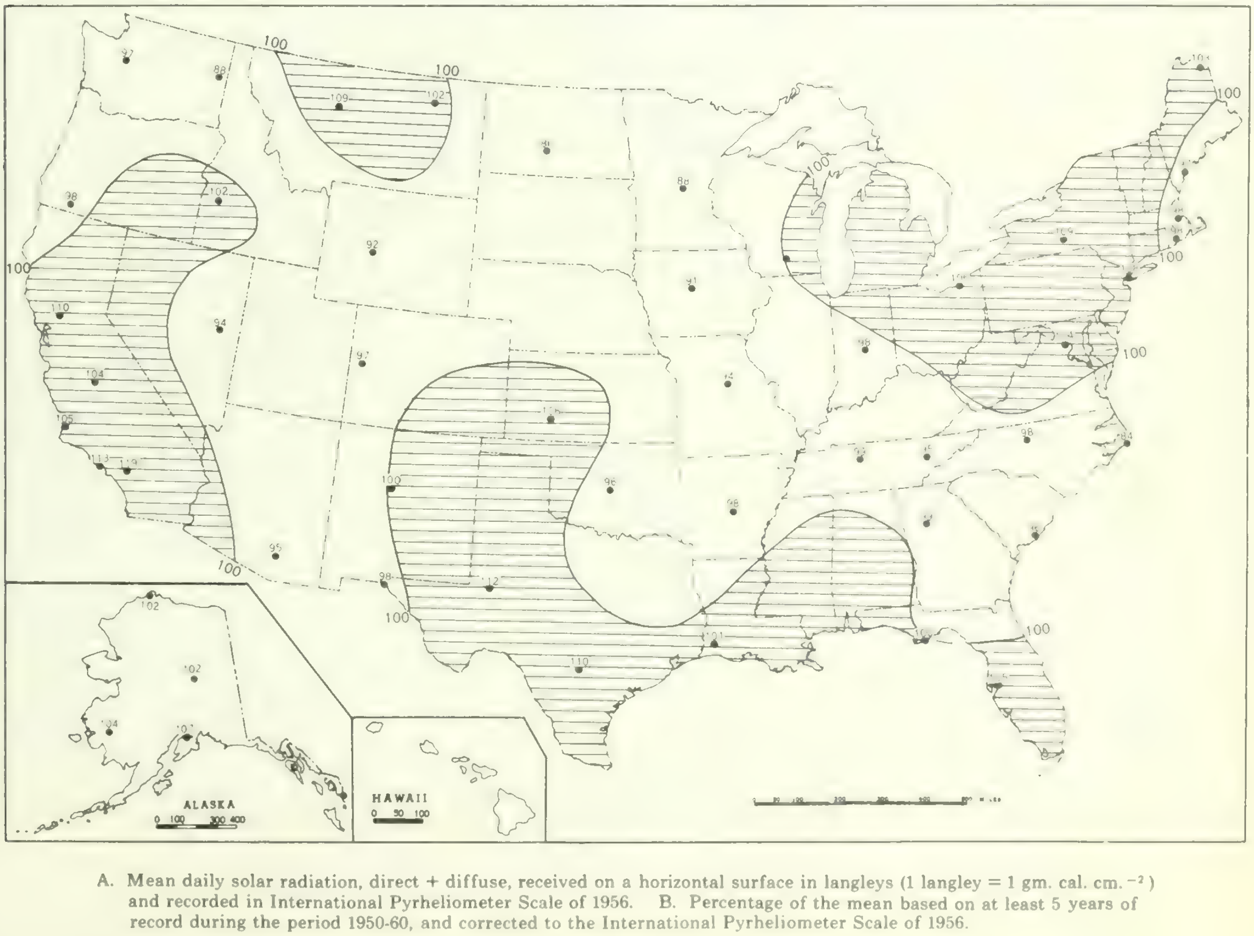


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, April 1972

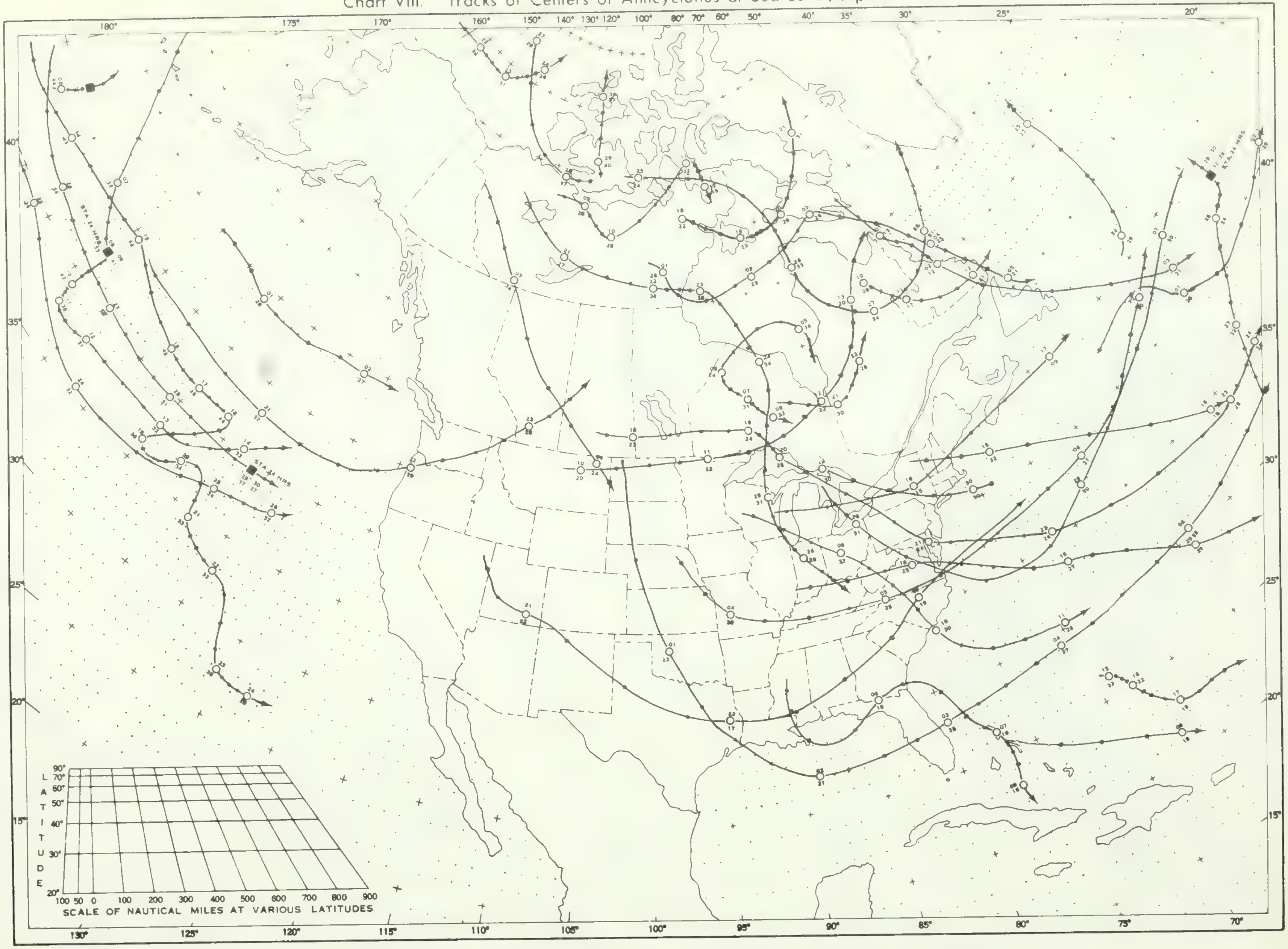


B. Percentage of Mean Daily Solar Radiation, April 1972



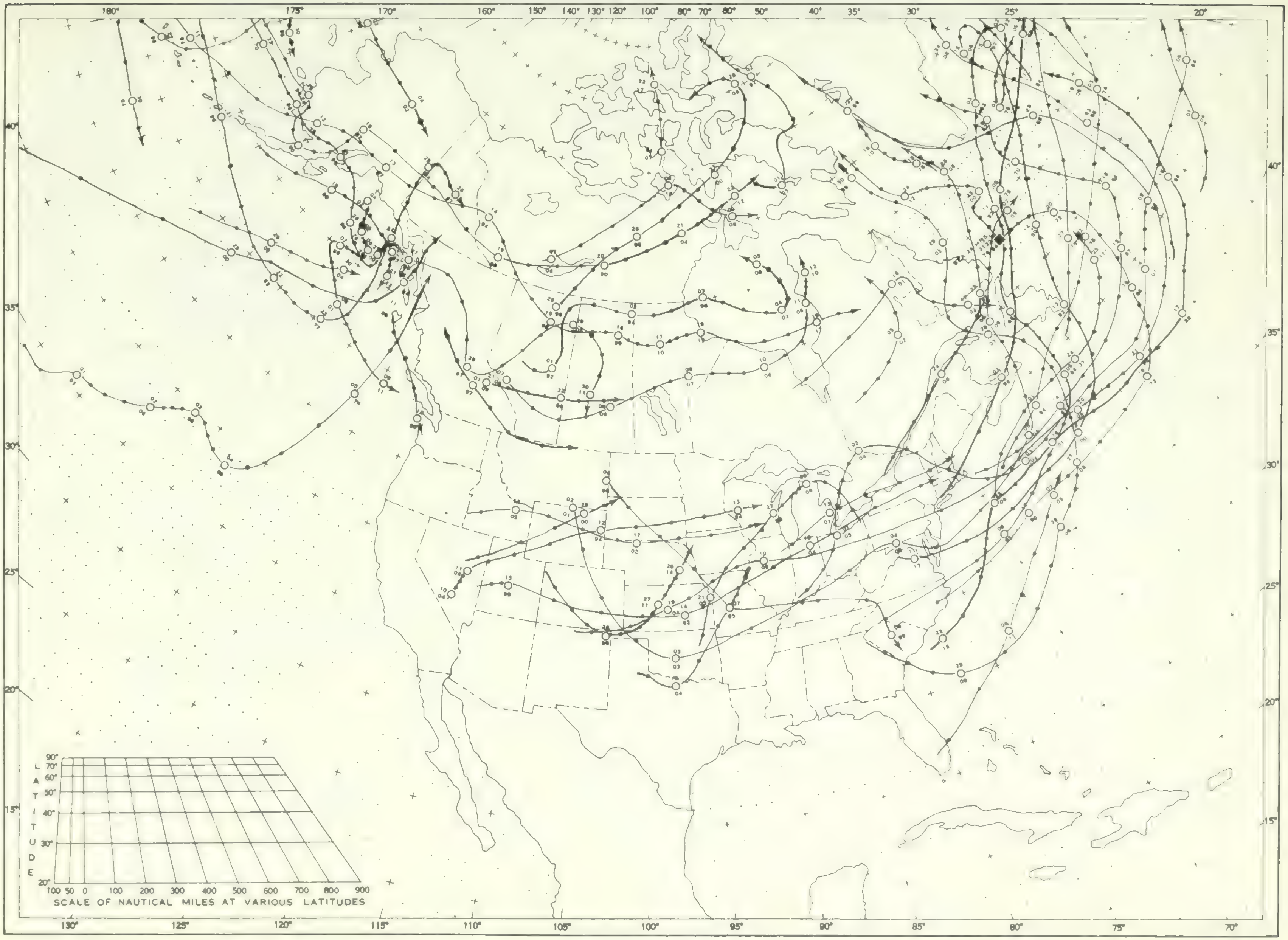
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, April 1972



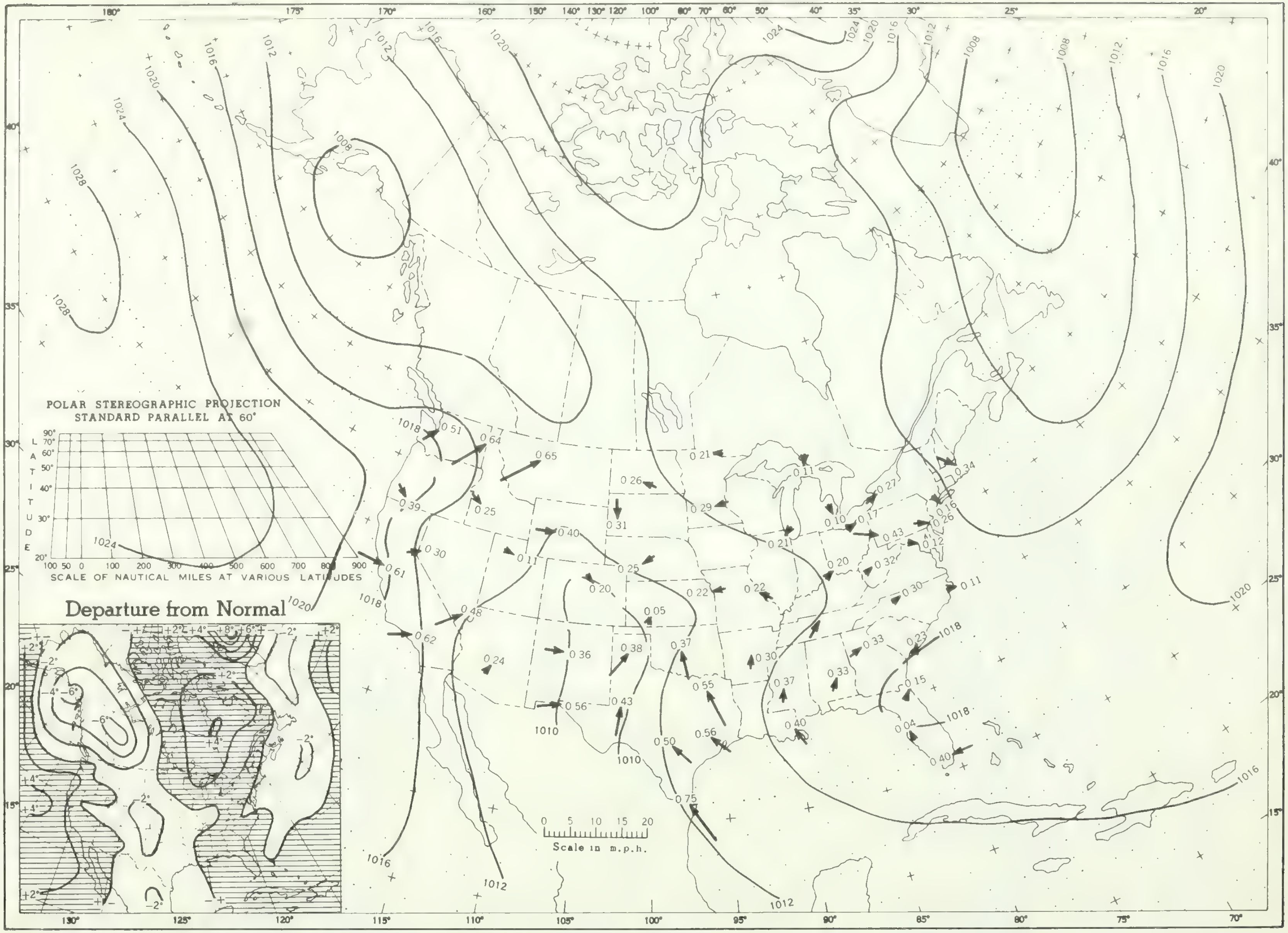
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, April 1972



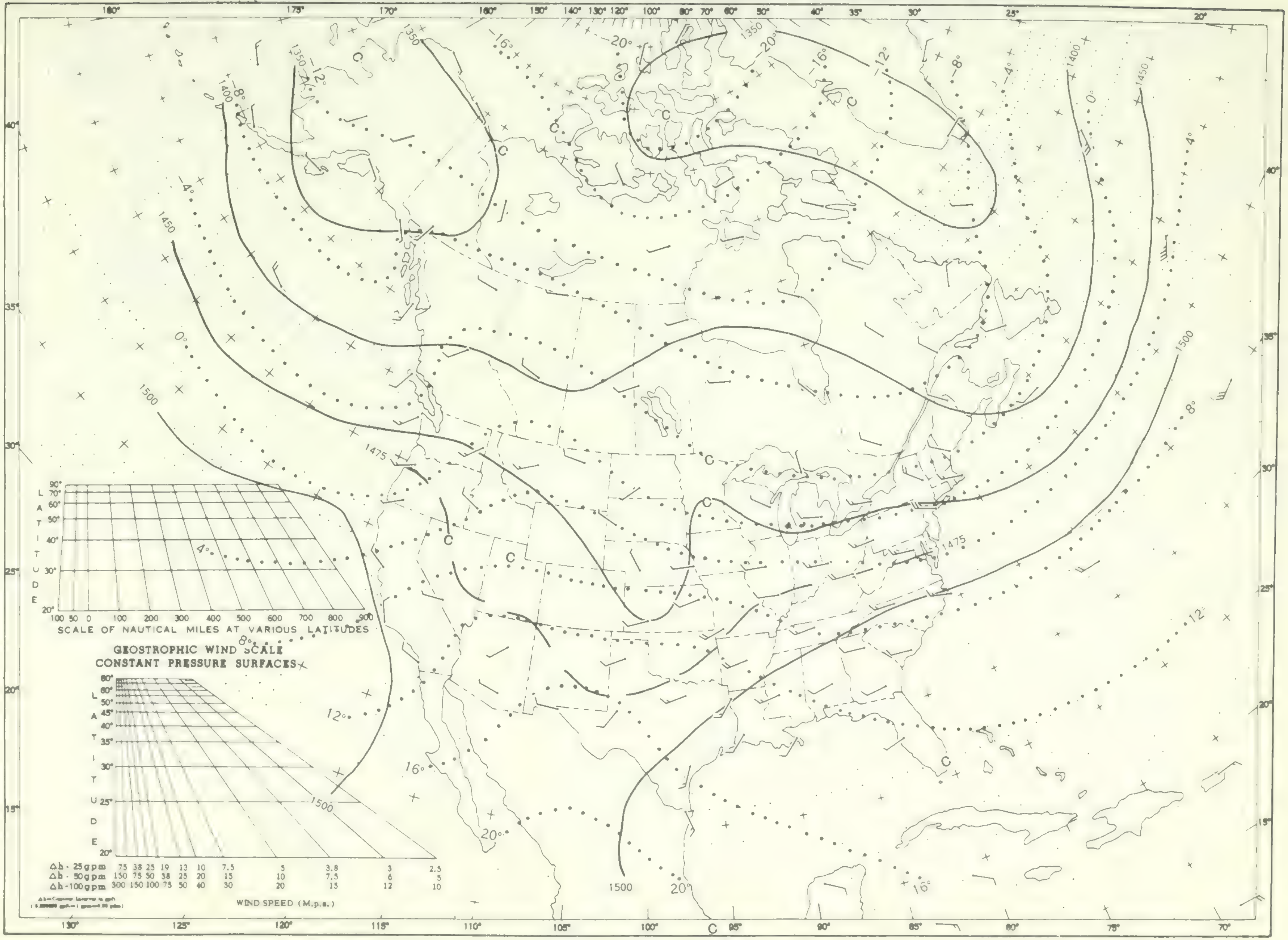
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, April 1972. Inset: Departure of Average Pressure (mb) from Normal, April 1972



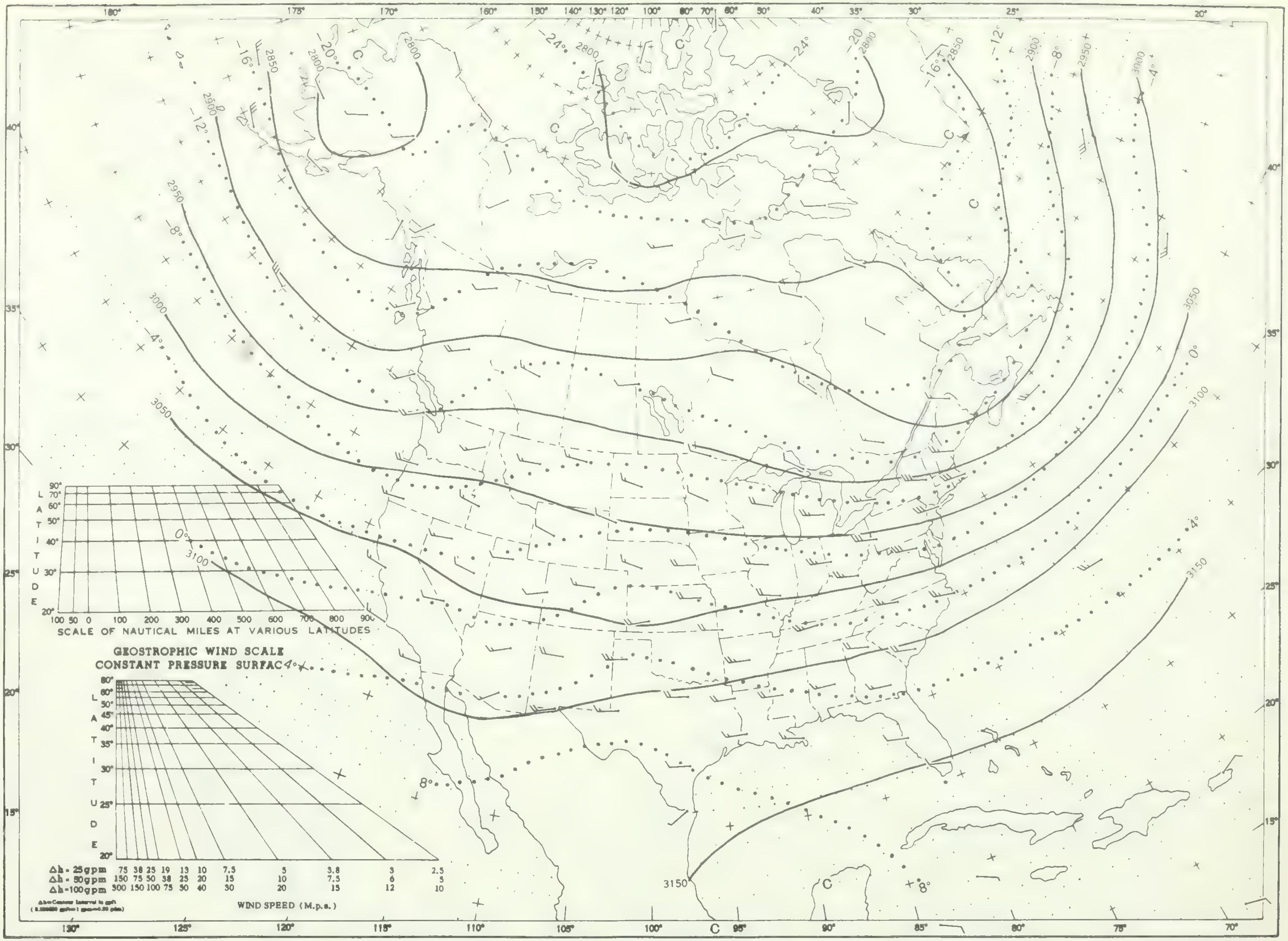
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 G.m.t., April 1972 Average Height and Temperature, and Resultant Winds



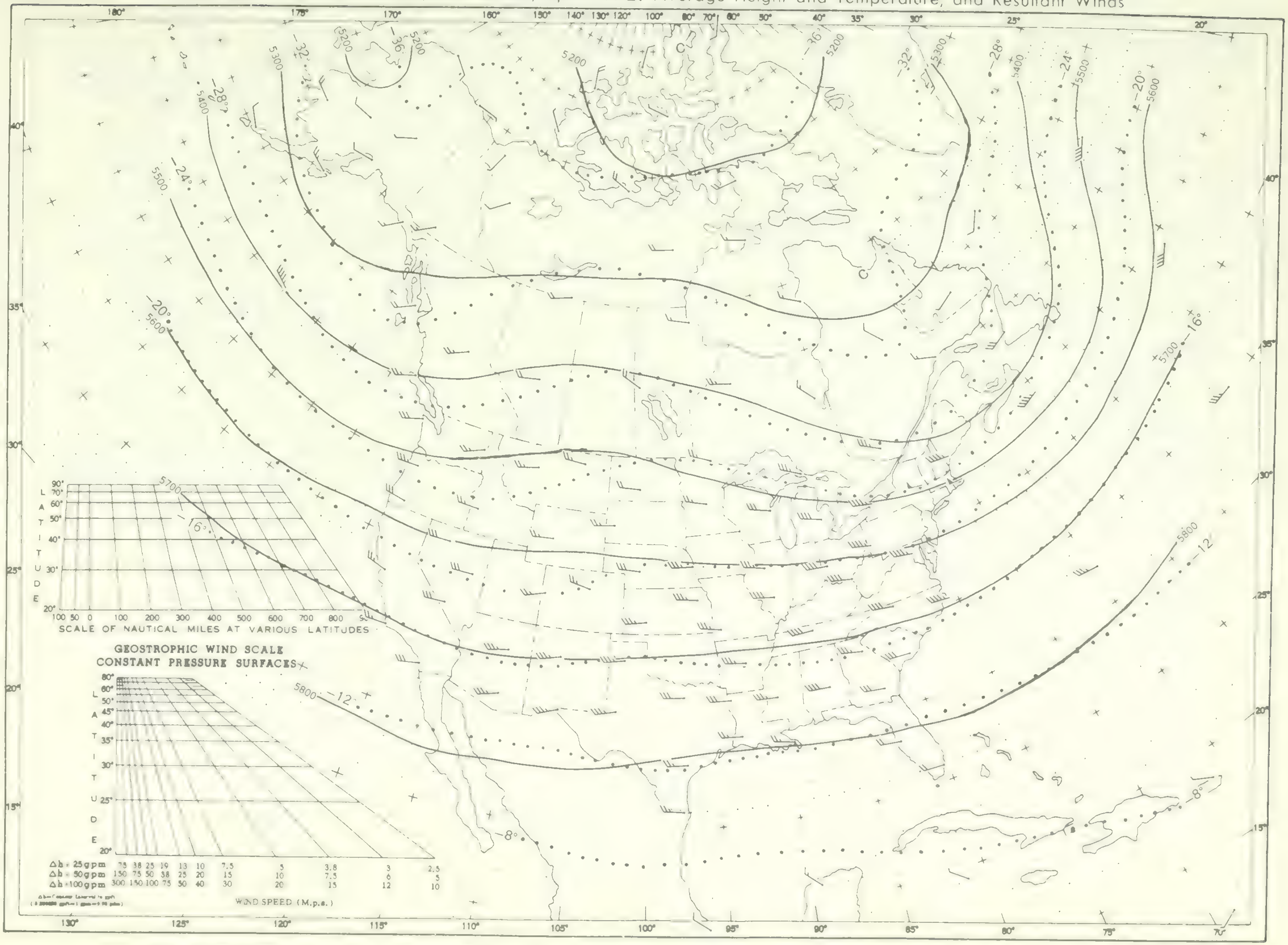
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb Surface, 1200 G.m.t., April 1972. Average Height and Temperature, and Resultant Winds



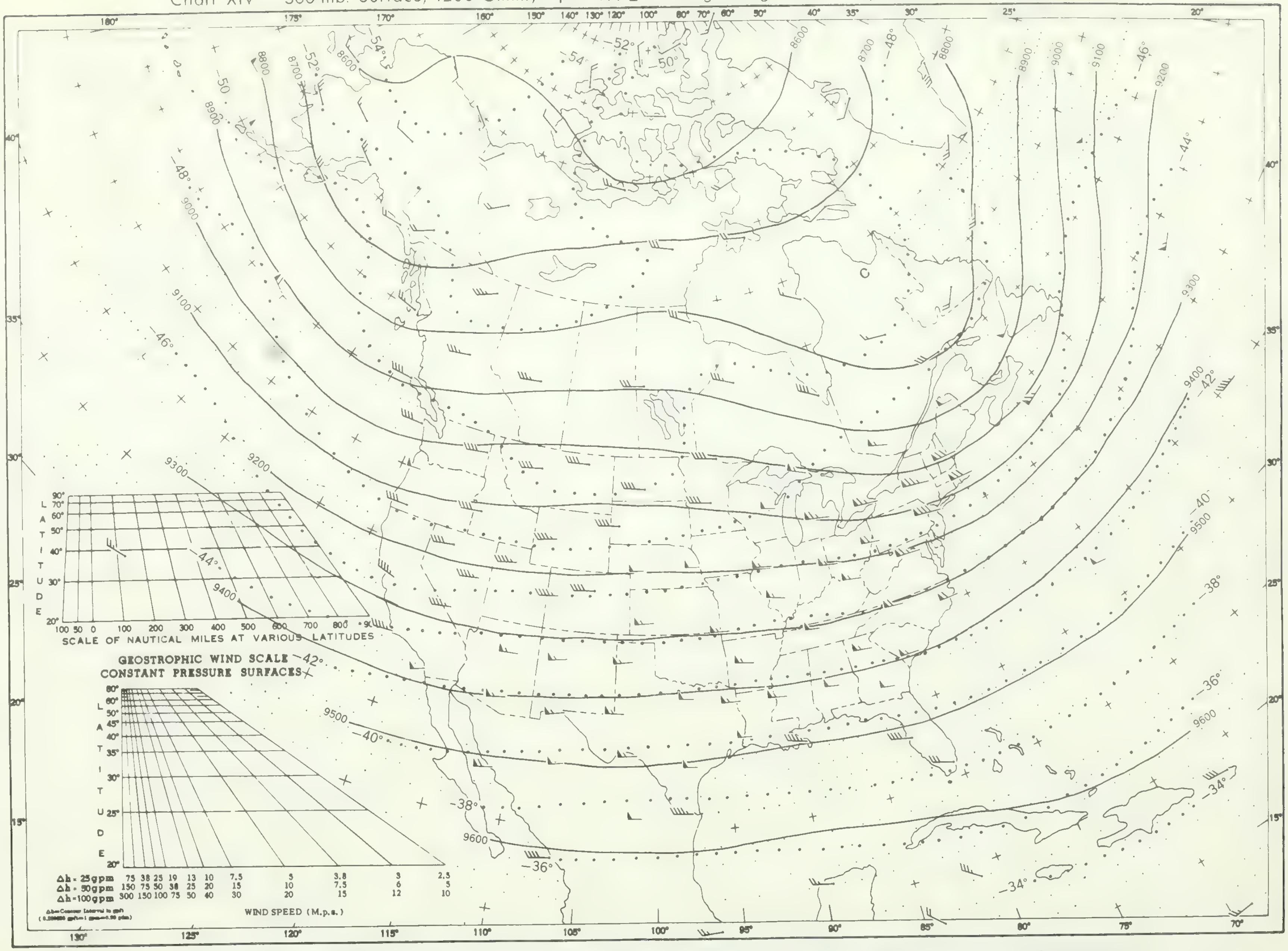
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb Surface, 1200 G.m.t., April 1972. Average Height and Temperature, and Resultant Winds



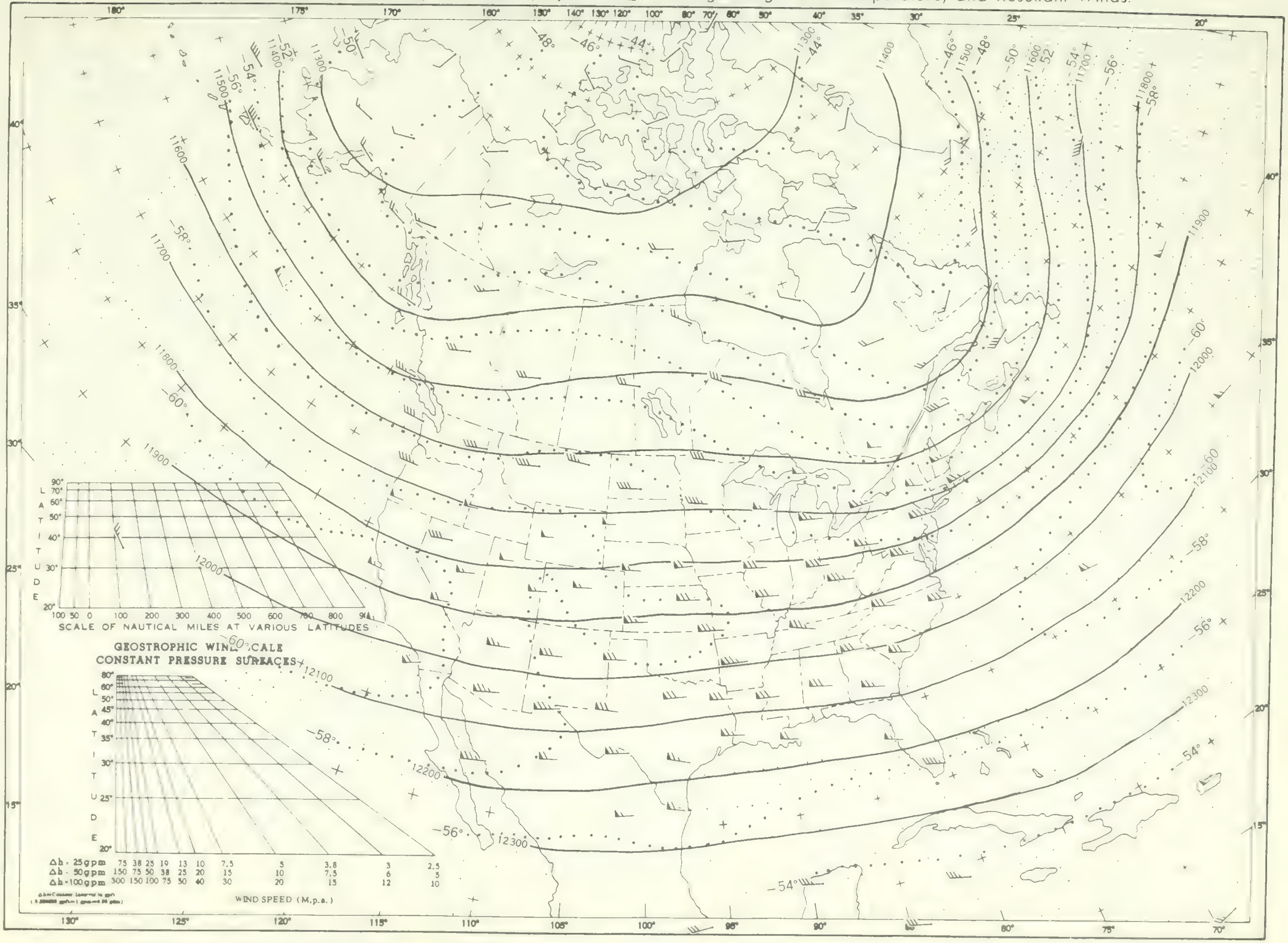
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300 mb. Surface, 1200 G.m.t., April 1972. Average Height and Temperature, and Resultant Winds



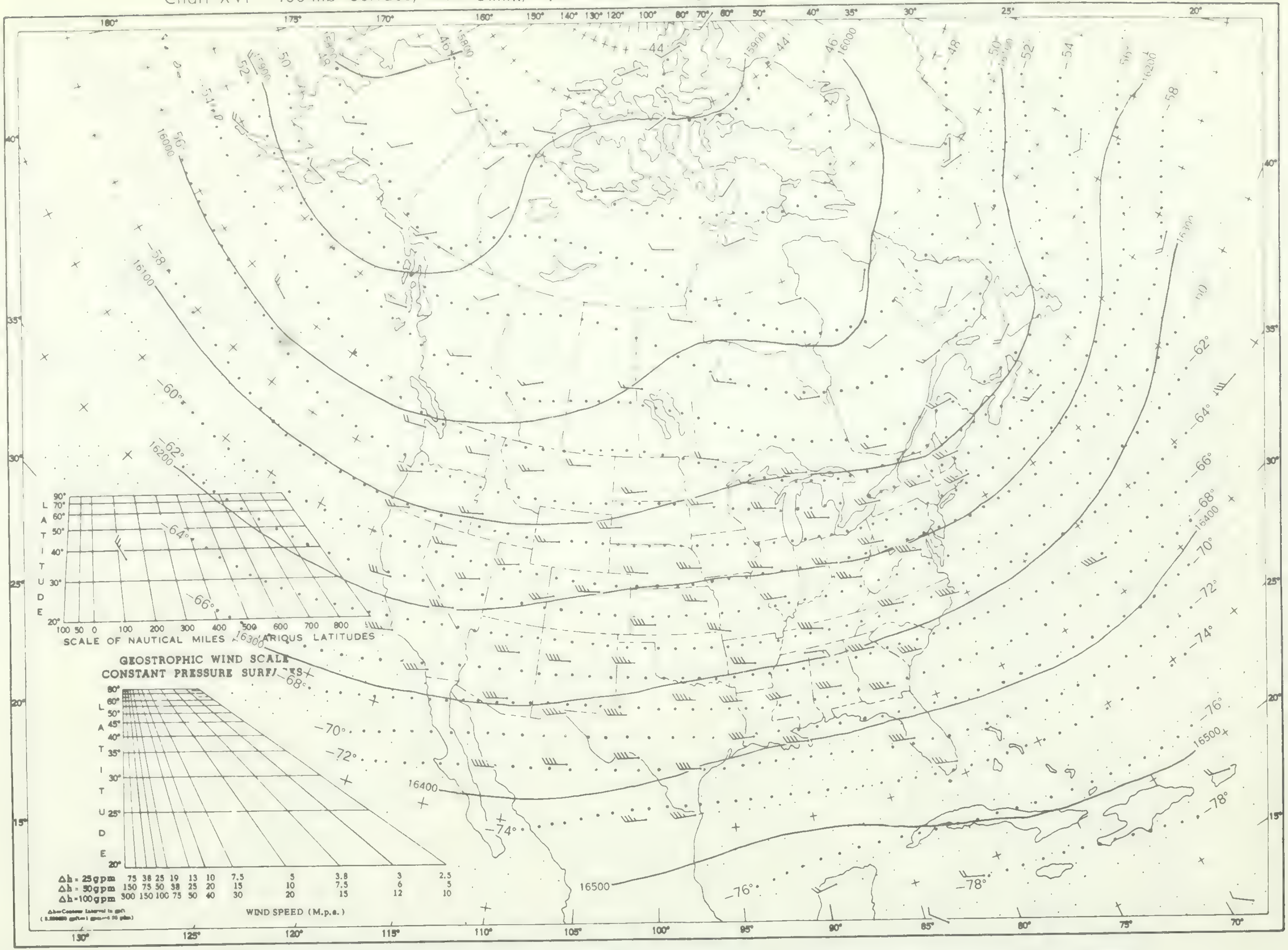
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb. Surface, 1200 G.m.t., April 1972. Average Height and Temperature, and Resultant Winds.



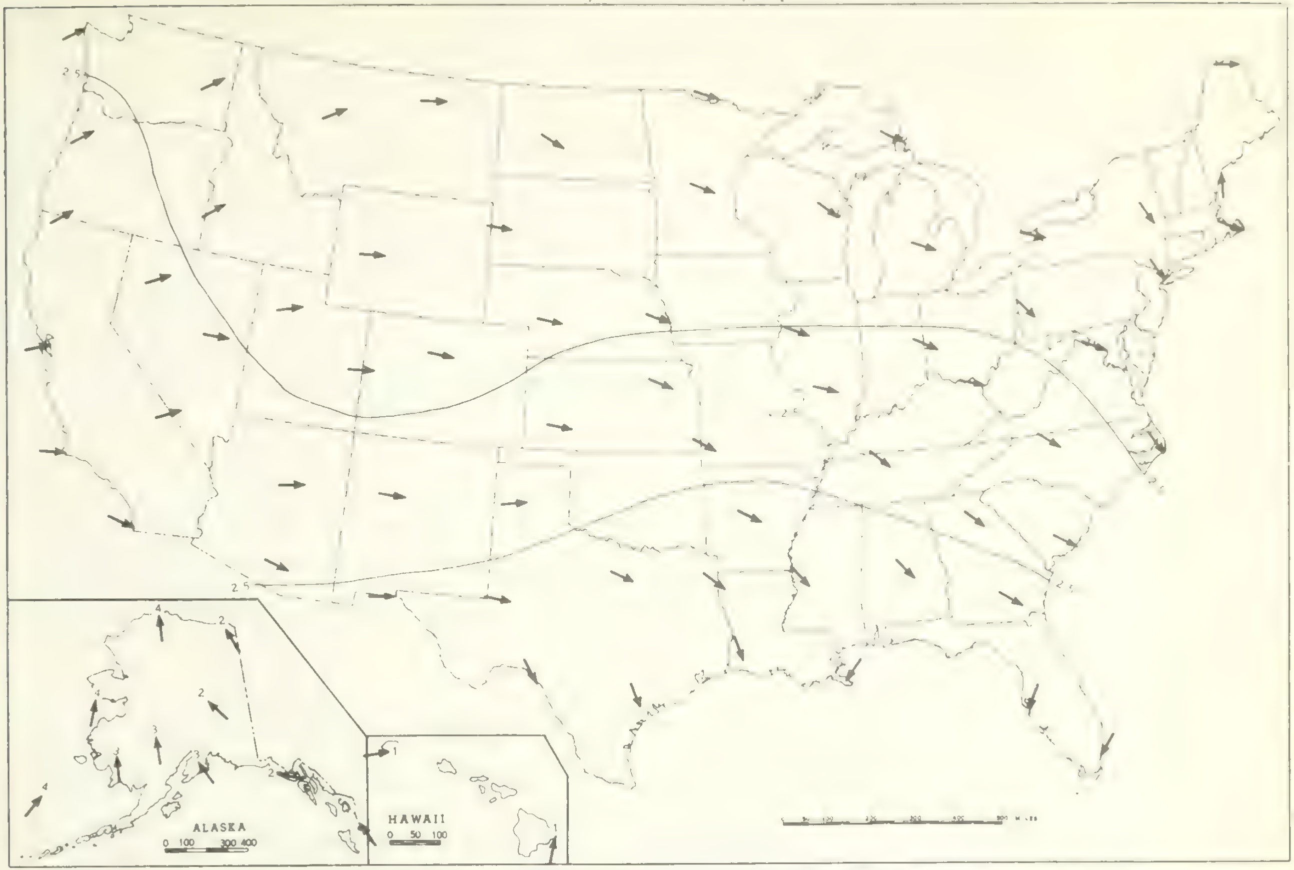
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb Surface, 1200 G.m.t., April 1972 Average Height and Temperature and Resultant Winds

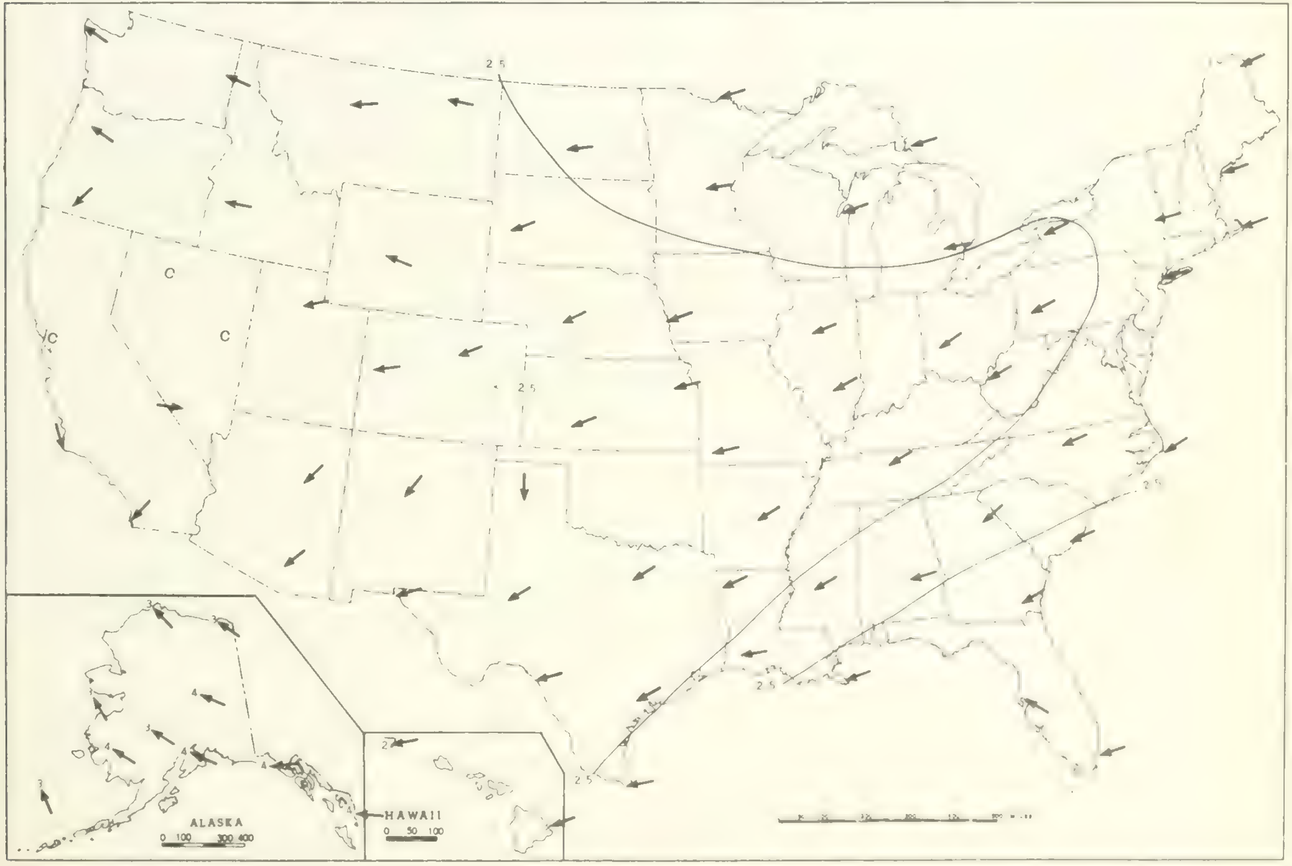

15900
16000
16100
16200
16300
16400
16500
-44°
-46°
-48
-50
-52°
-54
-56°
-58
-60°
-62°
-64°
-66°
-68°
-70°
-72°
-74°
-76°
-78°
LATITUDE
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
Δh = 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh = 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh = 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., April 1972. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., April 1972. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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William H. Haggard
Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 23 No. 5

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

MAY 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Recordbreaking warmth occurred over the northern Great Plains in the last half of May.

2. Record drought continued in the Southwest.

TEMPERATURE (° F.)-- May temperatures averaged above normal over the West and the northern States and cooler than normal across the South. Cool weather predominated during the first 2 weeks of May. The last half of the month was very warm.

Cold air spread southward over the Great Basin and the northern and central Rocky Mountains early in May. A storm centered over the central Great Plains moved toward the Great Lakes. Chilly northerly winds following the storm cooled the Great Plains and the Mississippi River Valley. Hot weather continued in the Southwestern Deserts, with temperatures reaching the nineties on most afternoons. Subfreezing temperatures occurred frequently over the Great Basin and the northern and central Rocky Mountains and occasionally in the southern Rockies. Flagstaff, Ariz., registered 22° on the 10th and Elkins, W. Va., 28° on the 11th.

High pressure prevailed over the western two-thirds of the nation at midmonth. The resulting clear skies favored radiation at night and rapid warming by day. Southerly breezes and bright sunshine pushed the temperatures into the eighties and nineties over much of the Great Plains. Nighttime temperatures over the Great Plains were balmy, mostly in the fifties and sixties. International Falls, Minn., warmed to 93° on the 17th. This is the highest temperature of record for so early in the season at International Falls. The warm weather spread eastward. Concord, N. H., recorded 86° on the 21st.

Summer heat under cloudless skies continued over most of the nation in the last week of May. Temperatures reached the eighties on most afternoons from Wisconsin and Lower Michigan to the Gulf of Mexico. Early morning temperatures ranged from near or slightly below freezing in the high Rocky Mountains and parts of the Great Basin to the forties and fifties across the northern border States to the upper sixties across the South. International Falls, Minn., averaged 16° above normal in the last half of May.

PRECIPITATION -- The Southwest continued dry through the month of May. May was the eighth consecutive month with below normal rainfall at Yuma, Ariz. At the end of May, no more than a few sprinkles had fallen at Yuma in 154 days. Similarly, only sprinkles fell at Phoenix in the first 5 months of 1972. Parts of the Northwest were also dry. In contrast, too much rain delayed planting of crops in the northern Great Plains. Also, heavy rainfall amounts occurred along the western portion of the gulf coast and over the Atlantic Coastal States from New England to northern Florida.

Early in May, a storm over the central Great Plains moved toward the Great Lakes. A cold front stretching from the storm center to Texas moved eastward to the Atlantic. Heavy thunderstorms occurred over the eastern portions of South Dakota, Nebraska, and Kansas, across Iowa to northern Illinois. Especially heavy thunderstorms soaked southern and eastern Texas and the Appalachians from northeastern Pennsylvania to northern Georgia.

Generous rains fell from the central and southern Great Plains to the Atlantic Ocean in the second week of May. Heavy thundershowers occurred over southern Texas, southern Louisiana, northward to the Ohio River Valley, and northeastward to Chesapeake Bay.

A "cloudburst," on the night of the 11th, dumped up to 10 inches of rain north of New Braunfels, Tex., sending a wall of water estimated at 30 feet in height down Blueders Creek into the Comal and Guadalupe River washing away people, houses, and automobiles. More than a dozen persons drowned, a few others were washed away and are presumed lost. Property damage was estimated at $20 million.

At midmonth, a low was centered over Lower Michigan. From this low, a cold front trailed southward to the Gulf of Mexico. As the system moved eastward, it dampened much of the area from the Great Lakes to the Atlantic Ocean and southward to the Florida Peninsula. About 6 inches fell at Miami, Fla., on the 18th and 19th. Scattered thunderstorms occurred over a large area from the Dakotas to northeastern Texas in the last week of May. The eastern third of the nation received a generous soaking in the last few days of the month.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

MAY 1972

STATE	Temperature							Precipitation			
	Monthly extremes							Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Mobile WSO AP	95	23	Brewton 3 SSE	47	5+	Atmore 1 SW	9.57	Geneva	1.26
Alaska	Annette WSO AP	77	28	Happy Valley Camp	- 9	17	Mac Leod Harbor	21.98	5 Stations	.00
Arizona	Buckeye	108	29+	Sunrise Mountain	12	22	Santa Rosa School	1.81	39 Stations	.00
Arkansas	8 Stations	[illegible]	28+	2 Stations	39	10+	Mount Ida 3 SE	6.37	Perry	.84
California	Death Valley	113	30	White Mountain 2	7	22+	Lakeshore	2.84	103 Stations	.00
Colorado	Holly	98	22	Berthoud Pass	- 3	1	Stonington	6.31	2 Stations	.00
Connecticut	Falls Village	89	28	Falls Village	27	11	Hartford WSO AP	7.49	Bulls Bridge Dam	3.24
Delaware	Wilmington NEWC WSO AP	87	24	Newark University Farm	35	11	Milford 2 WSW	5.54	Middletown 1 WSW	3.40
Florida	La Belle	98	15	2 Stations	42	5	Miami WSO AP	13.71	Bradenton 5 ESE	.81
Georgia	[illegible]	91	26	Blairsville Exp Sta	37	12	Helen 1 ESE	10.06	Fitzgerald	1.03
Hawaii	4 Stations	89	22+	Mauna Loa Slope Obs,Hawaii	29	8+	Kipa 89.2, Hawaii	11.18	18 Stations	.00
Idaho	2 Stations	99	31	Dixie	4	1	Pierce	3.86	Atlanta	.04
Illinois	Barrington 1 SE	95	21	Wheaton 3 SE	29	10	Lincoln	7.32	McLeansboro 2 E	.82
Indiana	New Whiteland	95	25	Ogden Dunes	30	10	Jeffersonville	6.10	Edwardsport Power Pl	1.21
Iowa	Carroll 2 SSW	93	22+	Britt	30	5	Inwood 2 SW	8.57	Fort Madison	1.96
Kansas	Leoti 2 S	96	17	2 Stations	27	3	Inman	8.76	Johnson 11 ESE	1.77
Kentucky	3 Stations	93	27+	Falmouth [illegible] SNW	30	10	Covington WSO AP	6.02	Calhoun Lock 2	1.95
Louisiana	14 Stations	94	29+	Homer Exp Station	41	4	Galliano	17.85	Simpson 10 ESE	2.00
Maine	2 Stations	91	29+	2 Stations	16	2	Jonesboro	4.24	Fort Kent	1.70
Maryland	Cumberland	89	7	Oakland 1 SE	27	11	Williamsport	7.36	Elkton	2.37
Massachusetts	2 Stations	90	29+	Chester 2	24	26	Chester 2	9.78	Birch Hill Dam	3.77
Michigan	5 Stations	91	25+	Vanderbilt Trout Sta	18	10	Hillsdale	4.65	Higgins Lake	.76
Minnesota	Cambridge St Hospital	98	17	Wannaska 8 SE	18	7	Luverne	7.97	Argyle 4 E	.64
Mississippi	Beizoni	97	24	University	41	10	Pascagoula 2 ENE	16.68	Shuqualak	1.35
Missouri	Kennett Radio KBOA	96	22	2 Stations	33	9	Macon	6.96	Siloam Springs	.82
Montana	5 Stations	96	31+	Philipsburg Ranger Sta	8	1	Plentywood	6.09	Browning	.47
Nebraska	Benkleman	94	22	Nenzel 20 S	18	7	Wahoo	11.35	Dalton	.66
Nevada	Sunrise Manr Las Vegas	106	29	Jiggs 13 N	11	1	Topaz Lake	1.54	8 Stations	.00
New Hampshire	Windham 3 NW	91	28	Mount Washington	13	10	Milford	6.54	Jefferson 5 SSW	2.01
New Jersey	5 Stations	88	25+	Flemington 1 NE	28	6	Paterson	10.03	Woodstown	2.99
New Mexico	Bitter Lakes WL Ref	100	22	2 Stations	14	2	Amistad 1 SSW	5.63	8 Stations	.00
New York	4 Stations	90	30	Stillwater Reservoir	22	6	Suffern Water Works	9.89	Watertown FAA AP	1.08
North Carolina	3 Stations	87	25+	Grandfather Mountain	30	10	Lake Toxaway 2 SW	16.77	Red Springs	2.60
North Dakota	3 Stations	95	18+	Watford City	18	6	Hebron	8.03	Grand Forks University	.40
Ohio	Ironton	92	25	Tom Jenkins Lake	27	11	Bellefontaine Sewage	7.27	Middlebourne	1.40
Oklahoma	2 Stations	97	17+	Kenton	31	3	Hooker 1 N	10.71	Mustogee	1.11
Oregon	Ontario KSRV	102	30	2 Stations	13	1	Silver Creek Falls	5.74	Vale	.04
Pennsylvania	3 Stations	91	25	Clermont 1 NW	20	11	Newport	8.43	Creekside	1.07
Puerto Rico	Manati 2 E	96	26	Adjuntas Substation	54	15+	Pico Del Este	12.72	San German 4 W	.39
Rhode Island	North Scituate 4 W	81	28	Kingston	30	27	Kingston	6.91	Block Island WSO AP	4.73
South Carolina	2 Stations	89	30	Union 8 SW	39	12	Hogback Mountain	11.68	Pageland 2 WSW	3.44
South Dakota	Interior 3 NE	94	17	Deerfield 4 NW	18	7+	Yankton 3 N	11.69	Hot Springs	2.11
Tennessee	3 Stations	93	22	Mountain City No 2	33	12+	Lawrenceburg Filt Pl	7.41	Bolton	2.11
Texas	Candelaria	107	21	Dalhart FAA AP	33	1	Cuero 3 E	18.06	La Tuna 1 S	.02
Utah	3 Stations	98	30+	3 Stations	10	1	Strawberry Res E Prtl	.97	22 Stations	.00
Vermont	3 Stations	89	29	Morrisville 2	17	8	Wardsboro	7.69	South Newbury	2.32
Virginia	Chase City	98	31	Blacksburg 3 SE	28	27	Philpot Dam 2	10.00	Newport News Press Bld	2.57
Washington	9 Stations	97	30+	2 Stations	20	1	Conconully	4.84	Port Angeles	.10
West Virginia	Williamson	93	26	2 Stations	24	11	Pickens 1	7.41	Wellsburg 3 NE	1.57
Wisconsin	Mauston 1 SE	94	20	Madeline Island	22	1	Drummond 6 W	5.00	Green Bay WSO AP	.82
Wyoming	Arvada 3 N	93	16	Lake Yellowstone	0	1	Alva 5 SE	4.86	Evanston 1 E	.07
ALASKA Mar 1972	Kake	59	30	2 Stations	-55	9	Little Port Walter	23.47	3 Stations	.00
Hawaii Mar 1972	Hilo WSO 87 AP, Hawaii	93	23	Mauna Loa Slope Obs,Hawaii	25	30	Panileihulu 259.2,Maui	16.23	Puu oo 82, Hawaii	.56

+ Also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No of days (sunrise to sunset)				
												No of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 90 F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F	F.		F				F	%	In.	In.	In.			In.	In.	M.p.h		M.p.h							%
ALABAMA																																
BIRMINGHAM	620	992.9	1015.1	78	56	67.2	-4.6	86	22	46	5+	0	0	57	71	3.82	0.40	2.15	9	4	0.0	0	0.9	4	25	W	24	12	8	11	5.5	70
HUNTSVILLE	624	992.2	1015.0	78	56	66.5	-3.9	86	22	45	4	0	0	56	71	3.53	0.14	1.32	10	3	0.0	0	1.1	7	32	27	14	13	8	10	5.3	
MOBILE	211	1006.1	1014.0	85	64	74.7	-.9	95	23	56	5	6	0	63	72	7.72	2.84	4.47	9	7	0.0	0	2.1	3	23	9	13	10	10	11	5.9	
MONTGOMERY	183	1007.1	1014.5	82	60	71.0	-1.4	88	30+	50	5	0	0	60	70	1.70	-1.77	0.74	8	2	0.0	0	1.5	1	20	N	27+	7	13	11	5.9	53
ALASKA																																
ANCHORAGE	114	1008.8	1013.8	49	37	43.3	-4.1	61	30	31	2	0	2	33	69	0.81	0.29	0.22	11	0	T	3	3.7	18	29	16	6	5	1	25	8.2	47
ANNETTE	110	1014.2	1018.3	58	41	49.0	-.2	77	28	34	23	6	0	38	71	5.18	-1.89	1.63	13	0	0.0	0	1.1	16	29	14	30	1	12	18	7.5	
BARROW	31	1019.0	1019.8	23	13	18.1	-.3	35	29+	-2	4	0	31	15	86	0.06	-0.06	0.02	5	0	1.3	7	7.8	9	28	11	26+	2	6	23	8.3	
BARTER ISLAND	39	1017.6	1019.7	25	12	18.8	-1.9	36	28+	-3	15+	0	31	17	89	0.45	0.20	0.20	7	0	4.2	16	6.2	8	32	10	27	6	8	17	7.0	
BETHEL	125	1005.8	1011.7	44	30	37.2	-1.8	58	25	24	1	0	25	30	78	0.53	-0.42	0.24	7	0	1.6	9	2.3	9	29	18	6	3	8	20	7.5	
BETTLES	644			52	34	42.6		70	31	20	11	1	14			0.25		0.14	4	0	0.7	39			20	2	27					
BIG DELTA	1268			55	36	45.3		71	30	20	16	1	12			0.35		0.16	3	0	2.0	7			32	20	18	5	9	17	6.9	
COLD BAY	96	1004.4	1008.2	44	33	38.6	-.9	59	29	26	15	0	16	34	88	2.06	-0.23	0.72	12	0	1.4	T	7.7	16	42	16	22+	1	4	26	8.7	
FAIRBANKS	436	995.9	1012.9	58	37	47.4	.3	70	26	26	3	1	7	29	51	0.35	-0.36	0.32	3	0	0.0	2	1.2	35	24	4	10+	5	10	16	7.0	
GULKANA	1572			52	32	42.1		69	29	14	2	0	19			0.57		0.21	8	0	0.4	24	5.5	19	29	17	18	5	7	19	6.8	
HOMER	67			47	33	40.0		54	8	26	22+	0	14			1.03	-0.04	0.36	10	0	1.6	8			23	22	20+	3	7	21	7.9	
JUNEAU	12	1016.6	1017.3	53	36	44.8	-.8	66	8	25	1	0	7	38	79	4.03	0.79	1.29	18	0	0.0	T	3.4	12	26	12	18	4	3	24	8.2	33
KING SALMON	49	1008.5	1010.5	49	33	40.9	-2.4	60	9	26	16+	0	16	29	66	1.29	0.33	0.46	11	0	0.1	T	3.7	13	37	8	2	1	13	17	7.8	
KOTZEBUE	10	1013.9	1014.5	42	27	34.0	3.1	63	27	14	4	0	24	27	78	0.35	0.02	0.17	6	0	0.9	39	1.9	10	26	15	29+	5	9	17	6.9	
MC GRATH	344	999.7	1012.4	51	35	42.8	-1.3	67	27	27	4	0	10	31	63	0.40	-0.48	0.23	5	0	0.3	30	1.2	32	22	15	25	8	8	15	6.6	
NOME	13	1011.9	1012.8	41	30	35.4	.4	56	24	23	4	0	25	27	74	0.27	-0.42	0.08	9	0	2.4	11	3.4	7	24	3	18	4	7	20	7.4	38
ST. PAUL ISLAND	22	1007.5	1008.4	37	29	32.8	-2.0	50	31	25	19+	0	27	31	94	0.98	-0.32	0.39	10	0	3.2	12	5.5	5	35	34	1	1	8	22	8.2	
SHEMYA	122	1005.8	1009.7	42	35	38.4	.4	48	30	25	2	0	3	35	88	1.90	-0.50	0.63	17	0	T	T	2.8	27	44	22	28	0	3	28	9.3	
SUMMIT	2401	926.5	1013.7	44	30	37.2		62	30	17	2	0	23	28	72	0.33		0.16	5	0	2.6	25	1.7	27	23	8	10	3	7	21	7.5	
TALKEETNA	345			53	31	42.0	-2.8	71	30	20	3	1	16			2.03	0.69	0.47	12	0	T	33			17	35	29+					
UNALAKLEET	15			44	32	38.0		62	27+	25	15	0	19			0.35		0.17	6	0	0.1	18			30	11	27	4	10	17	7.1	
YAKUTAT	28	1015.6	1016.5	47	34	40.0	-4.6	58	30	21	1	0	12	35	84	8.11	0.13	3.55	22	0	2.1	62	2.2	10	21	12	18	5	3	23	7.9	
ARIZONA																																
FLAGSTAFF	7006	780.7	1013.9	65	28	46.4	-4.5	76	29	17	1	0	24	18	34	0.14	-0.37	0.14	1	3	0.0	0	3.3	21	25	S	20	19	9	3	2.9	91
PHOENIX	1117	970.5	1008.7	93	63	78.3	3.3	100	28+	57	22	25	0	30	18	T	-0.13	T	0	1	0.0	0	1.6	21	44Y	SE	29	21	5	5	2.7	95
TUCSON	2584	922.8	1009.1	88	56	72.3	-1.2	95	27+	48	20	12	0	27	21	0.24	0.11	0.19	2	1	0.0	0	3.0	19	34	E	14	18	8	5	3.3	88
WINSLOW	4895	849.6	1011.1	82	43	62.2	-2.6	91	29	33	12+	1	0	18	20	0.02	-0.30	0.02	1	1	0.0	0	4.8	21	38	20	20	19	9	3	2.8	
YUMA	194	1001.7	1009.0	94	64	78.6	.6	102	15+	57	21+	24	0	38	27	T	-0.01	T	0	0	0.0	0	2.5	26	28	SE	28	24	5	2	1.9	95
ARKANSAS																																
FORT SMITH	447	999.0	1015.4	80	55	67.1	-2.8	90	27+	43	4	2	0	55	68	2.33	-2.93	1.51	7	5	0.0	0	0.2	36	28	SW	1	9	11	11	5.7	73
LITTLE ROCK	257	1005.4	1014.7	83	57	69.8	-.7	94	27+	46	10+	9	0	56	65	2.07	-3.21	1.42	5	4	0.0	0	1.3	33	33	SE	1	11	10	10	5.1	84
CALIFORNIA																																
BAKERSFIELD	475	994.9	1012.3	86	59	72.4	2.0	101	15+	49	9	13	0	44	39	0.02	-0.20	0.02	1	0	0.0	0	6.2	33	25	34	16	23	7	1	1.9	
BISHOP	4108	871.0		83	43	62.9	.3	95	30+	35	21+	7	0			0.11	-0.09	0.08	2		0.0	0						16	11	4	3.7	
BLUE CANYON	5280			64	46	55.1	2.9	78	27+	32	21+	0	4			1.12	-1.96	0.77	4		6.0	2			17	19	15	18	7	6	3.7	
EUREKA C	43			56	47	51.2	-1.8	61	19	40	1	0	0			1.11	-1.07	0.47	6		0.0	0			39	N	18	1	10	20	7.9	45
FRESNO	328	1001.0	1012.5	86	54	69.9	1.7	102	14	46	7	13	0	44	44	0.15	-0.15	0.15	1	0	0.0	0	4.6	30	27	NW	7	20	8	3	2.3	95
LONG BEACH	25	1012.9	1014.3	76	58	66.8	3.3	95	28	50	21+	2	0	53	67	0.02	-0.09	0.02	1	0	0.0	0	3.4	23	17	27	28+	11	13	7	4.8	
LOS ANGELES	97	1010.2	1013.7	71	57	64.1	2.1	84	30	52	21	0	0	54	75	0.01	-0.12	0.01	1	0	0.0	0	5.5	25	29	SW	21	12	11	8	4.9	
LOS ANGELES C	270			77	59	67.6	2.8	97	29	51	21	4	0			0.03	-0.13	0.03	1		0.0	0			16	SW	28+	14	10	7	4.3	85
MT SHASTA R	3544	891.0	1014.3	70	41	55.4	1.6	86	28+	33	17	0	0	38	56	1.56	-0.47	1.24	5		1.0	T										
OAKLAND	6	1015.2	1015.3	66	53	59.5	-.2	88	13	49	9	0	0	50	76	0.05	-0.60	0.04	2	0	0.0	0	7.7	27	23	25	18+	12	9	10	4.6	
RED BLUFF	342	1000.0	1011.4	84	52	67.8	-.5	100	13	38	8	13	0	42	46	0.90	-0.23	0.80	4	0	0.0	0	1.0	17	30	SE	7	17	8	6	3.5	88
SACRAMENTO	17	1012.2	1013.1	84	50	66.9	2.9	101	13	40	8	11	0	45	55	0.28	-0.31	0.18	3	0	0.0	0	4.9	21	22	SW	4	18	8	5	3.2	91
SANDBERG R	4517	861.5		69	47	57.9	1.3	83	31+	30	20+	0	2	35	52	0.06	-0.25	0.06	1		0.3	T	3.4	31	43	33	9	20	3	8	3.1	
SAN DIEGO	13	1013.2	1014.2	70	59	64.7	.7	79	29+	55	20+	0	0	53	68	0.10	-0.05	0.09	3	0	0.0	0	5.4	27	19	NW	27+	5	18	8	5.9	66
SAN FRANCISCO	8	1014.9	1015.5	67	49	57.6	-.7	86	13	45	10	0	0	47	73	T	-0.48	T	0	0	0.0	0	9.8	28	26	27	9	17	5	9	4.3	
SAN FRANCISCO C	52			62	49	55.5	-1.9	82	13	47	3	0	0			T	-0.63	T	0		0.0	0			27	W	23					75
SANTA MARIA	236			68	45	56.7	-.9	85	28	38	9	0	0			T	-0.22	T	0		0.0	0						17	7	7	3.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
	Elevation, ground	Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 90 F or above	Min 32 F or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft	Mb	Mb	F	F.	F.	F.	F		F				F	%	In.	In	In			In	In	M.p.h		M.p.h							
CALIFORNIA																																
STOCKTON	22	1012.9	1014.0	84	52	67.7	1.5	100	14	44	8+	12	0	45	52	0.11	-0.33	0.11	1	0	0.0	0	7.5	30	23	27	23	19	7	5	3.1	
COLORADO																																
ALAMOSA	7536	771.8		69	31	49.9	-.9	79	20	16	1	0	17			0.07	-0.66	0.05	3		T	T						14	11	6	4.5	
COLORADO SPRINGS	6145	811.4	1014.2	69	43	55.9	.9	82	25+	27	1	0	2	33	51	1.46	-0.67	0.40	10	11	T	0	2.4	8	44	15	19	8	14	9	5.5	
DENVER	5283	835.8	1012.3	71	43	57.0	.8	85	25	26	2	0	3	38	56	0.49	-2.21	0.17	10	7	0.0	0	1.2	14	36	S	19	6	13	12	6.2	62
GRAND JUNCTION	4843	850.3	1010.5	79	47	63.1	.9	90	31+	27	1	2	1	24	27	0.44	-0.10	0.20	5	3	0.0	0	2.7	14	42	SW	20	12	9	10	4.7	74
PUEBLO	4684	854.7	1012.3	76	45	60.4	-.2	90	21	26	1	1	3	39	53	0.84	-0.96	0.27	9	6	0.0	0	2.4	11	46	S	18	10	13	8	5.2	78
CONNECTICUT																																
BRIDGEPORT	7	1016.6	1017.3	67	51	59.0	.3	78	28	42	27+	0	0	47	68	7.38	3.67	1.97	12	2	0.0	0	1.8	12	35	30	11	9	6	16	6.4	
HARTFORD	169	1010.5	1017.1	72	49	60.1	.2	86	28	36	26+	0	0	47	66	7.49	4.08	2.56	15	2	0.0	0	0.8	17	27	SW	13	8	6	17	6.7	60
DELAWARE																																
WILMINGTON	74	1014.2	1017.2	73	52	62.5	-.2	[illegible]7	24	38	11	0	0	51	69	3.85	0.32	1.49	10	3	0.0	0	1.6	12	22	6	20+	8	7	16	6.5	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1004.7	1016.5	74	50	61.8		83	24+	34	11	0	0	53	76	4.76		1.18	14	6	0.0	0	0.4	7	31	20	15	9	3	19	6.8	
WASHINGTON NATIONAL	10	1013.9	1016.3	74	56	64.6	-1.2	82	30+	44	11	0	0	53	68	4.78	0.64	1.15	13	5	0.0	0	1.1	9	31	NE	19	9	3	19	6.5	56
FLORIDA																																
APALACHICOLA J	13			81	67	73.9	-.9	88	25	59	5	0	0			1.68	-1.20	0.69	6	3	0.0	0			26	E	11	12	9	10	5.2	89
DAYTONA BEACH	31	1012.9	1014.2	82	67	74.4	.2	91	9	58	28	1	0	65	75	4.02	1.17	2.15	20	10	0.0	0	2.5	7	20	9	13+	3	13	15	6.8	
FORT MYERS	15	1013.2	1013.6	89	68	78.3	.9	93	5	61	4	11	0	67	73	5.20	1.35	4.57	6	4	0.0	0	1.4	30	23	8	6	11	13	7	5.0	
JACKSONVILLE	26	1013.2	1014.1	82	64	72.9	-2.9	88	25+	56	6+	0	0	64	79	8.26	4.79	2.65	15	8	0.0	0	1.7	7	29	NW	20	4	12	15	6.8	52
KEY WEST	4	1012.5	1013.4	85	77	80.9	1.9	88	16+	72	6+	0	0	69	69	2.64	-0.09	1.54	8	4	0.0	0	1.6	8	32	E	6	15	12	4	4.1	83
LAKELAND J	214			84	67	75.4	-1.5	89	15	62	28+	0	0			2.21	-1.33	0.81	10		0.0	0						8	18	5	5.5	61
MIAMI	7	1012.9	1013.3	84	71	77.6	.0	87	30+	67	22	0	0	70	80	13.71	7.27	4.36	18	11	0.0	0	2.6	13	23	11	26+	5	18	8	5.8	
ORLANDO	108	1009.5	1013.9	87	68	77.4	-.2	92	25	64	28+	6	0	65	70	3.76	0.19	1.69	14	8	0.0	0	1.1	6	25	3	20	3	15	13	6.8	
PENSCOLA	112	1009.8	1014.2	82	66	74.1	-1.4	92	23	58	4	2	0	62	69	4.58	0.02	3.60	10	4	0.0	0	1.5	4	23	26	8	10	9	12	5.8	
TALLAHASSEE	55	1011.9	1014.1	84	62	73.0	-1.9	89	25	46	5	0	0	62	73	9.08	4.98	3.94	11	7	0.0	0	2.3	5	28	28	15	10	7	14	6.1	
TAMPA	19	1013.5	1013.7	86	67	76.6	-.2	90	25+	60	5	3	0	65	70	1.88	-0.97	0.93	9	8	0.0	0	0.6	31	20	28	23	5	12	14	6.4	72
WEST PALM BEACH	15	1012.5	1013.1	87	71	78.8	1.2	91	23+	65	21	7	0	68	74	11.19	6.08	3.47	20	17	0.0	0	2.6	11	39	14	29	2	18	11	6.5	
GEORGIA																																
ATHENS	802	986.5	1015.1	77	57	66.9	-3.2	88	25	49	5	0	0	56	74	6.02	2.41	1.80	10	8	0.0	0	2.3	5	18	7	27+	7	9	15	6.6	
ATLANTA	1010	978.3	1014.8	76	57	66.5	-2.6	84	25	49	5	0	0	55	72	4.28	1.12	2.05	13	7	0.0	0	2.1	5	26	NE	23	6	13	12	6.7	59
AUGUSTA	136	1009.5	1014.9	80	58	68.6	-3.0	88	25	49	11+	0	0	58	76	4.05	1.06	0.75	18	12	0.0	0	1.5	36	23	14	2	6	4	21	7.1	
COLUMBUS	385	1000.7		81	61	70.7	-1.4	86	30+	52	5	0	0	59	70	3.31	-0.19	1.13	12	7	0.0	0	2.7	4	25	3	22	5	14	12	6.6	
MACON	354	1001.7	1014.7	81	58	69.6	-4.3	87	30	49	5	0	0	59	74	2.10	-1.22	0.79	9	7	0.0	0	2.6	4	32	N	22	5	12	14	7.0	57
ROME	637			78	55	66.4	-2.3	88	25	42	5	0	0			5.90	2.10	3.27	13		0.0	0										
SAVANNAH	46	1012.9	1014.8	81	62	71.6	-1.8	88	25	54	6	0	0	61	75	5.84	2.07	1.57	16	11	0.0	0	2.3	4	26	S	31+	3	12	16	7.3	58
HAWAII																																
HILO	27	1016.3	1017.4	81	65	73.0	.0	83	22+	62	28+	0	0	66	81	4.71	-4.62	0.61	27	0	0.0	0	1.2	15	18	E	20+	1	10	20	7.7	39
HONOLULU	7	1016.3	1016.7	84	70	77.3	1.4	87	14	65	26	0	0	64	66	0.12	-0.87	0.04	5	0	0.0	0	13.1	6	27	NE	31	9	11	11	5.8	74
KAHULUI	48	1013.5	1016.0	85	64	74.7	-.6	89	12	59	18+	0	0	64	69	T	-0.69	T	0	0	0.0	0	11.5	5	29	NE	31+	10	9	12	5.7	73
LIHUE	103	1013.2	1018.2	81	72	76.7	2.2	83	24+	66	26	0	0	67	74	0.75	-1.84	0.33	13	0	0.0	0	9.8	5	19	NE	29+	3	14	14	6.9	59
IDAHO																																
BOISE	2838	913.6	1012.8	75	46	60.6	2.4	96	30	32	1	3	1	34	40	0.32	-0.97	0.18	5	2	0.0	0	0.3	33	44	SE	20	13	11	7	4.9	80
LEWISTON	1413			74	48	61.0	2.6	93	29	32	1	3	1			1.61	0.06	0.90	7		0.0	0			32Y		19	5	10	16	6.6	
POCATELLO	4454	861.5	1013.2	70	38	53.8	-1.3	88	31	20	1	0	6	30	44	0.54	-0.59	0.34	5	3	0.0	0	4.0	24	33	S	20	10	9	12	5.7	78
ILLINOIS																																
CAIRO U	314			78	61	69.6	.6	91	22	51	9	2	0			2.64	-1.75	1.00	7		0.0	0			25	SW	14+	14	8	9	4.7	67
CHICAGO O HARE	658	990.9	1015.3	72	50	61.0	3.2	88	28	35	10	0	0	48	65	3.02	-0.74	0.75	10	4	0.0	0	2.2	6	35	25	14	13	5	13	5.3	
CHICAGO MIDWAY	607	993.2	1015.6	72	51	61.7	1.7	92	28	34	10	2	0	47	63	2.88	-0.85	0.70	10	5	0.0	0	2.5	8	38	W	29	14	4	13	5.0	70

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F or above	No. of days: Min. 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft	Mb	Mb	F	F	F	F	F		F				F	%	In	In	In			In	In	Mph		Mph							%
ILLINOIS																																
MOLINE	582	993.9	1015.5	75	51	63.0	1.8	92	22	34	10	5	0	50	65	4.24	0.44	1.85	11	6	0.0	0	0.5	20	28	SW	2+	11	11	9	5.3	64
PEORIA	652	991.2	1015.0	75	52	63.2	1.7	89	22	37	9	0	0	48	61	1.30	-2.97	0.69	11	9	0.0	0	0.6	18	30	SW	2	9	11	11	5.8	74
ROCKFORD	724	988.2	1015.0	74	50	62.3	3.2	90	21	36	10	1	0	49	64	4.57	0.74	1.45	12	5	0.0	0	2.0	11	29	19	5	12	7	12	5.3	
SPRINGFIELD	588	992.6	1014.6	77	53	64.7	.8	91	22	39	4	3	0	50	62	1.88	-2.00	0.58	12	6	0.0	0	1.2	20	39	SW	2	12	12	7	4.9	67
INDIANA																																
EVANSVILLE	381	1001.0	1015.0	78	54	66.0	-.8	91	26	42	5	1	0	52	64	1.84	-2.35	0.89	10	2	0.0	0	0.5	25	26	SW	14+	13	8	10	5.2	72
FORT WAYNE	791	986.5	1016.4	73	50	61.7	1.0	87	25	34	10	0	0	48	65	3.29	-0.44	1.44	10	5	0.0	0	1.1	8	36	SW	2	9	10	12	6.1	69
INDIANAPOLIS	792	986.5	1015.5	77	53	65.0	3.6	91	26	38	10	2	0	50	61	1.89	-2.10	0.72	8	3	0.0	0	0.6	5	32	SW	14	10	8	13	5.9	71
SOUTH BEND	773	987.8	1015.5	71	49	60.0	1.3	86	25	33	10	0	0	48	69	3.01	-0.61	0.85	9	3	0.0	0	0.5	6	28	23	2	12	5	14	6.5	
IOWA																																
BURLINGTON	692			74	52	63.0	1.2	89	23+	37	9	0	0	52	65	2.85	-1.18	1.22	11	8	0.0	0	1.1	24								
DES MOINES	938	980.7	1015.2	73	52	62.5	1.9	86	22	40	31	0	0	50	68	3.05	-1.02	1.05	14	6	0.0	0	1.6	17	42	SW	1	8	5	18	6.6	63
DUBUQUE	1056	976.6		73	52	62.3	4.2	89	21	37	10	0	0			3.44	-0.78	0.92	11		0.0	0						10	9	12	5.7	
SIOUX CITY	1095	974.9	1014.5	73	52	62.7	1.3	89	22+	41	4	0	0	50	68	4.29	1.06	2.52	13	5	0.0	0	1.4	21	47	SW	1	7	6	16	7.1	53
WATERLOO	868	983.4	1015.2	73	49	60.8	.9	90	22	31	5	1	1	48	65	3.35	-0.39	1.86	12	5	0.0	0	1.2	15	25	1	30	6	10	15	6.5	
KANSAS																																
CONCORDIA	1470	961.7	1014.2	73	51	61.9	-1.2	86	22	41	9	0	0	52	75	4.07	0.18	1.13	14	7	0.0	0	1.0	19	40	W	1	9	7	15	5.8	64
DODGE CITY	2582	924.1	1013.9	75	51	63.0	-.7	91	16	37	3	1	0	47	61	5.44	2.22	1.46	13	12	0.0	0	1.3	16	47	NW	10	13	7	11	5.4	72
GOODLAND	3654	887.9	1013.7	72	45	59.0	.5	90	21	32	7+	1	2	44	65	6.04	3.63	2.49	11	8	0.0	0	2.8	16	31	14	25	13	6	12	5.0	
TOPEKA	877	983.4	1014.8	75	53	63.6	-.8	87	22	42	15+	0	0	53	71	2.90	-1.48	1.46	11	4	0.0	0	1.1	23	30	SW	5	11	4	16	6.8	54
WICHITA	1321	966.8	1014.1	75	53	64.1	-1.9	89	25+	43	2	0	0	52	69	2.47	-1.50	0.89	10	11	0.0	0	1.2	18	33	SW	5	11	8	12	5.7	64
KENTUCKY																																
COVINGTON	869	984.1	1015.3	74	52	63.1	.6	87	25	35	10	0	0	50	65	6.02	2.43	2.12	9	5	0.0	0	1.7	15	25	30	30+	7	10	14	6.5	
LEXINGTON	966	980.7	1015.9	74	53	63.2	-1.3	87	25	37	10	0	0	51	69	3.84	-0.01	1.50	12	5	0.0	0	1.2	16	25	18	7	8	8	15	6.4	
LOUISVILLE	477	997.6	1015.0	76	55	65.5	1.1	87	26+	41	10	0	0	52	64	4.46	0.56	2.38	10	6	0.0	0	1.5	20	32	5	13	9	12	10	5.8	64
LOUISIANA																																
ALEXANDRIA	92	1010.5	1014.7	83	60	71.2	-1.7	91	26+	49	5	5	0	60	74	5.32	-0.22	3.08	5	3	0.0	0	1.7	2	18	33	15	17	7	7	4.3	
BATON ROUGE	64	1011.5	1014.2	85	64	74.7	-.1	93	25	54	5	11	0	63	71	9.15	4.35	4.85	5	3	0.0	0	2.2	2	23	11	12	16	6	9	4.6	
LAKE CHARLES	9	1013.2	1014.3	84	65	74.1	-1.5	93	26	57	5	5	0	64	76	4.53	-0.09	1.64	7	6	0.0	0	2.0	4	28	17	12	13	7	11	5.1	
NEW ORLEANS	4	1013.2	1014.0	84	64	73.9	-.5	93	23	53	6+	3	0	64	74	6.31	1.93	4.70	4	2	0.0	0	1.5	4	24	33	12	12	8	11	4.9	
SHREVEPORT	254	1005.4	1014.5	84	61	72.3	-.8	93	28+	50	4	4	0	61	72	4.13	-0.66	2.45	6	6	0.0	0	1.4	36	23	[illegible]	1	14	7	10	5.0	72
MAINE																																
CARIBOU	624	992.9		64	41	52.4	2.5	87	29	25	2	0	8			3.69	0.65	0.78	12		T	T						6	10	15	6.5	
PORTLAND	43	1014.9	1017.3	62	43	52.6	-.4	80	28	30	6	0	3	42	71	3.17	-0.24	1.07	11	1	0.0	0	2.6	15	39	NW	12	8	8	15	6.4	50
MARYLAND																																
BALTIMORE	148	1011.5	1017.0	73	53	62.7	-1.7	83	7	40	11	0	0	52	71	4.11	0.13	1.28	12	4	0.0	0	1.2	10	26	NW	4	7	8	16	6.2	53
MASSACHUSETTS																																
BLUE HILL OBS R	629			64	46	55.7	-1.0	83	28	35	10	0	0			5.29	2.81	1.64	14		0.0	0			42	SSW	31+					47
BOSTON	15	1016.6	1017.5	66	49	57.6	-1.2	85	29	40	10	0	0	45	69	5.26	1.97	1.40	13	1	0.0	0	1.7	13	37	NE	9	8	6	17	6.6	48
WORCESTER	986	981.0	1018.1	64	46	55.7	.5	82	28	34	10	0	0	41	63	7.83	4.04	2.28	13	1	0.0	0	1.3	19	31	35	17	7	5	14	6.6	
MICHIGAN																																
ALPENA	689	991.5	1017.0	67	39	52.7	2.1	88	29	23	8	0	5	39	62	2.18	-0.73	0.46	5	3	0.0	0	1.8	[illegible]	29	NE	1	17	3	11	4.5	62
DETROIT	619			72	50	60.9	1.9	87	29	38	10	0	0	44	59	1.39	-1.54	0.72	7	2	0.0		1.1	7	33	[illegible]	9					
DETROIT METRO	633	991.5	1015.7	72	49	60.3	2.7	86	29+	36	10+	0	0	47	64	2.48	-0.84	0.73	9	2	0.0	0	0.5	[illegible]	32	NE	[illegible]	10	7	14	6.5	67
FLINT	771	987.8	1015.7	71	46	59.1	2.7	84	24	31	10	0	1	45	61	3.76	-0.03	0.75	11	4	0.0	0	0.9	[illegible]	24	[illegible]	[illegible]	12	8	11	5.2	
GRAND RAPIDS	784	985.8	1015.9	72	47	59.3	2.5	89	21	32	10	0	1	46	65	1.99	-1.47	0.65	11	3	0.0	0	0.5	10	30	S	14+	12	7	12	5.3	65
HOUGHTON LAKE	1149	974.5	1016.5	71	43	56.9	4.6	87	24	29	10	0	4	42	63	1.79	[illegible]	0.71	8	4	0.0	0	1.4	7	31	21	29	14	7	10	4.7	
LANSING	841	984.4	1016.0	71	46	58.2	4.1	83	24+	30	10	0	1	46	64	2.25	-0.87	1.16	9	5	0.0	0	0.5	14	29	N	14	12	8	13	5.0	59
MARQUETTE	677			63	42	52.3	2.4	86	29	29	8	0	3			2.86	-0.46	1.05	7		0.0	0			31	NW	30	14	10	7	4.6	71

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft	Mb.	Mb.	F	F.	F.	F.	F.		F.				F	%	In.	In.	In			In	In	M p.h		M p h							%
MICHIGAN																																
MUSKEGON	625	993.2	1016.2	71	47	58.7	2.9	87	23	32	10	0	1	44	62	1.18	-1.79	0.45	11	2	0.0	0	0.7	23	23	19	6	13	5	13	5.1	
SAULT STE MARIE	721	989.8	1016.6	68	42	55.1	5.5	88	20	29	8	0	5	41	63	2.15	-0.62	0.98	9	1	0.0	T	0.8	6	29	NW	6	13	9	9	4.7	73
MINNESOTA																																
DULUTH	1428	965.1	1016.6	65	42	53.5	4.3	87	17	28	8	0	5	40	65	2.00	-1.29	0.78	10	3	T	T	4.5	9	42	NE	1	5	12	14	6.4	62
INTERNATIONAL FALLS	1179	972.9	1015.8	73	46	59.5	8.8	93	17	26	7	2	4	45	62	2.57	-0.04	1.51	12	6	T	0	1.2	11	25	8	1	7	11	13	6.3	
MINNEAPOLIS	834	985.1	1015.3	72	50	61.3	4.0	90	22+	34	3	2	0	47	63	2.18	-1.01	0.59	11	5	0.0	0	1.4	9	28	SW	1	7	5	19	7.2	59
ROCHESTER	1297	968.2	1015.5	73	48	60.1	3.4	90	22	34	3	1	0	48	68	1.76	-1.89	0.57	10	8	0.0	0	2.0	15	26	15	12+	6	10	15	6.3	
ST CLOUD	1028	978.7	1016.3	70	48	59.0	3.4	90	17	31	3	1	1			3.30	-0.21	0.97	9		0.0	0						6	7	18	7.0	
MISSISSIPPI																																
JACKSON	310	1003.1	1014.8	84	60	71.9	-1.2	93	23+	50	5+	8	0	62	76	4.52	0.14	1.97	9	4	0.0	0	1.7	5	25	NW	14	10	10	11	5.5	67
MERIDIAN	290	1003.7	1014.8	83	58	70.5	-1.9	90	23+	48	5	2	0	58	69	5.51	1.60	3.50	7	2	0.0	0	1.1	35	18	36	19	9	11	11	5.9	
MISSOURI																																
COLUMBIA REGIONAL	887	983.4	1015.5	76	55	65.1	.7	89	22	43	31	0	0	52	65	3.40	-1.30	1.22	6	4	0.0	0	1.3	23	33	NW	1	10	7	14	5.6	69
KANSAS CITY	742	987.8	1014.3	77	57	67.1	1.5	91	25	44	9	2	0	53	63	2.18	-2.22	0.65	11	5	0.0	0	0.7	18	30	SW	2	10	10	11	5.5	66
ST JOSEPH	811			77	53	65.1	1.0	91	21	42	9+	2	0			5.11	0.72		13				1.0	21	29	25	2+	8	11	12	6.0	
ST LOUIS	535	994.9	1015.0	79	54	66.4	2.2	92	22	41	11+	4	0	53	65	1.02	-2.71	0.33	7	3	0.0	0	1.5	23	26	SW	2+	10	11	10	5.5	69
SPRINGFIELD	1268	970.5	1015.4	78	52	65.3	.8	93	16	44	31+	1	0	51	65	1.96	-3.32	0.95	4	3	0.0	0	1.9	19	34	W	23	11	5	15	5.8	66
MONTANA																																
BILLINGS	3567	892.0	1015.8	65	43	53.8	-3.0	88	31	30	2	0	1	35	54	2.51	0.63	1.27	14	6	T	0	2.9	32	29	NE	18	3	11	17	7.3	53
GLASCOW	2284	934.3	1016.1	66	45	55.6	.5	91	17	26	6	1	2	41	64	2.73	1.24	0.58	15	8	T	T	2.2	5	36	15	17	4	8	19	7.1	
GREAT FALLS	3662	888.9	1016.3	66	41	53.5	.5	90	31	27	2	1	3	36	59	1.59	-0.51	0.92	10	3	0.2	0	4.3	25	38	W	17	3	12	16	7.1	58
HAVRE	2584	923.8	1015.4	70	43	56.3	1.6	94	31	28	2	1	3	38	56	1.26	-0.27	0.28	11	4	T	0	0.9	19	34	N	26	3	13	15	7.3	71
HELENA	3828	881.5	1016.9	64	38	50.9	-2.0	85	31+	26	2	0	6	33	55	0.77	-0.79	0.18	10	4	T	0	3.6	30	35	W	24+	3	11	17	7.2	58
KALISPELL	2965	912.3	1017.0	66	40	52.8	.6	84	30	20	1	0	4	36	57	1.50	-0.17	0.55	12	3	T	T	1.6	8	24	2	19	6	5	20	7.1	
MILES CITY	2629	922.1	1014.9	68	46	57.0	-.4	92	17	34	6	2	0	42	63	2.83	1.10		14	5	0.1		3.3	33								
MISSOULA	3190	905.2	1016.8	68	41	54.2	1.6	90	30	23	1	1	4	39	60	0.69	-1.18	0.27	9	4	0.0	0	1.3	6	34	SW	14	5	10	16	6.8	58
NEBRASKA																																
GRAND ISLAND	1841	948.9	1014.5	71	51	61.2	.6	87	21	40	9+	0	0	48	66	5.91	2.06	1.73	13	7	0.0	0	0.9	22	46	28	1	9	8	14	6.2	
LINCOLN U	1150			73	54	63.4	.9	88	22+	43	7	0	0			4.25	0.77	1.52	15		0.0	0			39	NW	2	8	7	16	6.4	53
NORFOLK	1544			71	51	60.5	.3	90	21	37	4	1	0			4.64	0.98	1.91	13		0.0	0						8	6	17	6.8	
NORTH PLATTE	2775	917.4	1014.6	70	46	58.1	-.4	90	16	24	7	1	2	45	67	3.18	0.23	1.65	9	6	0.0	0	1.7	13	56	NW	1	8	10	13	6.4	59
OMAHA	977	979.3	1014.3	73	52	62.4	-.6	88	21	40	15	0	0	52	71	5.13	1.65	2.05	15	9	0.0	0	0.8	20	37	W	1	8	5	18	6.4	58
SCOTTSBLUFF	3957	879.1	1014.1	71	42	56.5	-.3	90	16	31	1	1	3	38	56	1.54	-1.16	0.88	7	8	0.0	0	2.0	3	44	29	21+	3	14	14	6.7	
VALENTINE	2587			70	47	58.3	1.2	91	21+	25	7	2	1			3.64	0.97	1.04	12		T	0			60	NW	1	7	10	14	6.7	56
NEVADA																																
ELKO	5050	843.2	1012.6	72	36	54.0	2.0	89	30	20	1	0	10	23	33	0.16	-0.80	0.16	2	1	T	0	1.0	27	23	18	20	13	6	12	5.2	
ELY	6253	807.3	1011.4	70	32	51.1	.8	84	30+	20	1	0	15	23	38	0.32	-0.53	0.18	4	2	1.3	0	4.4	20	36	SE	16	8	13	10	5.7	74
LAS VEGAS	2162	934.6	1009.7	90	59	74.5	.7	101	30+	47	21	18	0	24	16	0.46	0.38	0.44	2	1	0.0	0	4.1	21	35	N	30	21	9	1	2.4	94
RENO	4404	864.2	1012.5	77	37	56.9	3.0	91	28	29	1	2	6	28	36	1.02	0.50	1.01	2	2	0.0	0	2.8	28	34	W	20+	18	6	7	3.8	96
WINNEMUCCA	4301	866.6	1011.9	80	38	58.9	5.2	94	31+	20	1	6	9	26	30	0.18	-0.76	0.13	4	4	T	0	1.8	31	29	SW	20	16	8	7	4.1	83
NEW HAMPSHIRE																																
CONCORD	342	1004.7	1017.2	70	44	56.8	1.3	88	28	26	11	0	6	45	69	4.20	1.03	1.16	12	1	0.0	0	0.6	13	26	NW	12	8	7	16	5.5	48
MT WASHINGTON OBS	6262			44	31	37.9	2.9	64	28	13	10	0	15			6.36	0.52	1.54	13	2	7.0	22			101Y	N	12	7	7	17	6.7	50
NEW JERSEY																																
ATLANTIC CITY	64	1014.6	1016.8	69	50	59.1	-2.2	79	7	37	28+	0	0	50	77	3.51	0.00	1.15	9	0	0.0	0	2.7	14	29	6	25+	8	8	15	6.5	52
ATLANTIC CITY U	11			63	53	58.1	-1.4	73	12	44	11	0	0			5.10	1.94	1.40	10						35	ENE	20+					
NEWARK	7	1015.9	1017.0	72	54	63.0	1.0	82	24+	43	11	0	0	50	67	6.02	2.37	1.46	14	2	0.0	0	1.5	11	24	4	20+	7	9	15	6.5	
TRENTON U	56			71	53	61.7	-.6	83	24+	42	27+	0	0			5.04	1.42	1.28	14		0.0	0			30	NE	25	8	7	16	6.4	49
NEW MEXICO																																
ALBUQUERQUE	5311	836.4	1010.1	81	47	64.0	-1.1	91	20	34	1	1	0	21	26	0.18	-0.57	0.11	3	1	0.0	0	3.4	17	47	E	29	16	6	9	4.1	81

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F. or above	Temperature: No of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb	F	F	F.	F.	F		F				F	%	In	In.	In.			In	In.	M.p.h.		M.p.h							%
NEW MEXICO																																
CLAYTON	4969			74	46	59.9	.1	87	21	33	1	0	0			2.60	-0.14	1.47	10		0.0	0						15	3	13	5.2	
ROSWELL	3612			85	52	68.3	.3	99	21	38	8	7	0			0.16	-1.12	0.08	3		0.0	0			33	SE	9					67
NEW YORK																																
ALBANY	275	1006.1	1016.9	71	48	59.5	1.6	85	23	33	6	0	0	44	62	5.98	2.51	1.36	12	2	0.0	0	0.7	21	31	NW	11	9	5	17	6.6	54
BINGHAMTON	1590	958.0	1016.7	68	49	58.8	3.7	85	24	34	6	0	0	45	64	5.17	1.68	0.96	15	7	0.0	0	0.9	23	32	NW	11	6	9	16	6.5	52
BUFFALO	705	990.5	1016.2	69	49	59.1	4.3	82	28+	38	12+	0	0	44	63	3.64	0.69	1.73	13	6	0.0	0	1.8	22	32	NE	8	11	3	17	6.2	61
NEW YORK U	132	1013.5	1017.0	72	54	63.3	.9	86	24	45	10	0	0	49	67	8.39	4.72	2.18	15	4	0.0	0	1.7	9	30	NE	9					47
NEW YORK KENNEDY	13	1016.6	1017.4	69	54	61.2	1.0	82	22	45	26+	0	0	49	69	5.02	1.35	1.55	14	2	0.0	0	3.8	15	29	15	15+	9	8	14	6.1	
NEW YORK LA GUARDIA	11	1015.9	1017.1	68	52	59.7	-2.4	81	24	44	11+	0	0	47	68	6.85	3.27	1.85	14	4	0.0	0	2.1	13	35	S	15	9	7	15	6.2	
ROCHESTER	547	996.3	1016.4	73	48	60.4	3.7	87	29	35	12	0	0	49	70	3.32	0.55	1.02	13	4	0.0	0	0.8	29	31	SW	6	9	5	17	6.2	63
SYRACUSE	410	1001.4	1016.3	70	47	58.5	.8	85	29	34	12	0	0	48	72	6.19	2.92	1.10	15	5	0.0	0	0.7	26	31	NW	11	10	5	16	6.2	62
NORTH CAROLINA																																
ASHEVILLE	2140	940.7	1016.3	72	50	61.2	-1.8	81	25	38	12+	0	0	53	79	6.63	2.97	2.52	13	8	0.0	0	1.9	36	25	34	31	4	10	17	7.4	64
CAPE HATTERAS R	7	1015.2	1015.8	73	59	66.0	-2.0	80	30+	44	12	0	0	60	83	11.44	7.46	2.55	20	8	0.0	0	3.8	8	35	18	14	5	5	21	7.7	40
CHARLOTTE	736	988.5	1015.6	75	55	64.7	-4.3	81	25+	44	11	0	0	53	70	5.61	2.50	1.57	14	6	0.0	0	2.0	5	25	SE	2	3	12	16	7.5	66
GREENSBORO	897	984.6	1016.2	73	53	63.0	-3.9	80	2	43	6	0	0	53	73	6.24	2.95	2.09	14	6	0.0	0	1.5	3	26	NE	26+	5	5	21	7.6	55
RALEIGH	434	1000.3	1016.0	75	54	64.3	-3.3	82	2	42	11	0	0	54	74	5.34	1.82	1.95	12	7	0.0	0	1.5	4	54	20	3	3	8	20	7.7	47
WILMINGTON	28	1013.9	1015.3	76	58	67.2	-3.3	85	9	45	11	0	0	61	82	3.50	-0.02	0.99	14	2	0.0	0	2.0	6	28	N	26+	1	9	21	8.1	54
NORTH DAKOTA																																
BISMARCK	1647	955.3	1015.0	70	46	58.1	2.2	92	17	28	4	1	2	45	64	3.16	1.19	1.95	11	T	T	T	2.1	6	36	SE	18	6	10	17	7.4	60
FARGO	896	982.7	1015.3	71	49	59.8	4.4	91	17	27	7	1	2	49	70	3.52	1.49	1.70	11	4	0.0	0	2.3	14	38	S	18	6	6	19	7.4	59
WILLISTON	1899	947.2	1015.4	68	45	56.3	1.6	94	17	21	6	1	3	44	70	4.10	2.67	1.16	14	7	0.0	0	1.6	4	49	W	21	5	8	18	7.1	55
OHIO																																
AKRON	1208	971.6	1015.8	70	49	59.2	-.5	81	24	33	5	0	0	47	69	2.88	-0.97	0.94	10	3	0.0	0	0.5	9	23	19	2	9	5	17	6.4	
CINCINNATI ABBE OB	761			75	54	64.4	.2	88	25	36	10	0	0			6.53	2.73	2.86	9		0.0	0			17	SW	2					60
CLEVELAND	777	987.5	1016.5	68	49	58.6	.6	84	29	33	5	0	0	48	71	3.74	0.22	1.06	11	7	0.0	0	0.4	9	31	SW	14+	12	3	16	6.1	63
COLUMBUS	812	986.1	1015.9	72	50	60.8	-.7	85	25	34	11+	0	0	47	63	6.56	2.56	2.55	10	4	0.0	0	0.7	11	29	W	29+	8	5	18	6.7	59
DAYTON	1002	979.7	1015.6	73	51	62.0	.4	87	25	35	10	0	0	49	65	4.34	0.61	1.10	11	3	0.0	0	0.3	9	30	W	14	8	7	16	6.5	57
MANSFIELD	1295			72	50	61.4	.8	85	25+	33	10	0	0	46	66	3.07	-0.65	1.31	11	5	0.0	0	0.5	20	25	36	9+	9	7	15	6.1	
TOLEDO	669	990.5	1015.6	73	48	60.4	2.1	88	29	30	10	0	1	46	61	2.63	-0.41	1.00	13	6	0.0	0	1.2	5	30	SW	6	10	8	13	5.5	63
YOUNGSTOWN	1178	973.6	1016.3	69	47	58.3	.4	83	24	33	10	0	0	47	70	2.41	-1.66	0.47	11	4	0.0	0	0.9	4	25	36	7+	10	5	16	6.2	
OKLAHOMA																																
OKLAHOMA CITY	1285	969.2	1015.0	79	56	67.6	-.8	91	27	46	8	3	0	54	66	4.03	-1.16	2.25	7	8	0.0	0	2.2	14	30	S	5	11	12	8	4.6	64
TULSA	650	990.9	1014.9	79	57	68.0	.2	90	27+	48	8+	4	0	55	67	2.43	-2.83	0.75	10	7	0.0	0	1.8	17	34	SE	23	11	11	9	5.1	73
OREGON																																
ASTORIA	8	1016.9	1017.8	62	47	54.7	1.4	78	26	35	1	0	0	48	81	1.22	-1.98	0.45	10	0	0.0	0	3.8	28	23	23	29+	2	12	17	7.7	
BURNS	4151	872.0	1014.0	70	39	54.7	1.3	88	29	27	1	0	6	33	47	0.31	-0.58	0.16	6		0.0	0	2.5	31				15	7	9	4.9	
EUGENE	359	1003.4	1016.7	70	44	56.9	.8	91	28	33	1	1	0	46	72	2.94	0.80	2.37	7	0	0.0	0	2.1	29	23	35	19	11	5	15	6.1	
MEACHAM	4050	871.1	1015.5	60	40	50.1	2.1	84	29	30	1	0	5			2.84	0.39	1.28	7		3.7	2			16	29	17+	13	10	8	4.6	
MEDFORD	1298	967.5	1015.1	73	43	57.9	.4	93	28	32	1	2	1	43	64	1.61	0.14	0.84	7	0	T	T	2.8	32	21	35	31+	12	7	12	5.5	
PENDLETON	1482	961.7	1014.9	74	48	60.9	1.3	92	29	36	1	3	0	40	49	1.97	0.85	1.52	5	1	0.0	0	2.8	27	35	28	17	9	12	10	5.5	
PORTLAND	21	1015.2	1016.6	71	49	60.2	2.8	92	28	37	1	1	0	46	65	2.23	0.24	0.93	9	0	0.0	0	2.8	31	26	SW	20	10	6	15	6.4	70
SALEM	196	1009.5	1016.7	70	43	56.5	.2	89	28	31	1	0	1	43	65	2.40	0.29	1.47	9	0	0.0	0	1.6	30	18	30	23+	9	8	14	6.1	
SEXTON SUMMIT R	3836	883.6	1015.4	63	41	51.9	1.9	62	28	31	24	0	2			1.38	-0.81	0.79	8		T	T			35	23	16					
PACIFIC AREA																																
GUAM TAG AP R	361	997.3	1010.0	86	72	79.0	-1.4	87	22+	65	11	0	0	72	82	3.02	-1.17	1.06	15	0	0.0	0	9.1	8	26	NE	1					64
JOHNSTON	7	1012.9	1013.6	81	76	78.3	-.9	83	18	70	12	0	0	71	79	6.07	5.08	1.82	17	0	0.0	0	19.7	8	36	E	12	6	6	19	7.4	60
KOROR R	94	1005.8	1009.3	89	76	82.7	1.4	93	19	73	16+	20	0	75	81	9.49	-5.14	4.57	14	1	0.0	0	3.0	1	28	W	27	0	11	20	8.2	65
KWAJALEIN	8	1007.5	1008.4	87	78	82.4	1.3	90	9	73	2	1	0	76	83	14.26	6.08	2.57	23	1	0.0	0	7.1	10	35	9	2	0	4	27	9.0	
MAJURO	10	1009.1	1009.4	86	77	81.2	.8	86	17+	73	24	0	0	75	82	14.96	2.21	4.26	22	0	0.0	0	4.7	6	28	E	23	0	4	27	9.0	47
PAGO PAGO	12	1010.2	1010.3	86	74	79.9		90	6+	66	16	3	0	73	82	6.55		2.75	18	0	0.0	0	2.5	10	18	SW	13	4	15	12	6.7	51

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min 32 F or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft.	Mb	Mb.	F.	F.	F	F	F		F				F	%	In	In	In			In	In	Mph		Mph							
PACIFIC AREA																																
PONAPE R	123	1002.0	1007.2	86	74	80.0	-.4	89	17+	70	31	0	0	75	88	33.46	13.15	7.00	29	4	0.0	0	1.0	18	29	SW	31	0	0	31	9.5	57
TRUK MOEN ISLAND	5	1008.1	1008.3	87	76	81.5	.7	88	26+	72	27	0	0	76	84	15.68	2.56	2.87	26	1	0.0	0	4.0	3	40	NE	19	0	0	31	9.8	71
WAKE	11	1013.2	1013.6	85	74	79.7	-.1	89	31+	70	2	0	0	70	75	0.67	-1.37	0.12	15	0	0.0	0	17.2	7	30	NE	4	8	20	3	4.6	64
YAP R	44			87	75	81.0	-1.0	89	27+	70	13	0	0			5.33	-4.19	1.91	16	1	0.0	0			20	W	28	5	13	13	6.5	78
PENNSYLVANIA																																
ALLENTOWN	387	1003.1	1016.9	73	50	61.4	1.0	86	24	36	11	0	0	50	69	6.20	2.12	3.24	14	5	0.0	0	1.7	11	25	5	19	8	9	14	6.2	
ERIE	731	989.8	1016.6	64	47	55.6	.6	79	29	32	10	0	1	45	72	4.69	1.15	1.72	14	8	0.0	0	1.4	18	32	23	1	14	4	13	5.4	
HARRISBURG	338	1004.1	1016.8	73	52	62.3	-.4	90	24	37	11	1	0			5.56	1.66	1.23	17	9	0.0	0	1.4	12	25	SW	11	8	10	13	6.1	62
PHILADELPHIA	5	1015.9	1016.8	73	54	63.6	1.0	84	24	42	11	0	0	52	71	4.11	0.37	1.40	13	4	0.0	0	1.8	13	29	E	25	9	3	19	6.5	53
PITTSBURGH	1137	972.2	1016.0	73	51	61.8	2.0	84	24	34	11	0	0	46	59	1.38	-2.53	0.46	13	4	0.0	0	1.0	31	28	20	2	6	7	18	6.7	54
SCRANTON	930	982.4	1016.4	71	49	60.0	.4	86	24	34	11	0	0	47	66	7.33	3.38	2.58	16	4	0.0	0	0.4	9	29	SW	30	8	4	19	6.4	54
WILLIAMSPORT	524	997.6	1016.6	71	51	61.0	.6	86	24	33	11	0	0	49	68	6.79	2.71	1.83	13	8	0.0	0	0.5	15	23	28	15	9	5	17	6.3	
RHODE ISLAND																																
BLOCK ISLAND	110			60	47	53.5	-.4	69	23	34	27	0	0			4.73	1.72	1.72	10		0.0	0										
PROVIDENCE	51	1015.2	1017.7	69	47	57.7	.2	80	29	35	27+	0	0	46	69	5.73	2.38	1.80	10	0	0.0	0	1.5	14	28	14	15+	8	9	14	6.4	50
SOUTH CAROLINA																																
CHARLESTON	40	1012.9	1014.9	79	60	69.8	-3.1	87	17	50	6	0	0	60	75	5.67	2.06	1.74	16	9	0.0	0	2.4	5	40Y	W	31	4	8	19	7.2	50
CHARLESTON J	9			76	64	70.2	-3.1	86	9	56	26	0	0			7.25	4.16	2.36	15		0.0	0			35	N	23					
COLUMBIA	213	1007.1	1015.2	79	58	68.4	-3.8	85	25	44	11	0	0	60	78	6.41	2.87	1.19	18	8	0.0	0	1.9	2	29	2	22	6	7	18	7.1	53
GRNVLLE-SPRTNBRG	957	981.0	1015.5	76	54	64.9	-4.5	83	25	44	11+	0	0	52	67	8.89	5.67	3.58	12	7	0.0	0	2.1	4	24	NE	27	5	9	17	6.8	51
SOUTH DAKOTA																																
ABERDEEN	1296	967.8	1014.5	71	50	60.7	3.4	90	17	28	7	1	2	51	73	4.80	2.52	1.14	13	6	0.0	0	1.9	7	45	3	1	7	4	20	6.9	
HURON	1281	967.8	1014.0	69	51	60.0	2.5	87	17	33	4	0	0	51	74	6.86	4.50	1.51	15	7	0.0	0	1.3	10	40	NW	1	7	7	17	7.0	50
RAPID CITY	3162	904.5	1014.8	67	43	55.2	-.5	89	17	31	6+	0	3	43	69	3.28	0.62	0.85	13	5	T	T	5.3	35	51	NW	1	2	12	17	7.0	48
SIOUX FALLS	1418	963.1	1014.4	70	49	59.1	.8	87	19+	34	7	0	0	47	67	7.25	3.87	3.92	13	5	0.0	0	0.5	15	42	24	1	7	2	22	7.0	
TENNESSEE																																
BRISTOL	1507	962.1	1015.7	74	52	62.7	-3.0	84	25	43	11+	0	0	52	72	5.92	2.47	1.50	13	8	0.0	0	0.7	36	23	10	21+	3	9	19	7.7	
CHATTANOOGA	665	990.5	1015.0	76	52	63.9	-6.2	85	25	42	5	0	0	52	69	6.47	2.95	3.09	10	6	0.0	0	0.2	4	24	NE	22+	6	11	14	6.4	56
KNOXVILLE	980	981.0	1015.8	74	56	64.9	-2.8	84	25	45	5	0	0	53	68	4.49	0.99	1.36	10	6	0.0	0	1.7	35	40	NE	19	3	9	19	7.4	56
MEMPHIS	258	1004.7	1014.9	80	59	69.7	-.6	91	22	47	10	2	0	56	63	4.55	0.32	1.60	10	5	0.0	0	0.6	12	40	30	16	12	8	11	5.1	72
NASHVILLE	590	993.2	1014.7	79	56	67.4	-1.2	88	26	45	10	0	0	57	74	3.52	-0.20	1.87	11	5	0.0	0	0.9	16	30	S	14	13	7	11	5.3	63
OAK RIDGE R	905			75	53	63.9	-2.6	85	25	42	5	0	0			5.81	2.08	1.46	9		0.0	0			45Y		22	4	11	16	7.1	
TEXAS																																
ABILENE	1784	952.6	1014.4	82	60	70.6	-1.1	92	24	44	3	5	0	56	65	2.47	-1.86	1.51	6	7	0.0	0	6.2	15	38	SE	5	10	12	9	5.2	86
AMARILLO	3604	890.6	1012.6	76	51	63.2	-3.3	88	25	38	3	0	0	43	54	2.81	-0.56	0.86	9	12	0.0	0	7.3	16	38	SE	25	8	13	10	5.3	74
AUSTIN	597	991.9	1013.7	83	64	73.5	-1.6	90	27+	57	4	4	0	63	72	7.88	4.17	3.38	11	9	0.0	0	2.6	11	49	N	1	8	10	13	5.7	69
BROWNSVILLE	19	1011.9	1012.4	85	70	77.6	-1.4	88	11	64	19	0	0	69	77	2.02	-0.34	1.63	9	6	0.0	0	7.5	11	38	SE	18	0	14	17	7.4	68
CORPUS CHRISTI	41	1011.9	1013.2	85	69	77.0	-.5	90	30+	64	21+	2	0	70	81	5.99	3.00	2.16	11	6	0.0	0	7.1	11	38	W	10	5	12	14	6.5	64
DALLAS	481	997.0	1014.0	86	65	75.4	2.5	94	26	56	9+	12	0	58	59	1.09	-3.74	0.54	3	2	0.0	0	3.3	12	30	S	16	13	9	9	4.8	67
DEL RIO	1026	976.6	1012.1	85	65	74.9	-3.5	93	24	55	2	8	0	63	70	2.61	-0.12	0.80	8	6	0.0	0	8.4	12	38	1	2	2	10	19	7.6	
EL PASO	3918	880.1	1009.6	85	55	69.8	-2.1	93	21	46	2+	7	0	29	26	0.04	-0.36	0.03	2	2	0.0	0	2.4	21	30	SW	21+	11	9	11	5.0	79
FORT WORTH	537	994.2	1014.3	84	62	72.7	.0	92	27	52	3	4	0	59	65	2.35	-2.24	1.15	5	4	0.0	0	2.4	13	23	20	16	12	9	10	5.1	
GALVESTON	7			82	71	76.3	.5	88	27+	65	2	0	0			6.37	3.58	2.95	8		0.0	0			37	E	10					69
HOUSTON INTERCON	96	1010.2	1014.0	84	63	73.7	-1.5	92	26	54	4	4	0	64	77	6.99	2.71	2.14	10	8	0.0	0	2.2	8	22	5	10+	10	11	10	5.2	65
LUBBOCK	3254	902.8	1012.3	80	55	67.4	-.8	92	26+	45	3	4	0	51	63	3.20	0.02	1.40	9	12	0.0	0	6.8	14	38	17	20	8	10	13	6.2	
MIDLAND	2851	914.7	1011.7	83	58	70.4	-3.0	92	24+	47	8	5	0	55	66	1.20	-0.88	0.66	7	9	0.0	0	8.5	14	35	6	13	10	6	15	6.1	
PORT ARTHUR	16	1013.9		83	64	73.3	-1.4	92	26	55	4	2	0	64	76	5.92	0.98	2.04	7	3	0.0	0	1.7	7	52	S	12	14	9	8	4.7	58
SAN ANGELO	1903	946.8	1012.5	82	59	70.8	-3.5	92	23	50	3	5	0	56	64	4.89	1.69	1.69	12	8	0.0	0	6.1	15	32	29	10	8	10	13	6.4	
SAN ANTONIO	788	986.1	1013.6	83	63	72.8	-2.5	88	1	58	17	0	0	63	74	11.24	7.79	6.53	12	11	0.0	0	3.9	10	32	N	16	4	13	14	6.7	51
VICTORIA	104	1009.5	1013.6	85	67	76.1	-.1	91	26	60	4	5	0	66	74	11.24	7.12	8.45	10	9	0.0	0	4.2	11	48Y	NW	7	4	12	15	6.4	
WACO	501	996.3	1013.9	84	63	73.3	-1.0	92	27+	56	9+	6	0	60	67	1.95	-2.62	1.18	9	8	0.0	0	2.8	14	28	18	2	15	5	11	5.0	
WICHITA FALLS	994	977.7	1013.8	83	57	70.0	-2.2	93	28+	48	8+	7	0	56	65	2.90	-1.70	1.26	6	8	0.0	0	3.7	12	39	36	12	11	12	8	4.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation ground	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 90 F or above	No. of days: Min 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover tenths, sunrise to sunset	Possible sunshine
	Ft	Mb	Mb	F.	F.	F	F	F		F				F	%	In	In	In			In	In.	Mph		Mph							%
UTAH																																
MILFORD	5028	844.2		77	37	56.7	.2	90	31+	23	1	2	8			0.02	-0.67	0.02	1		0.0	0			24	NW	31+	19	5	7	3.5	84
SALT LAKE CITY	4220	869.6	1011.9	76	45	60.5	1.6	91	31	28	1	1	2	33	38	0.14	-1.26	0.12	2	3	0.0	0	1.2	15	35	NE	20	11	6	14	5.6	81
WENDOVER	4237	868.9	1012.3	74	51	62.7	1.3	88	31	33	1	0	0	23	24	0.06	-0.60	0.04	3		0.0	0						12	8	11	5.3	
VERMONT																																
BURLINGTON	332	1004.1	1016.4	68	44	56.2	2.4	87	29	30	11+	0	3	43	64	2.83	-0.16	1.14	12	3	0.0	0	1.2	21	28	S	30	8	7	16	6.3	57
VIRGINIA																																
LYNCHBURG	916			73	53	63.1	-2.2	81	2	41	11	0	0			8.04	4.83	2.57	15		0.0	0			25	NE	22	4	12	15	7.1	56
NORFOLK	24	1015.2	1016.2	71	56	63.5	-4.0	81	31+	46	11	0	0	56	81	3.35	-0.01	1.15	12	7	0.0	0	3.1	6	44	NE	26	3	11	17	7.6	57
RICHMOND	164	1009.8	1016.2	75	55	64.6	-2.4	84	30	44	11+	0	0	55	77	8.87	5.15	2.53	13	6	0.0	0	1.0	8	26	SW	30+	4	9	18	7.4	53
ROANOKE	1149	974.3	1016.0	74	50	62.0	-3.7	81	24	39	11+	0	0	50	68	6.00	2.21	1.65	15	6	0.0	0	1.6	5	22	26	15	3	11	17	7.1	
WALLOPS ISLAND	9			66	55	60.4		80	7	46	11	0	0			6.88		2.26	10		0.0	0			42Y	NE	26+	7	5	19	7.3	
WASHINGTON																																
OLYMPIA	195	1009.8	1017.2	68	41	54.9	-.2	91	28	29	1	1	3	45	71	0.83	-1.18	0.36	7	0	0.0	0	1.6	25	23	22	17	5	10	16	7.1	
QUILLAYUTE	179	1010.2	1017.6	64	44	53.7	1.7	89	27	32	25+	0	2	44	75	1.05	-3.37	0.45	8	0	0.0	0	1.7	24	27	NE	19	2	7	22	8.0	30
SEATTLE-TACOMA	[illegible]	1000.3	1016.7	68	49	58.3	2.8	91	28	41	1	1	0	45	65	0.69	-1.04	0.24	6	0	0.0	0	1.9	[illegible]	27	[illegible]	19	2	13	16	7.3	43
SPOKANE	2356	931.3	1014.5	68	45	56.9	.7	88	29	29	1	0	1	40	56	1.99	0.78	0.99	9	0	0.0	0	1.7	17	31	[illegible]	15	5	11	14	6.7	62
STAMPEDE PASS R	3958	879.4		52	39	45.4	1.5	71	29+	30	23	0	7			2.62	-1.63	1.37	10		1.6	148						3	6	22	8.0	
WALLA WALLA	949			74	51	62.2	1.2	93	29	38	1	3	0			1.89	0.40	1.05	6		0.0	0			28	W	17	8	13	10	5.5	73
YAKIMA	1052	975.5	1014.8	77	43	59.9	1.4	95	29	29	1	3	2	38	47	0.60	0.06	0.26	5	1	0.0	0	3.6	31	29	29	17	8	10	13	4.9	
WEST INDIES																																
SAN JUAN P.R.	13	1013.2	1015.0	88	75	81.7	3.0	93	25+	70	18	9	0	68	65	0.44	-6.68	0.25	8	0	0.0	0	9.2	10	29	E	3	2	21	8	6.3	61
WEST VIRGINIA																																
BECKLEY	2504	928.5	1016.0	69	48	58.3	-2.5	79	25	35	11	0	0	46	68	4.73	0.72	1.23	17	6	0.0	0	[illegible]	18	23	34	22	3	7	21	7.6	
CHARLESTON	939	[illegible]	1015.5	76	51	63.7	-1.1	88	25	34	11	0	0	50	67	2.55	-1.16	0.61	12	4	0.0	0	[illegible]	17	45	27	2	2	8	21	7.8	
ELKINS	1948	945.8		71	45	57.8	-1.5	81	29+	28	11	0	2			4.72	0.15	1.45	17		0.0	0						5	7	19	7.6	
HUNTINGTON	827	985.5	1015.7	73	51	62.2	-2.4	86	25	36	11	0	0	51	70	3.82	-0.07	1.15	16	7	0.0	0	[illegible]	19	23	24	14	4	5	21	7.9	
PARKERSBURG	615			75	53	63.9	-.1	87	25	38	11	0	0			2.07	-1.63	0.71	13		0.0	0			31	[illegible]	15					63
WISCONSIN																																
GREEN BAY	682	990.5	1016.1	74	46	59.6	4.8	90	20	32	8	1	1	45	62	0.82	-2.24	1.35	6	1	0.0	0	2.7	6	25	NE	30	13	8	10	4.9	76
LA CROSSE	651	991.5	1015.9	76	51	63.4	4.2	93	22	36	8	7	0	49	65	1.80	-1.96		9	4	0.0		1.9	9								
MADISON	858	984.1	1015.3	74	45	59.2	3.1	89	21+	32	9+	0	2	47	67	2.83	-0.51	0.83	10	3	0.0		1.7	10	22	SW	29	13	7	11	5.4	63
MILWAUKEE	672	991.5	1015.9	66	45	55.6	1.6	84	20	35	10+	0	0	46	75	2.33	-0.83	0.57	11	1	0.0	0	1.8	5	26	N	8+	14	6	11	4.8	64
WYOMING																																
CASPER	5338	837.8	1014.8	66	38	52.1	-1.0	85	31	26	2+	0	5	36	63	0.76	-1.27	0.30	8	5	0.0	0	1.6	33	31	27	1	3	13	15	7.2	
CHEYENNE	6126	812.4	1014.6	64	39	51.2	-1.7	79	16	27	1	0	4	33	56	2.75	0.24	0.78	11	8	0.3	T	3.7	33	51	NW	1	5	11	15	6.7	52
LANDER	5563	827.3	1014.7	64	40	51.9	-1.0	82	31	21	1	0	3	32	53	2.06	-0.59	0.74	9	4	0.0	0	1.7	28	36	S	25	4	12	15	7.0	58
SHERIDAN	3964	879.1	1015.7	67	42	54.1	.5	88	17	23	2	0	1	38	58	1.35	-1.22	0.47	12	5	T	T	3.9	31	36	NW	1	5	8	18	7.4	50

Data from airport locations unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day & hence may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

8 Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
+ Also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressures" table of the annual summary of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation, ground	Pressure		Temperature												Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths, sunrise to sunset	Possible sunshine
												No of days								No of days		Snow, Ice pellets				Fastest mile 1.6 kilometers							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
ALABAMA	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							%
BIRMINGHAM	189	992.9	1015.1	25.6	13.3	19.6	- 2.6	30.0	22	7.8	5+	0	0	13.9	71	97	10	55	9	4	0	0	0.4	4	11.2	W	24	12	8	11	5.5	70
HUNTSVILLE	190	992.2	1015.0	25.6	13.3	19.2	- 2.2	30.0	22	7.2	4	0	0	13.3	71	90	4	34	10	3	0	0	0.5	7	14.3	27	14	13	8	10	5.3	
MOBILE	64	1006.1	1014.0	29.4	17.8	23.7	- 0.5	35.0	23	13.3	5	6	0	17.2	72	196	72	114	9	7	0	0	0.9	3	10.3	9	13	10	10	11	5.9	
MONTGOMERY	56	1007.1	1014.5	27.8	15.6	21.7	- 0.8	31.1	30+	10.0	5	0	0	15.6	70	43	- 45	19	8	2	0	0	0.7	1	8.9	N	27+	7	13	11	5.9	53
ALASKA																																
ANCHORAGE	35	1008.8	1013.8	9.4	2.8	5.3	- 2.3	16.1	30	- 0.6	2	0	2	0.6	69	21	7	6	11	0	T	76	1.7	18	13.0	16	6	5	1	25	8.2	47
ANNETTE	34	1014.2	1018.3	14.4	5.0	9.4	- 0.1	25.0	28	1.1	23	6	0	3.3	71	132	- 48	41	13	0	0	0	0.5	16	13.0	14	30	1	12	18	7.5	
BARROW	9	1019.0	1019.8	- 5.0	-10.6	- 7.7	- 0.2	1.7	29+	-18.9	4	0	31	- 9.4	86	2	- 2	1	5	0	33	178	3.5	9	12.5	11	26+	2	6	23	8.3	
BARTER ISLAND	12	1017.6	1019.7	- 3.9	-11.1	- 7.3	- 1.1	2.2	28+	-19.4	15+	0	31	- 8.3	89	11	5	5	7	0	107	406	2.8	8	14.3	10	27	6	8	17	7.0	
BETHEL	38	1005.8	1011.7	6.7	- 1.1	2.9	- 1.0	14.4	25	- 4.4	1	0	25	- 1.1	78	13	- 11	6	7	0	41	229	1.0	9	13.0	18	6	3	8	20	7.5	
BETTLES	196			11.1	1.1	5.9		21.1	31	- 6.7	11	1	14			6		4	4	0	18	991			8.9	2	27					
BIG DELTA	386			12.8	2.2	7.4		21.7	30	- 6.7	16	1	12			9		4	3	0	51	178			14.3	20	18	5	9	17	6.9	
COLD BAY	29	1004.4	1008.2	6.7	0.6	3.7	- 0.5	15.0	29	- 3.3	15	0	16	1.1	88	52	- 6	18	12	0	36	T	3.4	16	18.8	16	22+	1	4	26	8.7	
FAIRBANKS	133	995.9	1012.9	14.4	2.8	8.6	0.2	21.1	26	- 3.3	3	1	7	- 1.7	51	9	- 9	8	3	0	0	51	0.5	35	10.7	4	10+	5	10	16	7.0	
GULKANA	479			11.1	0.0	5.6		20.6	29	-10.0	2	0	19			14		5	8	0	10	610	2.5	19	13.0	17	18	5	7	19	6.8	
HOMER	20			8.3	0.6	4.4		12.2	8	- 3.3	22+	0	14			26	- 1	9	10	0	41	203			10.3	22	20+	3	7	21	7.9	
JUNEAU	4	1016.6	1017.3	11.7	2.2	7.1	- 0.4	18.9	8	- 3.9	1	0	7	3.3	79	102	20	33	18	0	0	T	1.5	12	11.6	12	18	4	3	24	8.2	33
KING SALMON	15	1008.5	1010.5	9.4	0.6	4.9	- 1.3	15.6	9	- 3.3	16+	0	16	- 1.7	66	33	8	12	11	0	T	T	1.7	13	16.5	8	2	1	13	17	7.8	
KOTZEBUE	3	1013.9	1014.5	5.6	- 2.8	1.1	1.7	17.2	27	-10.0	4	0	24	- 2.8	78	9	1	4	6	0	23	991	0.8	10	11.6	15	29+	5	9	17	6.9	
MC GRATH	105	999.7	1012.4	10.6	1.7	6.0	- 0.7	19.4	27	- 2.8	4	0	10	- 0.6	63	10	- 12	6	5	0	8	762	0.5	32	9.8	15	25	8	8	15	6.6	
NOME	4	1011.9	1012.8	5.0	- 1.1	1.9	0.2	13.3	24	- 5.0	4	0	25	- 2.8	74	7	- 11	2	9	0	61	279	1.5	7	10.7	3	18	4	7	20	7.4	38
ST. PAUL ISLAND	7	1007.5	1008.4	2.8	- 1.7	0.4	- 1.1	10.0	31	- 3.9	19+	0	27	- 0.6	94	25	- 8	10	10	0	81	305	2.5	5	15.6	34	1	1	8	22	8.2	
SHEMYA	37	1005.8	1009.7	5.6	1.7	3.6	0.2	8.9	30	- 3.9	2	0	3	1.7	88	48	- 13	16	17	0	T	T	1.3	27	19.7	22	28	0	3	28	9.3	
SUMMIT	732	926.5	1013.7	6.7	- 1.1	2.9		16.7	30	- 8.3	2	0	23	- 2.2	72	8		4	5	0	66	635	0.8	27	10.3	8	10	3	7	21	7.5	
TALKEETNA	105			11.7	- 0.6	5.6	- 1.6	21.7	30	- 6.7	3	1	16			52	18	12	12	0	T	838			7.6	35	29+					
UNALAKLEET	5			6.7	0.0	3.3		16.7	27+	- 3.9	15	0	19			9		4	6	0	T	457			13.4	11	27	4	10	17	7.1	
YAKUTAT	9	1015.6	1016.5	8.3	1.1	4.4	- 2.6	14.4	30	- 6.1	1	0	12	1.7	84	206	3	90	22	0	53	1575	1.0	10	9.4	12	18	5	3	23	7.9	
ARIZONA																																
FLAGSTAFF	2135	786.7	1013.9	18.3	- 2.2	8.0	- 2.5	24.4	29	- 8.3	1	0	24	- 7.8	34	4	- 9	4	1	3	0	0	1.5	21	11.2	S	20	19	9	3	2.9	91
PHOENIX	340	970.5	1008.7	33.9	17.2	25.7	1.8	37.8	28+	13.9	22	25	0	- 1.1	18	T	- 3	T	0	1	0	0	0.7	21	19.7Y	SE	29	21	5	5	2.7	95
TUCSON	788	922.8	1009.1	31.1	13.3	22.4	- 0.7	35.0	27+	8.9	20	12	0	- 2.8	21	6	3	5	2	1	0	0	1.3	19	15.2	E	14	18	8	5	3.3	88
WINSLOW	1492	849.6	1011.1	27.8	6.1	16.8	- 1.4	32.8	29	0.6	12+	1	0	- 7.8	20	1	- 8	1	1	1	0	0	2.1	21	17.0	20	20	19	9	3	2.8	
YUMA	59	1001.7	1009.0	34.4	17.8	25.9	0.3	38.9	15+	13.9	21+	24	0	3.3	27	T	T	T	0	0	0	0	1.1	26	12.5	SE	28	24	5	2	1.9	95
ARKANSAS																																
FORT SMITH	136	999.0	1015.4	26.7	12.8	19.5	- 1.6	32.2	27+	6.1	4	2	0	12.8	68	59	- 74	38	7	5	0	0	0.1	36	12.5	SW	1	9	11	11	5.7	73
LITTLE ROCK	78	1005.4	1014.7	28.3	13.9	21.0	- 0.4	34.4	27+	7.8	10+	9	0	13.3	65	53	- 82	36	5	4	0	0	0.6	33	14.8	SE	1	11	10	10	5.1	84
CALIFORNIA																																
BAKERSFIELD	145	994.9	1012.3	30.0	15.0	22.4	1.1	38.3	15+	9.4	9	13	0	6.7	39	1	- 5	1	1	0	0	0	2.8	33	11.2	34	16	23	7	1	1.9	
BISHOP	1252	871.0		28.3	6.1	17.2	0.2	35.0	30+	1.7	21+	7	0			3	- 2	2	2		0	0						16	11	4	3.7	
BLUE CANYON	1609			17.8	7.8	12.8	1.6	25.6	27+	0.0	21+	0	4			28	- 50	20	4		152	51			7.6	19	15	18	7	6	3.7	
EUREKA U	13			13.3	8.3	10.7	- 1.0	16.1	19	4.4	1	0	0			28	- 27	12	6		0	0			17.4	N	18	1	10	20	7.9	45
FRESNO	100	1001.0	1012.5	30.0	12.2	21.1	0.9	38.9	14	7.8	7	13	0	6.7	44	4	- 4	4	1	0	0	0	2.1	30	12.1	NW	7	20	8	3	2.3	95
LONG BEACH	8	1012.9	1014.3	24.4	14.4	19.3	1.8	35.0	28	10.0	21+	2	0	11.7	67	1	- 2	1	1	0	0	0	1.5	23	7.6	27	28+	11	13	7	4.8	
LOS ANGELES	30	1010.2	1013.7	21.7	13.9	17.8	1.2	28.9	30	11.1	21	0	0	12.2	75	T	- 3	T	1	0	0	0	2.9	25	13.0	SW	21	12	11	8	4.9	
LOS ANGELES U	82			25.0	15.0	19.8	1.6	36.1	29	10.6	21	4	0			1	- 3	1	1		0	0			7.2	SW	28+	14	10	7	4.3	85
MT SHASTA R	1080	891.0	1014.3	21.1	5.0	13.0	0.9	30.0	28+	0.6	17	0	0	3.3	56	39	- 12	31	5		25	T										
OAKLAND	2	1015.2	1015.3	18.9	11.7	15.3	- 0.1	31.1	13	9.4	9	0	0	10.0	76	1	- 15	1	2	0	0	0	3.4	27	10.3	25	18+	12	9	10	4.6	
RED BLUFF	104	1000.0	1012.4	28.9	11.1	19.9	- 0.3	37.8	13	3.3	8	13	0	5.6	46	23	- 6	20	4	0	0	0	0.4	17	13.4	SE	7	17	8	6	3.5	88
SACRAMENTO	5	1012.2	1013.1	28.9	10.0	19.4	1.6	38.3	13	4.4	8	11	0	7.2	55	7	- 8	5	3	0	0	0	2.2	21	9.8	SW	4	18	8	5	3.2	91
SANDBERG R	1377	861.5		20.6	8.3	14.4	0.7	28.3	31+	- 1.1	20+	0	2	1.7	52	2	- 6	2	1		8	T	1.5	31	19.2	33	9	20	3	8	3.1	
SAN DIEGO	4	1013.2	1014.2	21.1	15.0	18.2	0.4	26.1	29+	12.8	20+	0	0	11.7	68	3	- 1	2	3	0	0	0	2.4	27	8.5	NW	27+	5	18	8	5.9	66
SAN FRANCISCO	2	1014.9	1015.5	19.4	9.4	14.2	- 0.4	30.0	13	7.2	10	0	0	8.3	73	T	- 12	T	0	0	0	0	4.4	28	11.6	27	9	17	5	9	4.3	
SAN FRANCISCO U	16			16.7	9.4	13.1	- 1.1	27.8	13	8.3	3	0	0			T	- 16	T	0		0	0			12.1	W	23					75
SANTA MARIA	72			20.0	7.2	13.7	- 0.5	29.4	28	3.3	9	0	0			T	- 6	T	0		0	0						17	7	7	3.8	
STOCKTON	7	1012.9	1014.0	28.9	11.1	19.8	0.8	37.8	14	6.7	8+	12	0	7.2	52	3	- 8	3	1	0	0	0	3.4	30	10.3	27	23	19	7	5	3.1	
COLORADO																																
ALAMOSA	2297	771.8		20.6	- 0.6	9.9	- 0.5	26.1	20	- 8.9	1	0	17			2	- 17	1	3		T	T						14	11	6	4.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths, sunrise to sunset	Possible sunshine
												No of days							No of days		Snow Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
COLORADO	M	Mb	Mb	C	C	C.	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							
COLORADO SPRINGS	1873	811.4	1014.2	20.6	6.1	13.3	0.5	27.8	25+	- 2.8	1	0	2	0.6	51	37	- 17	10	10	11	T	0	1.1	8	19.7	15	19	8	14	9	5.5	
DENVER	1610	835.8	1012.3	21.7	6.1	13.9	0.4	29.4	25	- 3.3	2	0	3	3.3	56	12	- 56	4	10	7	0	0	0.5	14	16.1	S	19	6	13	12	6.2	62
GRAND JUNCTION	1476	850.3	1010.5	26.1	8.3	17.3	0.5	32.2	31+	- 2.8	1	2	1	- 4.4	27	11	- 4	5	5	3	0	0	1.2	14	18.8	SW	20	12	9	10	4.7	74
PUEBLO	1428	854.7	1012.3	24.4	7.2	15.8	- 0.1	32.2	21	- 3.3	1	1	3	3.9	53	21	- 24	7	9	6	0	0	1.1	11	20.6	S	18	10	13	8	5.2	78
CONNECTICUT																																
BRIDGEPORT	2	1016.6	1017.3	19.4	10.6	15.0	0.2	25.6	28	5.6	27+	0	0	8.3	68	187	93	50	12	2	0	0	0.8	12	15.6	30	11	9	6	16	6.4	
HARTFORD	52	1010.5	1017.1	22.2	9.4	15.6	0.1	30.0	28	2.2	26+	0	0	8.3	66	190	104	65	15	2	0	0	0.4	17	12.1	SW	13	8	6	17	6.7	60
DELAWARE																																
WILMINGTON	23	1014.2	1017.2	22.8	11.1	16.9	- 0.1	30.6	24	3.3	11	0	0	10.6	69	98	8	38	10	3	0	0	0.7	12	9.8	6	20+	8	7	16	6.8	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1004.7	1016.5	23.3	10.0	16.6		28.3	24+	1.1	11	0	0	11.7	76	121		30	14	6	0	0	0.2	7	13.9	20	15	9	3	19	6.8	
WASHINGTON NATIONAL	3	1013.9	1016.3	23.3	13.3	18.1	- 0.7	27.8	30+	6.7	11	0	0	11.7	68	121	16	29	13	5	0	0	0.5	9	13.9	NE	19	9	3	19	6.5	56
FLORIDA																																
APALACHICOLA U	4			27.2	19.4	23.3	- 0.5	31.1	25	15.0	5	0	0			43	- 30	18	6	3	0	0			11.6	E	11	12	9	10	5.2	89
DAYTONA BEACH	9	1012.9	1014.2	27.8	19.4	23.6	0.1	32.8	9	14.4	28	1	0	18.3	75	102	30	55	20	10	0	0	1.1	7	8.9	9	13+	3	13	15	6.8	
FORT MYERS	5	1013.2	1013.6	31.7	20.0	25.7	0.5	33.9	5	16.1	4	11	0	19.4	73	132	34	116	6	4	0	0	0.6	30	10.3	8	6	11	13	7	5.0	
JACKSONVILLE	8	1013.2	1014.1	27.8	17.8	22.7	- 1.6	31.1	25+	13.3	6+	0	0	17.8	79	210	122	67	15	8	0	0	0.8	7	13.0	NW	20	4	12	15	6.8	52
KEY WEST	1	1012.5	1013.4	29.4	25.0	27.2	1.1	31.1	16+	22.2	6+	0	0	20.6	69	67	- 2	39	8	4	0	0	0.7	8	14.3	E	6	15	12	4	4.1	93
LAKELAND U	65			28.9	19.4	24.1	- 0.8	31.7	15	16.7	28+	0	0			56	- 34	21	10		0	0						8	18	5	5.5	61
MIAMI	2	1012.9	1013.3	28.9	21.7	25.3	0.0	30.6	30+	19.4	22	0	0	21.1	80	348	185	111	18	11	0	0	1.2	13	10.3	11	26+	5	18	8	5.8	
ORLANDO	33	1009.5	1013.9	30.6	20.0	25.2	- 0.1	33.3	25	17.8	28+	6	0	18.3	70	96	5	43	14	8	0	0	0.5	6	11.2	3	20	3	15	13	6.9	
PENSACOLA	34	1009.8	1014.2	27.8	18.9	23.4	- 0.8	33.3	23	14.4	4	2	0	16.7	69	116	1	91	10	4	0	0	0.7	4	10.3	26	8	10	9	12	5.8	
TALLAHASSEE	17	1011.9	1014.1	28.9	16.7	22.8	- 1.1	31.7	25	7.8	5	0	0	16.7	73	231	126	100	11	7	0	0	1.0	5	12.5	28	15	10	7	14	6.1	
TAMPA	6	1013.5	1013.7	30.0	19.4	24.8	- 0.1	32.2	25+	15.6	5	3	0	18.3	70	48	- 25	24	9	8	0	0	0.3	31	8.9	28	23	5	12	14	6.4	72
WEST PALM BEACH	5	1012.5	1013.1	30.6	21.7	26.0	0.7	32.8	23+	18.3	21	7	0	20.0	74	284	154	88	20	17	0	0	1.2	11	17.4	14	29	2	18	11	6.5	
GEORGIA																																
ATHENS	244	986.5	1015.1	25.0	13.9	19.4	- 1.8	31.1	25	9.4	5	0	0	13.3	74	153	61	46	10	8	0	0	1.0	5	8.0	7	27+	7	9	15	6.6	
ATLANTA	308	978.3	1014.8	24.4	13.9	19.2	- 1.4	28.9	25	9.4	5	0	0	12.8	72	109	28	52	13	7	0	0	0.9	5	11.6	NE	23	6	13	12	6.7	59
AUGUSTA	41	1009.5	1014.9	26.7	14.4	20.3	- 1.7	31.1	25	9.4	11+	0	0	14.4	76	103	27	19	18	12	0	0	0.7	36	10.3	14	2	6	4	21	7.1	
COLUMBUS	117	1000.7		27.2	16.1	21.5	- 0.8	30.0	30+	11.1	5	0	0	15.0	70	84	- 5	29	12	7	0	0	1.2	4	11.2	3	22	5	14	12	6.6	
MACON	108	1001.7	1014.7	27.2	14.4	20.9	- 2.4	30.6	30	9.4	5	0	0	15.0	74	53	- 31	20	9	7	0	0	1.2	4	14.3	N	22	5	12	14	7.0	67
ROME	194			25.6	12.8	19.1	- 1.3	31.1	25	5.6	5	0	0			150	53	83	13		0	0										
SAVANNAH	14	1012.9	1014.8	27.2	16.7	22.0	- 1.0	31.1	25	12.2	6	0	0	16.1	75	148	53	40	16	11	0	0	1.0	4	11.6	S	31+	3	12	16	7.3	58
HAWAII																																
HILO	8	1016.3	1017.4	27.2	18.3	22.8	0.0	28.3	22+	16.7	28+	0	0	18.9	81	120	-117	15	27	2	0	0	0.5	15	8.0	E	20+	1	10	20	7.7	39
HONOLULU	2	1016.3	1016.7	28.9	21.1	25.2	0.8	30.6	14	18.3	26	0	0	17.8	66	3	- 22	1	5	0	0	0	5.9	6	12.1	NE	31	9	11	11	5.8	74
KAHULUI	15	1013.5	1016.0	29.4	17.8	23.7	- 0.3	31.7	12	15.0	18+	0	0	17.8	69	T	- 18	T	0	0	0	0	5.1	5	13.0	NE	31+	10	9	12	5.7	73
LIHUE	31	1013.2	1018.2	27.2	22.2	24.8	1.2	28.3	24+	18.9	26	0	0	19.4	74	19	- 47	8	13	0	0	0	4.4	5	8.5	NE	29+	3	14	14	6.9	59
IDAHO																																
BOISE	865	913.6	1012.8	23.9	7.8	15.9	1.3	35.6	30	0.0	1	3	1	1.1	40	8	- 25	5	5	2	0	0	0.1	33	19.7	SE	20	13	11	7	4.9	80
LEWISTON	431			23.3	8.9	16.1	1.4	33.9	29	0.0	1	3	1			41	2	23	7		0	0			14.3Y		19	5	10	16	6.6	
POCATELLO	1358	861.5	1013.2	21.1	3.3	12.1	- 0.7	31.1	31	- 6.7	1	0	6	- 1.1	44	14	- 15	9	5	3	0	0	1.8	24	14.8	S	20	10	9	12	5.7	78
ILLINOIS																																
CAIRO U	96			25.6	16.1	20.9	0.3	32.8	22	10.6	9	2	0			67	- 44	25	7		0	0			11.2	SW	14+	14	8	9	4.7	67
CHICAGO O HARE	201	990.9	1015.3	22.2	10.0	16.1	1.8	31.1	28	1.7	10	0	0	8.9	65	77	- 19	19	10	4	0	0	1.0	6	15.6	25	14	13	5	13	5.3	
CHICAGO MIDWAY	185	993.2	1015.6	22.2	10.6	16.5	0.9	33.3	28	1.1	10	2	0	8.3	63	73	- 22	18	10	5	0	0	1.1	8	17.0	W	29	14	4	13	5.0	70
MOLINE	177	993.9	1015.5	23.9	10.6	17.2	1.0	33.3	22	1.1	10	5	0	10.0	65	108	11	47	11	6	0	0	0.2	20	12.5	SW	2+	11	11	9	5.3	64
PEORIA	199	991.2	1015.0	23.9	11.1	17.3	0.9	31.7	22	2.8	9	0	0	8.9	61	33	- 75	18	11	9	0	0	0.3	18	13.4	SW	2	9	11	11	5.8	74
ROCKFORD	221	988.2	1015.0	23.3	10.0	16.8	1.8	32.2	21	2.2	10	1	0	9.4	64	116	19	37	12	5	0	0	0.9	11	13.0	19	5	12	7	12	5.3	
SPRINGFIELD	179	992.6	1014.6	25.0	11.7	18.2	0.4	32.8	22	3.9	4	3	0	10.0	62	48	- 51	15	12	6	0	0	0.5	20	17.4	SW	2	12	12	7	4.9	67
INDIANA																																
EVANSVILLE	116	1001.0	1015.0	25.6	12.2	18.9	- 0.4	32.8	26	5.6	5	1	0	11.1	64	47	- 60	23	10	7	0	0	0.2	25	11.6	SW	14+	13	8	10	5.2	72

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths sunrise to sunset	Pct. possible sunshine
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days Max 32.2 °C or above	No. of days Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days 25 mm or more	No. of days With thunderstorms	Snow, Ice pellets Total	Snow, Ice pellets Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile 1.6 kilometer Speed	Fastest mile Direction	Fastest mile Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
INDIANA																																
FORT WAYNE	241	986.5	1016.4	22.8	10.0	16.5	0.6	30.6	25	1.1	10	0	0	8.9	65	84	- 11	37	10	5	0	0	0.5	8	17.0	SW	2	9	10	12	6.1	69
INDIANAPOLIS	241	986.5	1015.5	25.0	11.7	18.3	2.0	32.8	26	3.3	10	2	0	10.0	61	48	- 53	18	8	2	0	0	0.3	5	14.3	SW	14	10	8	13	5.9	71
SOUTH BEND	236	987.8	1015.5	21.7	9.4	15.6	0.7	30.0	25	0.6	10	0	0	8.9	69	76	- 15	22	9	3	0	0	0.2	6	12.5	23	2	12	5	14	5.5	
IOWA																																
BURLINGTON	211			23.3	11.1	17.2	0.7	31.7	23+	2.8	9	0	0	11.1	65	72	- 30	31	11	8	0	0	0.5	24								
DES MOINES	286	980.7	1015.2	22.8	11.1	16.9	1.1	30.0	22	4.4	31	0	0	10.0	68	77	- 26	27	14	6	0	0	0.7	17	18.8	SW	1	8	5	18	6.6	63
DUBUQUE	322	976.6		22.8	11.1	16.8	2.3	31.7	21	2.8	10	0	0			87	- 20	23	11		0	0						10	9	12	5.7	
SIOUX CITY	334	974.9	1014.5	22.8	11.1	17.1	0.7	31.7	22+	5.0	4	0	0	10.0	68	109	27	64	13	5	0	0	0.2	21	21.0	SW	1	7	6	18	7.1	53
WATERLOO	265	983.4	1015.2	22.8	9.4	16.0	0.5	32.2	22	- 0.5	5	1	1	8.9	65	85	- 10	47	12	5	0	0	0.5	15	11.2	1	30	6	10	15	6.5	
KANSAS																																
CONCORDIA	448	961.7	1014.2	22.8	10.6	16.6	- 0.7	30.0	22	5.0	9	0	0	11.1	75	103	5	29	14	7	0	0	0.4	19	17.9	W	1	9	7	15	5.8	64
DODGE CITY	787	924.1	1013.9	23.9	10.6	17.2	- 0.4	32.8	16	2.8	3	1	0	8.3	61	138	56	37	13	12	0	0	1.0	16	21.0	NW	10	13	7	11	5.4	70
GOODLAND	1114	887.9	1013.7	22.8	7.2	15.0	0.3	32.2	21	0.0	7+	1	2	6.7	65	153	92	89	11	8	0	0	1.3	16	13.9	14	25	13	6	12	5.0	
TOPEKA	267	983.4	1014.8	23.9	11.7	17.6	- 0.4	30.6	22	5.6	15+	0	0	11.7	71	74	- 38	37	11	4	0	0	0.5	23	13.4	SW	5	11	4	16	5.8	54
WICHITA	403	966.8	1014.1	23.9	11.7	17.8	- 1.1	31.7	25+	6.1	2	0	0	11.1	69	63	- 38	23	10	11	0	0	0.5	18	14.8	SW	5	11	8	12	5.7	64
KENTUCKY																																
COVINGTON	265	984.1	1015.3	23.3	11.1	17.3	0.3	30.6	25	1.7	10	0	0	10.0	65	153	62	54	9	5	0	0	0.3	15	11.2	30	30+	7	10	14	6.5	
LEXINGTON	294	980.7	1015.9	23.3	11.7	17.3	- 0.7	30.6	25	2.8	10	0	0	10.6	69	98	T	38	12	5	0	0	0.5	16	11.2	18	7	8	8	15	6.6	
LOUISVILLE	145	997.6	1015.0	24.4	12.8	18.6	0.6	30.6	26+	5.0	10	0	0	11.1	64	113	14	60	10	6	0	0	0.3	20	9.8	S	13	9	12	10	5.8	64
LOUISIANA																																
ALEXANDRIA	28	1010.5	1014.7	28.3	15.6	21.9	- 0.9	32.8	26+	9.4	5	5	0	15.6	74	135	- 6	78	5	3	0	0	0.8	2	8.0	33	15	17	7	7	4.3	
BATON ROUGE	20	1011.5	1014.2	29.4	17.8	23.7	- 0.1	33.9	25	12.2	5	11	0	17.2	71	232	110	123	5	3	0	0	1.0	2	10.3	11	12	16	6	9	4.6	
LAKE CHARLES	3	1013.2	1014.3	28.9	18.3	23.4	- 0.8	33.9	26	13.9	5	5	0	17.8	76	115	- 2	42	7	6	0	0	0.9	4	12.5	17	12	13	7	11	5.1	
NEW ORLEANS	1	1013.2	1014.0	28.9	17.8	23.3	- 0.3	33.9	23	11.7	6+	3	0	17.8	74	160	49	119	4	2	0	0	0.8	4	10.7	33	12	12	8	11	4.9	
SHREVEPORT	77	1005.4	1014.5	28.9	16.1	22.4	- 0.4	33.9	28+	10.0	4	4	0	16.1	72	105	- 17	62	6	6	0	0	0.2	36	10.3	2	1	14	7	10	5.0	72
MAINE																																
CARIBOU	190	992.9		17.8	5.0	11.3	1.4	30.6	29	- 3.9	2	0	8			94	17	20	12		T	T						6	10	15	6.5	
PORTLAND	13	1014.9	1017.3	16.7	6.1	11.4	- 0.2	26.7	28	- 1.1	6	0	3	5.6	71	81	- 6	27	11	1	0	0	1.2	18	13.0	NW	12	8	8	15	6.4	50
MARYLAND																																
BALTIMORE	45	1011.5	1017.0	22.8	11.7	17.1	- 0.9	28.3	7	4.4	11	0	0	11.1	71	104	3	33	12	4	0	0	0.5	10	11.6	NW	4	7	8	16	6.2	53
MASSACHUSETTS																																
BLUE HILL OBS R	192			18.9	7.8	13.2	- 0.6	28.3	28	1.7	10	0	0			160	71	39	14		0	0			18.8	SSW	31+					47
BOSTON	5	1016.6	1017.5	18.9	9.4	14.2	- 0.7	30.0	29	4.4	10	0	0	7.2	69	134	49	36	13	1	0	0	0.3	13	16.5	NE	9	8	6	17	6.6	48
WORCESTER	301	981.0	1018.1	18.9	7.8	13.2	0.3	27.8	28	1.1	10	0	0	5.0	63	199	103	58	13	1	0	0	0.6	29	13.4	35	12	7	5	19	6.8	
MICHIGAN																																
ALPENA	210	991.5	1017.0	19.4	3.9	11.5	1.2	31.1	29	- 5.0	8	0	5	3.9	62	55	- 19	24	8	3	0	0	0.8	8	13.0	NE	1	17	3	11	4.5	68
DETROIT	189			22.2	10.0	16.1	1.1	30.6	29	3.3	10	0	0	6.7	58	51	- 39	18	7	2	0		0.5	7	14.8	35	9					
DETROIT METRO.	193	991.5	1015.7	22.2	9.4	15.7	1.5	30.0	29+	2.2	10+	0	0	8.3	66	68	- 22	19	9	2	0	0	0.4	6	14.3	NE	9	10	7	14	5.5	67
FLINT	235	987.8	1015.7	21.7	8.9	15.1	1.5	28.9	24	- 0.6	10	0	1	7.2	62	85	- 1	19	11	4	0	0	0.4	11	10.7	6	9	12	8	11	5.2	
GRAND RAPIDS	239	986.8	1015.9	22.2	8.3	15.2	1.4	31.7	21	0.0	10	0	1	7.8	65	51	- 37	17	11	3	0	0	0.3	10	13.4	S	14+	12	7	12	5.3	65
HOUGHTON LAKE	350	974.6	1016.5	21.7	6.1	13.8	2.6	30.6	24	- 1.7	10	0	4	5.6	63	45	- 29	18	8	4	0	0	0.6	7	9.4	21	29	14	7	10	4.7	
LANSING	256	984.4	1016.0	21.7	7.8	14.6	0.6	28.3	24+	- 1.1	10	0	1	7.8	64	73	- 22	40	9	6	0	0	0.2	14	13.0	W	14	12	6	13	5.0	59
MARQUETTE U	206			17.2	5.6	11.3	1.3	30.0	28	- 1.7	8	0	3			64	- 12	42	7		0	203			9.4	NW	30	14	10	7	4.6	71
MUSKEGON	191	993.2	1016.2	21.7	8.3	14.8	1.6	30.6	23	0.0	10	0	1	6.7	62	30	- 45	11	11	2	0	0	0.3	23	10.3	19	6	13	5	13	5.1	
SAULT STE MARIE	220	989.8	1016.6	20.0	5.6	12.8	3.1	31.1	20	- 1.7	8	0	5	5.0	63	55	- 16	25	9	1	0	T	0.4	6	13.0	NW	6	13	9	9	4.7	73
MINNESOTA																																
DULUTH	435	965.1	1016.6	18.3	5.6	11.9	2.4	30.6	17	- 2.2	8	0	5	4.4	65	51	- 33	20	10	3	T	T	2.0	9	18.8	NE	1	5	12	14	6.4	62
INTERNATIONAL FALLS	359	972.9	1015.8	22.8	7.8	15.3	4.9	33.9	17	- 3.3	7	2	4	7.2	62	65	- 1	38	12	6	T	0	0.5	11	11.2	8	1	7	11	13	6.3	
MINNEAPOLIS	254	985.1	1015.3	22.2	10.0	16.3	2.2	32.2	22+	1.1	3	2	0	8.3	63	55	- 26	15	11	5	0	0	0.6	9	12.5	SW	1	7	5	19	7.2	59
ROCHESTER	395	968.2	1015.5	22.8	8.9	15.6	1.9	32.2	22	1.1	3	1	0	8.9	68	45	- 48	14	10	8	0	0	0.9	16	11.6	15	12+	6	10	15	6.3	
ST CLOUD	313	978.7	1016.3	21.1	8.9	15.0	1.9	32.2	17	- 0.6	3	1	1			84	- 5	25	9		0	0						6	7	18	7.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation on ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile 1.6 kilometers: Speed	Direction	Date	No. of days sunrise to sunset: Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover tenths sunrise to sunset	Percent of possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
MISSISSIPPI																																
JACKSON	94	1003.1	1014.8	28.9	15.6	22.2	- 0.7	33.9	23+	10.0	5+	8	0	16.7	76	115	4	50	9	4	0	0	0.8	5	11.2	NW	14	10	10	11	5.5	67
MERIDIAN	88	1003.7	1014.8	28.3	14.4	21.4	- 1.1	32.2	23+	8.9	5	2	0	14.4	69	140	41	89	7	3	0	0	0.5	35	8.0	36	19	9	11	11	5.9	
MISSOURI																																
COLUMBIA REGIONAL	270	983.4	1015.5	24.4	12.8	18.4	0.4	31.7	22	6.1	31	0	0	11.1	65	86	- 33	31	6	4	0	0	0.6	23	14.8	NW	1	10	7	14	5.6	60
KANSAS CITY	226	987.8	1014.3	25.0	13.9	19.5	0.8	32.8	25	6.7	9	2	0	11.7	63	55	- 56	17	11	5	0	0	0.3	18	13.4	SW	2	10	10	11	5.5	66
ST JOSEPH	247			25.0	11.7	18.4	0.6	32.8	21	5.6	9+	2	0			130	18		13				0.4	21	13.0	25	2+	8	11	12	6.0	
ST LOUIS	163	994.9	1015.0	26.1	12.2	19.1	1.2	33.3	22	5.0	11+	4	0	11.7	65	26	- 69	8	7	3	0	0	0.7	22	11.6	SW	2+	10	11	10	5.5	60
SPRINGFIELD	386	970.5	1015.4	25.6	11.1	18.5	0.4	33.9	16	6.7	31+	1	0	10.6	65	50	- 84	24	4	3	0	0	0.8	19	15.2	W	23	11	5	15	5.8	66
MONTANA																																
BILLINGS	1087	892.0	1015.8	18.3	6.1	12.1	- 1.7	31.1	31	- 1.1	2	0	1	1.7	54	64	16	32	14	6	T	0	1.3	32	13.0	NE	18	3	11	17	7.3	53
GLASGOW	696	934.3	1016.1	18.9	7.2	13.1	0.3	32.8	17	- 3.3	6	1	2	5.0	64	69	31	15	15	8	T	T	1.0	5	16.1	15	17	4	8	19	7.1	
GREAT FALLS	1116	888.9	1016.3	18.9	5.0	11.9	0.3	32.2	31	- 2.8	2	1	3	2.2	59	40	- 13	23	10	3	5	0	1.9	25	17.0	W	17	3	12	16	7.1	58
HAVRE	788	923.8	1015.4	21.1	6.1	13.5	0.9	34.4	31	- 2.2	2	1	3	3.3	56	32	- 7	7	11	4	T	0	0.4	19	15.2	N	26	3	13	15	7.3	71
HELENA	1167	881.5	1016.9	17.8	3.3	10.5	- 1.1	29.4	31+	- 3.3	2	0	6	0.6	55	20	- 20	5	10	4	T	0	1.6	30	15.6	W	24+	3	11	17	7.3	58
KALISPELL	904	912.3	1017.0	18.9	4.4	11.6	0.3	28.9	30	- 6.7	1	0	4	2.2	57	38	- 4	14	12	3	T	T	0.7	8	10.7	2	19	6	5	20	7.1	
MILES CITY	801	922.1	1014.9	20.0	7.8	13.9	- 0.2	33.3	17	1.1	6	2	0	5.6	63	72	28		14	5	T		1.5	33								
MISSOULA	972	905.2	1016.8	20.0	5.0	12.3	0.9	32.2	30	- 5.0	1	1	4	3.9	60	18	- 30	7	9	4	0	0	0.6	6	15.2	SW	14	5	10	16	6.8	58
NEBRASKA																																
GRAND ISLAND	561	948.9	1014.5	21.7	10.6	16.2	0.3	30.6	21	4.4	9+	0	0	8.9	66	150	52	44	13	7	0	0	0.4	22	20.6	28	1	9	8	14	6.2	
LINCOLN U	351			22.8	12.2	17.4	0.5	31.1	22+	6.1	7	0	0			108	20	39	15		0	0			17.4	NW	2	8	7	16	6.4	53
NORFOLK	471			21.7	10.6	15.8	0.2	32.2	21	2.8	4	1	0			118	25	49	13		0	0						8	6	17	6.8	
NORTH PLATTE	846	917.4	1014.6	21.1	7.8	14.5	- 0.2	32.2	16	- 4.4	7	1	2	7.2	67	81	6	42	9	6	0	0	0.8	12	25.0	NW	1	8	10	13	6.4	60
OMAHA	298	979.3	1014.3	22.8	11.1	16.9	- 0.3	31.1	21	4.4	15	0	0	11.1	71	130	42	52	15	9	0	0	0.4	20	16.5	W	1	8	5	18	6.4	58
SCOTTSBLUFF	1206	879.1	1014.1	21.7	5.6	13.6	- 0.2	32.2	16	- 0.6	1	1	3	3.3	56	39	- 29	22	7	8	0	0	0.9	3	19.7	32	21+	3	14	14	6.7	
VALENTINE	789			21.1	8.3	14.6	0.7	32.8	21+	- 3.9	7	2	1			92	25	26	12		T	0			26.8	NW	1	7	10	14	6.7	56
NEVADA																																
ELKO	1539	843.2	1012.6	22.2	2.2	12.2	1.1	31.7	30	- 6.7	1	0	10	- 5.0	33	4	- 20	4	2	1	T	0	0.4	27	10.3	18	20	13	6	12	5.2	
ELY	1906	807.3	1011.4	21.1	0.0	10.6	0.4	28.9	30+	- 6.7	1	0	15	- 5.0	38	8	- 13	5	4	2	33	0	2.0	20	16.1	SE	16	8	13	10	5.7	74
LAS VEGAS	659	934.6	1009.7	32.2	15.0	23.6	0.4	38.3	30+	8.3	21	18	0	- 4.4	16	12	10	11	2	1	0	0	1.8	21	15.6	N	30	21	9	1	2.4	94
RENO	1342	864.2	1012.5	25.0	2.8	13.8	1.7	32.8	28	- 1.7	1	2	6	- 2.2	36	26	13	26	2	2	0	0	1.3	28	15.2	W	30+	18	6	7	3.8	86
WINNEMUCCA	1311	866.6	1011.9	26.7	3.3	14.9	2.9	34.4	31+	- 6.7	1	6	9	- 3.3	30	5	- 19	3	4	4	T	0	0.8	31	13.0	SW	20	16	8	7	4.1	83
NEW HAMPSHIRE																																
CONCORD	104	1004.7	1017.2	21.1	6.7	13.8	0.7	31.1	28	- 3.3	11	0	6	7.2	69	107	26	29	12	1	0	0	0.3	13	11.6	NW	12	8	7	16	6.5	48
MT WASHINGTON OBS	1909			6.7	- 0.6	3.3	1.6	17.8	28	-10.6	10	0	15			162	13	30	13	2	178	559			45.2Y	N	12	7	7	17	6.7	50
NEW JERSEY																																
ATLANTIC CITY	20	1014.6	1016.8	20.6	10.0	15.1	- 1.2	26.1	7	2.8	28+	0	0	10.0	77	89	0	29	9	0	0	0	1.2	14	13.0	6	25+	8	8	15	6.5	52
ATLANTIC CITY U	3			17.2	11.7	14.5	- 0.8	22.8	12	6.7	11	0	0			130	49	36	10						15.6	ENE	20+					
NEWARK	2	1015.9	1017.0	22.2	12.2	17.2	0.6	27.8	24+	6.1	11	0	0	10.0	67	153	60	37	14	7	0	0	0.1	11	10.7	4	20+	7	9	15	6.5	
TRENTON U	17			21.7	11.7	16.5	- 0.3	28.3	24+	5.6	27+	0	0			128	36	33	14		0	0			13.4	N	25	8	7	16	6.4	43
NEW MEXICO																																
ALBUQUERQUE	1619	836.4	1010.1	27.2	8.3	17.8	- 0.6	32.8	20	1.1	1	1	0	- 6.1	26	5	- 14	3	3	1	0	0	1.5	17	21.0	E	29	16	6	9	4.1	81
CLAYTON	1515			23.3	7.8	15.5	0.1	30.6	21	0.6	1	0	0			66	- 4	37	10		0	0						15	3	13	5.7	
ROSWELL	1101			29.4	11.1	20.2	0.2	37.2	21	3.3	8	7	0			4	- 28	2	3		0	0			14.8	ST	9					67
NEW YORK																																
ALBANY	94	1006.1	1016.9	21.7	8.9	15.3	0.9	29.4	23	0.6	6	0	0	6.7	62	152	64	35	12	2	0	0	0.3	21	13.9	NW	11	9	5	17	6.6	54
BINGHAMTON	485	958.0	1016.7	20.0	9.4	14.9	2.1	29.4	24	1.1	6	0	0	7.2	64	131	43	24	15	7	0	0	0.4	23	14.3	NW	11	6	9	16	6.5	52
BUFFALO	215	990.5	1016.2	20.6	9.4	15.1	2.4	27.8	28+	3.3	12+	0	0	6.7	63	92	18	44	13	6	0	0	0.8	22	14.3	NE	9	11	3	17	6.2	61
NEW YORK U	40	1013.5	1017.0	22.2	12.2	17.4	0.5	30.0	24	7.2	10	0	0	9.4	67	213	120	55	15	4	0	0	0.8	9	13.4	NE	9					47
NEW YORK KENNEDY	4	1016.6	1017.4	20.6	12.2	16.2	0.6	27.8	22	7.2	26+	0	0	9.4	69	128	34	39	14	7	0	0	1.7	15	13.0	15	15+	9	8	14	6.1	
NEW YORK LA GUARDIA	3	1015.9	1017.1	20.0	11.1	15.4	- 1.3	27.2	24	6.7	11+	0	0	8.3	68	174	83	47	14	4	0	0	0.9	13	15.6		15	9	7	15	6.2	
ROCHESTER	167	996.3	1016.4	22.8	8.9	15.8	2.1	30.6	29	1.7	12	0	0	9.4	70	84	14	26	13	4	0	0	0.4	29	13.9	SW	6	9	5	17	6.2	63
SYRACUSE	125	1001.4	1016.3	21.1	8.3	14.7	0.4	29.4	29	1.1	12	0	0	8.9	72	157	74	28	15	5	0	0	0.3	26	13.9	NW	11	10	5	16	6.2	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1972

State and Station		Pressure		Temperature								No of days				Precipitation			No of days		Snow Ice pellets		Wind		Fastest mile (1.6 kilometers)			No of days (sunrise to sunset)				
	Elevation (ground)	Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
NORTH CAROLINA	M	Mb	Mb	C	C	C	C	C		C				C.	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
ASHEVILLE	652	940.7	1016.3	22.2	10.0	16.2	- 1.0	27.2	25	3.3	12+	0	0	11.7	79	168	75	64	13	8	0	0	0.8	36	11.2	34	31	4	10	17	7.4	64
CAPE HATTERAS R	2	1015.2	1015.8	22.8	15.0	18.9	- 1.1	26.7	30+	6.7	12	0	0	15.6	83	291	189	65	20	8	0	0	1.7	8	15.6	18	14	5	5	21	7.7	40
CHARLOTTE	224	988.5	1015.6	23.9	12.8	18.2	- 2.4	27.2	25+	6.7	11	0	0	11.7	70	142	64	40	14	6	0	0	0.9	5	11.2	SE	2	3	12	16	7.5	66
GREENSBORO	273	984.8	1016.2	22.8	11.7	17.2	- 2.2	26.7	2	6.1	6	0	0	11.7	73	158	75	53	14	6	0	0	0.7	3	11.6	NE	26+	5	5	21	7.6	55
RALEIGH	132	1000.3	1016.0	23.9	12.2	17.9	- 1.8	27.8	2	5.6	11	0	0	12.2	74	136	46	50	12	7	0	0	0.7	4	24.1	20	3	3	8	20	7.7	47
WILMINGTON	9	1013.9	1015.3	24.4	14.4	19.6	- 1.8	29.4	9	7.2	11	0	0	16.1	82	89	- 1	25	14	2	0	0	0.9	6	12.5	N	26+	1	9	21	8.1	54
NORTH DAKOTA																																
BISMARCK	502	955.3	1015.0	21.1	7.8	14.5	1.2	33.3	17	- 2.2	4	1	2	7.2	64	80	30	50	11	7	T	T	0.9	6	16.1	SE	18	4	10	17	7.4	60
FARGO	273	982.7	1015.3	21.7	9.4	15.4	2.4	32.8	17	- 2.8	7	1	2	9.4	70	89	38	43	11	4	0	0	1.0	12	17.0	S	18	6	6	19	7.4	55
WILLISTON	579	947.2	1015.4	20.0	7.2	13.5	0.9	34.4	17	- 6.1	6	1	3	6.7	70	104	68	29	14	7	0	0	0.7	4	21.9	W	21	5	8	18	7.1	55
OHIO																																
AKRON	368	971.6	1015.8	21.1	9.4	15.1	- 0.3	27.2	24	0.6	5	0	0	8.3	69	73	- 25	24	10	3	0	0	0.2	9	10.3	19	2	9	5	17	6.4	
CINCINNATI ABBE OB.	232			23.9	12.2	18.0	0.1	31.1	25	3.3	10	0	0			166	69	73	9		0	0			7.6	SW	2					60
CLEVELAND	237	987.5	1016.5	20.0	9.4	14.8	0.3	28.9	29	0.6	5	0	0	8.9	71	95	6	27	11	7	0	0	0.2	9	13.9	SW	14+	12	3	16	6.1	63
COLUMBUS	247	986.1	1015.9	22.2	10.0	16.0	- 0.4	29.4	25	1.1	11+	0	0	8.3	63	167	65	65	10	4	0	0	0.3	11	13.0	W	29+	8	5	18	6.7	58
DAYTON	305	979.7	1015.6	22.8	10.6	16.7	0.2	30.6	25	1.7	10	0	0	9.4	65	110	15	28	11	3	0	0	0.1	9	13.4	W	14	8	7	16	6.5	57
MANSFIELD	395			22.2	10.0	16.3	0.4	29.4	25+	0.6	10	0	0	8.9	66	78	- 17	33	11	5	0	0	0.2	20	11.2	36	9+	9	7	15	6.1	
TOLEDO	204	990.5	1015.6	22.8	8.9	15.8	1.2	31.1	29	- 1.1	10	0	1	7.8	61	67	- 10	25	13	6	0	0	0.5	6	13.4	SW	6	10	8	13	5.5	63
YOUNGSTOWN	359	973.6	1016.3	20.6	8.3	14.6	0.2	28.3	24	0.6	10	0	0	8.3	70	61	- 42	12	11	4	0	0	0.4	4	11.2	36	7+	10	5	16	6.2	
OKLAHOMA																																
OKLAHOMA CITY	392	969.2	1015.0	26.1	13.3	19.8	- 0.4	32.8	27	7.8	8	3	0	12.2	66	102	- 29	57	7	8	0	0	1.0	14	13.4	S	5	11	12	8	4.6	66
TULSA	198	990.9	1014.9	26.1	13.9	20.0	0.1	32.2	27+	8.9	8+	4	0	12.8	67	62	- 72	19	10	7	0	0	0.8	17	15.2	SE	23	11	11	9	5.1	73
OREGON																																
ASTORIA	2	1016.9	1017.8	16.7	8.3	12.6	0.8	25.6	26	1.7	1	0	0	8.9	81	31	- 50	11	10	0	0	0	1.7	28	10.3	23	29+	2	12	17	7.7	
BURNS U	1265	872.0	1014.0	21.1	3.9	12.6	0.7	31.1	29	- 2.8	1	0	6	0.6	47	8	- 15	4	6		0	0	1.1	31				15	7	9	4.9	
EUGENE	109	1003.4	1016.7	21.1	6.7	13.8	0.4	32.8	28	0.6	1	1	0	7.8	72	75	20	60	7	0	0	0	0.9	29	10.3	35	19	11	5	15	6.1	
MEACHAM	1234	877.1	1015.5	15.6	4.4	10.1	1.2	28.9	29	- 1.1	1	0	5			72	10	33	7		94	51			7.2	29	17+	13	10	8	4.6	
MEDFORD	396	967.5	1015.1	22.8	6.1	14.4	0.2	33.9	28	0.0	1	2	1	6.1	64	41	4	21	7	0	T	T	1.3	32	9.4	35	31+	12	7	12	5.5	
PENDLETON	452	961.7	1014.9	23.3	8.9	16.1	0.7	33.3	29	2.2	1	3	0	4.4	49	50	22	39	5	1	0	0	1.3	27	15.6	28	17	9	12	10	5.5	
PORTLAND	6	1015.2	1016.6	21.7	9.4	15.7	1.6	33.3	28	2.8	1	1	0	7.8	65	57	6	24	9	0	0	0	1.3	31	11.6	SW	20	10	6	15	6.4	70
SALEM	60	1009.5	1016.7	21.1	6.1	13.6	0.1	31.7	28	- 0.6	1	0	1	6.1	65	61	7	37	9	0	0	0	0.7	30	8.0	30	23+	9	8	14	6.1	
SEXTON SUMMIT R	1169	883.8	1015.4	17.2	5.0	11.1	1.1	27.8	28	- 0.6	24	0	2			35	- 21	20	8		T	T			15.6	23	16					
PACIFIC AREA																																
GUAM TAGUAC R	110	997.3	1010.0	30.0	22.2	26.1	- 0.8	30.6	22+	18.3	11	0	0	22.2	82	77	- 30	27	15	0	0	0	4.1	8	11.6	NE	1					64
JOHNSTON	2	1012.9	1013.6	27.2	24.4	25.7	- 0.5	28.3	18	21.1	12	0	0	21.7	79	154	129	46	17	0	0	0	8.8	8	16.1	E	12	6	6	19	7.4	60
KOROR R	29	1005.8	1009.3	31.7	24.4	28.2	0.8	33.9	19	22.8	16+	20	0	23.9	81	241	-131	116	14	1	0	0	1.3	1	12.5	W	27	0	11	20	8.2	65
KWAJALEIN	2	1007.5	1008.4	30.6	25.6	28.0	0.7	32.2	9	22.8	2	1	0	24.4	83	362	154	65	23	1	0	0	3.2	10	15.6	9	2	0	4	27	9.0	
MAJURO	3	1009.1	1009.4	30.0	25.0	27.3	0.4	31.1	17+	22.8	24	0	0	23.9	82	380	56	108	22	0	0	0	2.1	8	12.5	E	23	0	4	27	9.0	47
PAGO PAGO	4	1010.2	1010.3	30.0	23.3	26.6		32.2	6+	18.9	16	3	0	22.8	82	166		70	18	0	0	0	1.1	10	8.0	SW	13	4	15	12	6.7	51
PONAPE R	37	1002.0	1007.2	30.0	23.3	26.7	- 0.2	31.7	17+	21.1	31	0	0	23.9	88	850	334	178	29	4	0	0	0.4	18	13.0	SW	31	0	0	31	9.5	52
TRUK MOEN ISLAND	2	1008.1	1008.3	30.6	24.4	27.5	0.4	31.1	26+	22.2	27	0	0	24.4	84	424	65	73	26	1	0	0	1.8	3	17.9	NE	19	0	0	31	9.8	71
WAKE	3	1013.2	1013.6	29.4	23.3	26.5	- 0.1	31.7	31+	21.1	2	0	0	21.1	75	17	- 35	3	15	0	0	0	7.7	7	13.4	NE	4	8	20	3	4.6	64
YAP R	13			30.6	23.9	27.2	- 0.6	31.7	27+	21.1	13	0	0			135	-106	49	16	1	0	0			8.9	W	28	5	13	13	6.5	78
PENNSYLVANIA																																
ALLENTOWN	118	1003.1	1016.9	22.8	10.0	16.3	0.6	30.0	24	2.2	11	0	0	10.0	69	157	54	82	14	5	0	0	0.8	11	11.2	5	19	8	9	14	6.2	
ERIE	223	989.8	1016.6	17.8	8.3	13.1	0.3	26.1	29	0.0	10	0	1	7.2	72	119	29	44	14	8	0	0	0.6	18	14.3	23	1	14	4	13	5.4	
HARRISBURG	103	1004.1	1016.8	22.8	11.1	16.8	- 0.2	32.2	24	2.8	11	1	0			141	42	31	17	9	0	0	0.6	12	11.2	SW	11	8	10	13	6.1	62
PHILADELPHIA	2	1015.9	1016.8	22.8	12.2	17.6	0.6	28.9	24	5.6	11	0	0	11.1	71	104	9	36	13	4	0	0	0.8	13	13.0	E	25	9	3	19	6.5	53
PITTSBURGH	347	972.2	1016.0	22.8	10.6	16.6	1.1	28.9	24	1.1	11	0	0	7.8	59	35	- 64	12	13	4	0	0	0.4	31	12.5	20	2	6	7	18	6.7	54
SCRANTON	283	982.4	1016.4	21.7	9.4	15.6	0.2	30.0	24	1.1	11	0	0	8.3	66	186	86	66	16	4	0	0	0.2	9	13.0	SW	30	8	4	19	6.4	54
WILLIAMSPORT	160	997.6	1016.6	21.7	10.6	16.1	0.3	30.0	24	0.6	11	0	0	9.4	68	172	69	46	13	8	0	0	0.2	15	10.3	28	15	9	5	17	6.3	
RHODE ISLAND																																
BLOCK ISLAND	34			15.6	8.3	11.9	- 0.2	20.6	23	1.1	27	0	0			120	44	44	10		0	0										
PROVIDENCE	16	1015.2	1017.7	20.6	8.3	14.3	0.1	26.7	29	1.7	27+	0	0	7.8	69	146	60	46	10	0	0	0	0.7	14	12.5	14	15+	8	9	14	6.4	50

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C.	C	C		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1012.9	1014.9	26.1	15.6	21.0	-1.7	30.6	17	10.0	6	0	0	15.6	75	144	52	44	16	9	0	0	1.1	5	17.9Y	W	31	4	8	19	7.2	50
CHARLESTON	3			24.4	17.8	21.2	-1.7	30.0	9	13.3	26	0	0			184	106	60	15		0	0			15.6	N	23					
COLUMBIA	65	1007.1	1015.2	26.1	14.4	20.2	-2.1	29.4	25	6.7	11	0	0	15.6	78	163	73	30	18	8	0	0	0.8	2	13.0	2	22	6	7	18	7.1	53
GRNVLLE-SPRTNBRG	292	981.0	1015.5	24.4	12.2	18.3	-2.5	28.3	25	6.7	11+	0	0	11.1	67	226	144	91	12	7	0	0	0.9	4	10.7	NE	27	5	9	17	6.8	51
SOUTH DAKOTA																																
ABERDEEN	395	967.8	1014.5	21.7	10.0	15.9	1.9	32.2	17	-2.2	7	1	2	10.6	73	123	64	29	13	6	0	0	0.8	7	20.1	3	1	7	4	20	6.9	
HURON	390	967.8	1014.0	20.6	10.6	15.6	1.4	30.6	17	0.6	4	0	0	10.6	74	174	114	38	15	7	0	0	0.6	10	17.9	NW	1	7	7	17	7.0	50
RAPID CITY	964	904.5	1014.8	19.4	6.1	12.9	-0.3	31.7	17	-0.6	6+	0	3	6.1	69	83	16	22	13	5	T	T	2.4	35	22.8	NW	1	2	12	17	7.0	48
SIOUX FALLS	432	963.1	1014.4	21.1	9.4	15.1	0.4	30.6	19+	1.1	7	0	0	8.3	67	184	98	100	13	5	0	0	0.2	15	18.8	24	1	7	2	22	7.0	
TENNESSEE																																
BRISTOL	459	962.1	1015.7	23.3	11.1	17.1	-1.7	28.9	25	6.1	11+	0	0	11.1	72	150	63	38	13	8	0	0	0.3	36	10.3	10	21+	3	9	19	7.7	
CHATTANOOGA	203	990.5	1015.0	24.4	11.1	17.7	-3.4	29.4	25	5.6	5	0	0	11.1	69	164	75	78	10	6	0	0	0.1	4	10.7	NE	22+	6	11	14	6.4	56
KNOXVILLE	299	981.0	1015.8	23.3	13.3	18.3	-1.6	28.9	25	7.2	5	0	0	11.7	68	114	25	35	10	6	0	0	0.8	35	17.9	NE	19	3	9	19	7.4	56
MEMPHIS	79	1004.7	1014.9	26.7	15.0	20.9	-0.3	32.8	22	8.3	10	2	0	13.3	63	116	8	41	10	5	0	0	0.3	12	17.9	30	16	12	8	11	5.1	72
NASHVILLE	180	993.2	1014.7	26.1	13.3	19.7	-0.7	31.1	26	7.2	10	0	0	13.9	74	89	-5	47	11	5	0	0	0.4	16	13.4	S	14	13	7	11	5.3	63
OAK RIDGE R	276			23.9	11.7	17.7	-1.4	29.4	25	5.6	5	0	0			148	53	37	9		0	0			20.1Y		22	4	11	16	7.1	
TEXAS																																
ABILENE	544	952.6	1014.4	27.8	15.6	21.4	-0.6	33.3	24	6.7	3	5	0	13.3	65	63	-47	38	6	7	0	0	2.8	15	17.0	SE	5	10	12	9	5.2	86
AMARILLO	1098	890.6	1012.6	24.4	10.6	17.3	-1.8	31.1	25	3.3	3	0	0	6.1	54	71	-14	22	9	12	0	0	3.3	16	17.0	SE	25	8	13	10	5.3	74
AUSTIN	182	991.9	1013.7	28.3	17.8	23.1	-0.9	32.2	27+	13.9	4	4	0	17.2	72	200	106	86	11	9	0	0	1.2	11	21.9	N	1	8	10	13	5.7	69
BROWNSVILLE	6	1011.9	1012.4	29.4	21.1	25.3	-0.8	31.1	11	17.8	19	0	0	20.6	77	51	-9	41	9	6	0	0	3.4	11	17.0	SE	18	0	14	17	7.4	68
CORPUS CHRISTI	12	1011.9	1013.2	29.4	20.6	25.0	-0.3	32.2	30+	17.8	21+	2	0	21.1	81	152	76	55	11	6	0	0	3.2	11	17.0	W	10	5	12	14	6.5	64
DALLAS	147	997.0	1014.0	30.0	18.3	24.1	1.4	34.4	26	13.3	9+	12	0	14.4	59	28	-95	14	3	7	0	0	1.5	12	13.4	S	16	13	9	9	4.8	67
DEL RIO	313	976.6	1012.1	29.4	18.3	23.8	-1.9	33.9	24	12.8	2	8	0	17.2	70	66	-3	20	8	6	0	0	3.8	12	17.0	1	2	2	10	19	7.6	
EL PASO	1194	880.1	1009.6	29.4	12.8	21.0	-1.2	33.9	21	7.8	2+	7	0	-1.7	26	1	-9	1	2	2	0	0	1.1	21	13.4	SW	21+	11	9	11	5.0	79
FORT WORTH	164	994.2	1014.3	28.9	16.7	22.6	0.0	33.3	27	11.1	3	4	0	15.0	65	60	-57	29	5	4	0	0	1.1	13	10.3	20	16	12	9	10	5.1	
GALVESTON U	2			27.8	21.7	24.6	0.3	31.1	27+	18.3	2	0	0			162	91	75	8		0	0			16.5	E	10					69
HOUSTON INTERCON	29	1010.2	1014.0	28.9	17.2	23.2	-0.8	33.3	26	12.2	4	4	0	17.8	77	178	69	54	10	8	0	0	1.0	8	9.8	5	10+	10	11	10	5.2	65
LUBBOCK	992	902.8	1012.3	26.7	12.8	19.7	-0.4	33.3	26+	7.2	3	4	0	10.6	63	81	1	36	9	12	0	0	3.0	14	17.0	17	20	8	10	13	6.2	
MIDLAND	869	914.7	1011.7	28.3	14.4	21.3	-1.7	33.3	24+	8.3	8	5	0	12.8	64	30	-22	17	7	9	0	0	3.8	14	15.6	6	13	10	6	15	6.1	
PORT ARTHUR	5	1013.9		28.3	17.8	22.9	-0.8	33.3	26	12.8	4	2	0	17.8	76	150	25	52	7	3	0	0	0.8	7	23.2	S	12	14	9	8	4.7	58
SAN ANGELO	580	946.8	1012.5	27.8	15.0	21.6	-1.9	33.3	23	10.0	3	5	0	13.3	64	124	43	43	12	9	0	0	2.7	15	14.3	29	10	8	10	13	6.4	
SAN ANTONIO	240	986.1	1013.6	28.3	17.2	22.7	-1.4	31.1	1	14.4	17	0	0	17.2	74	285	198	166	12	11	0	0	1.7	10	14.3	N	16	4	13	14	6.7	51
VICTORIA	32	1009.5	1013.6	29.4	19.4	24.5	-0.1	32.8	26	15.6	4	5	0	18.9	74	285	181	215	10	9	0	0	1.9	11	21.5Y	NW	7	4	12	15	6.4	
WACO	153	996.3	1013.9	28.9	17.2	22.9	-0.6	33.3	27+	13.3	9+	6	0	15.6	67	50	-67	30	9	8	0	0	1.3	14	12.5	18	2	15	5	11	5.0	
WICHITA FALLS	303	977.7	1013.8	28.3	13.9	21.1	-1.2	33.9	28+	8.9	8+	7	0	13.3	65	74	-43	32	6	8	0	0	1.7	12	17.4	36	12	11	12	8	4.7	
UTAH																																
MILFORD	1533	844.2		25.0	2.8	13.7	0.1	32.2	31+	-5.0	1	2	8			1	-17	1	1		0	0			10.7	NW	31+	19	5	7	3.5	84
SALT LAKE CITY	1286	869.6	1011.9	24.4	7.2	15.8	0.9	32.8	31	-2.2	1	1	2	0.6	38	4	-32	3	2	3	0	0	0.5	18	15.6	NE	20	11	6	14	5.6	81
WENDOVER	1291	868.9	1012.3	23.3	10.6	17.1	0.7	31.1	31	0.6	1	0	0	-5.0	24	2	-15	1	3		0	0						12	8	11	5.3	
VERMONT																																
BURLINGTON	101	1004.1	1016.4	20.0	6.7	13.4	1.3	30.6	29	-1.1	11+	0	3	6.1	64	72	-4	26	12	3	0	0	0.5	21	12.5	S	30	8	7	16	6.3	57
VIRGINIA																																
LYNCHBURG	279			22.8	11.7	17.3	-1.2	27.2	2	5.0	11	0	0			274	123	65	15		0	0			11.2	NE	22	4	12	15	7.1	56
NORFOLK	7	1015.2	1016.2	21.7	13.3	17.5	-2.2	27.2	31+	7.8	11	0	0	13.3	81	85	T	29	12	7	0	0	1.4	6	19.7	NE	26	3	11	17	7.6	57
RICHMOND	50	1009.8	1016.2	23.9	12.8	18.1	-1.3	28.9	30	6.7	11+	0	0	12.8	77	225	131	64	13	6	0	0	0.4	8	11.6	SW	30+	4	9	18	7.4	50
ROANOKE	350	974.3	1016.0	23.3	10.0	16.7	-2.1	27.2	24	3.9	11+	0	0	10.0	68	152	56	42	15	6	0	0	0.4	5	9.8	26	15	3	11	17	7.1	
WALLOPS ISLAND	3			18.9	12.8	15.8		26.7	7	7.8	11	0	0			175		57	10		0	0			18.8Y	NE	26+	7	5	19	7.3	
WASHINGTON																																
OLYMPIA	59	1009.8	1017.2	20.0	5.0	12.7	-0.1	32.8	28	-1.7	1	1	3	7.2	71	21	-30	9	7	0	0	0	0.7	25	10.3	22	17	5	10	16	7.1	
QUILLAYUTE	55	1010.2	1017.6	17.8	6.7	12.1	0.9	31.7	27	0.0	25+	0	2	6.7	75	27	-86	12	8	0	0	0	0.8	24	12.1	NE	19	2	7	22	8.0	30
SEATTLE-TACOMA	122	1000.3	1016.7	20.0	9.4	14.6	1.6	32.8	28	5.0	1	1	0	7.2	65	18	-26	6	6	0	0	0	0.8	30	12.1	N	19	2	13	16	7.3	48
SPOKANE	718	931.3	1014.5	20.0	7.2	13.8	0.4	31.1	29	-1.7	1	0	1	4.4	56	51	20	25	9	0	0	0	0.8	17	13.9	W	15	6	11	14	6.7	62
STAMPEDE PASS R	1206	879.4		11.1	3.9	7.4	0.8	21.7	29+	-1.1	23	0	7			67	-41	27	10		41	3759						3	6	22	8.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature								No of days				Precipitation			No of days		Snow Ice pellets		Wind		Fastest mile 1 6 kilometers			No. of days (sunrise to sunset)				
	Elevation ground	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32 2 °C or above	Min 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0 3	Partly cloudy 4 7	Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm.	M p.s		M p s							%
WASHINGTON																																
WALLA WALLA U	289			23.3	10.6	16.8	0.7	33.9	29	3.3	1	3	0			48	10	27	6		0	0			12.5	W	17	8	13	10	5.6	73
YAKIMA	321	976.6	1014.8	25.0	6.1	15.5	0.8	35.0	29	- 1.7	1	3	2	3.3	47	15	2	7	5	1	0	0	1.6	31	13.0	29	17	8	10	13	5.9	
WEST INDIES																																
SAN JUAN P.R.	4	1013.2	1016.0	31.1	23.9	27.6	1.7	33.9	25+	21.1	18	9	0	20.0	65	11	-170	6	8	0	0	0	4.1	10	13.0	E	3	2	21	8	6.3	61
WEST VIRGINIA																																
BECKLEY	763	928.5	1016.0	20.6	8.9	14.6	- 1.4	26.1	25	1.7	11	0	0	7.8	68	120	18	31	17	6	0	0	0.9	18	10.3	34	22	3	7	21	7.6	
CHARLESTON	286	981.7	1015.5	24.4	10.6	17.6	- 0.6	31.1	25	1.1	11	0	0	10.0	67	65	- 29	15	12	4	0	0	0.4	19	19.2	27	2	2	8	21	7.8	
ELKINS	594	945.8		21.7	7.2	14.3	- 0.9	27.2	29+	- 2.2	11	0	2			120	4	37	17		0	0						5	7	19	7.6	
HUNTINGTON	252	985.8	1015.7	22.8	10.6	16.8	- 1.3	30.0	25	2.2	11	0	0	10.6	70	97	- 2	27	16	7	0	0	0.4	19	10.3	28	14	4	6	21	7.9	
PARKERSBURG U	187			23.9	11.7	17.7	- 0.1	30.6	25	3.3	11	0	0			53	- 41	18	13		0	0			13.9	W	15					63
WISCONSIN																																
GREEN BAY	208	990.5	1016.1	23.3	7.8	15.3	2.7	32.2	20	0.0	8	1	1	7.2	62	21	- 57	9	6	1	0	0	1.2	6	11.2	NE	30	13	8	10	4.9	76
LA CROSSE	198	991.5	1015.9	24.4	10.6	17.4	2.3	33.9	22	2.2	8	7	0	9.4	65	46	- 50		9	4	0		0.8	9								
MADISON	262	984.1	1015.3	23.3	7.2	15.1	1.7	31.7	21+	0.0	9+	0	2	8.3	67	72	- 13	21	10	3	0	0	0.8	10	9.8	SW	28	13	7	11	5.4	63
MILWAUKEE	205	990.5	1015.9	18.9	7.2	12.8	0.9	28.9	20	1.7	10+	0	0	7.8	75	59	- 21	14	11	1	0	0	0.8	5	11.6	N	8+	14	6	11	4.8	64
WYOMING																																
CASPER	1627	837.8	1014.8	18.9	3.3	11.2	- 0.6	29.4	31	- 3.3	2+	0	6	2.2	63	19	- 32	8	8	5	0	25	0.7	33	13.9	27	1	3	13	15	7.2	
CHEYENNE	1867	812.4	1014.6	17.8	3.9	10.7	- 0.9	26.1	16	- 2.8	1	0	4	0.5	56	70	6	20	11	8	8	T	1.7	33	22.8	NW	1	5	11	15	6.7	52
LANDER	1696	829.3	1014.7	17.8	4.4	11.1	- 0.6	27.8	31	- 6.1	1	0	3	0.0	53	52	- 15	19	9	4	0	0	0.8	28	16.1	S	25	4	12	15	7.0	58
SHERIDAN	1208	879.1	1015.7	19.4	5.6	12.3	0.3	31.1	17	- 2.2	2	0	1	3.3	58	34	- 31	12	12	5	T	T	1.7	31	16.1	NW	1	5	8	18	7.4	50

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column 'Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21 1 C. or above for Alaskan Stations.
Y Peak Gust
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	21	2366	2551
HUNTSVILLE	36	2730	3070
MOBILE	0	1053	1560
MONTGOMERY	0	1769	2291
ALASKA			
ANCHORAGE	666	11693	10366
ANNETTE	488	7530	6748
BARROW	1448	19750	19217
BARTER ISLAND	1426	19726	18938
BETHEL	856	13844	12794
BETTLES	585	17217	
BIG DELTA	601	15259	
COLD BAY	814	10223	9289
FAIRBANKS	539	14936	14057
GULKANA	704	15400	
HOMER	764	10929	
JUNEAU	618	9737	8694
KING SALMON	739	12343	10935
KOTZEBUE	953	15988	15469
MC GRATH	680	15035	14025
NOME	911	14439	13598
ST. PAUL ISLAND	993	11423	10473
SHEMYA	816	8983	8991
SUMMIT	855	15346	
TALKEETNA	703	13030	11259
UNALAKLEET	832	14354	
YAKUTAT	766	10397	8657
ARIZONA			
FLAGSTAFF	573	7645	6972
PHOENIX	0	1341	1765
TUCSON	0	1743	1800
WINSLOW	110	4543	4782
YUMA	0	1167	1217
ARKANSAS			
FORT SMITH	36	3040	3292
LITTLE ROCK	20	2631	3219
CALIFORNIA			
BAKERSFIELD	25	2312	2122
BISHOP	103	4268	4191
BLUE CANYON	316	5760	5312
EUREKA U	423	4607	4358
FRESNO	37	2744	2492
LONG BEACH	33	1434	1693
LOS ANGELES	53	1531	1745
LOS ANGELES U	35	1193	1331
MT SHASTA R	296	5968	5563
OAKLAND	175	2873	2780
RED BLUFF	69	2934	2515
SACRAMENTO	63	2831	2767
SANDBERG R	266	4391	4152
SAN DIEGO	34	1328	1403
SAN FRANCISCO	226	3145	2889
SAN FRANCISCO U	287	3086	2821
SANTA MARIA	252	3192	2802
STOCKTON	53	2776	2676
COLORADO			
ALAMOSA	462	8323	8361
COLORADO SPRINGS	273	5996	6339
DENVER	246	5814	6217
GRAND JUNCTION	139	5456	5620
PUEBLO	170	5196	5447
CONNECTICUT			
BRIDGEPORT	187	5233	5590
HARTFORD	172	6021	6148
DELAWARE			
WILMINGTON	105	4509	4924
DIST.OF COLUMBIA			
WASHINGTON DULLES	117	4551	
WASHINGTON NATIONAL	56	3801	4224
FLORIDA			
APALACHICOLA U	0	869	1308
DAYTONA BEACH	0	441	879
FORT MYERS	0	85	442
JACKSONVILLE	3	864	1239
KEY WEST	0	8	108
LAKELAND U	0	299	661
MIAMI	0	41	214
ORLANDO	0	240	766
PENSACOLA	0	1019	1463
TALLAHASSEE	0	1133	1485
TAMPA	0	286	683
WEST PALM BEACH	0	52	253
GEORGIA			
ATHENS	17	2491	2929
ATLANTA	21	2633	2983
AUGUSTA	5	2037	2397
COLUMBUS	0	1749	2383
MACON	0	1880	2136
ROME	28	2881	3326
SAVANNAH	1	1347	1819
IDAHO			
BOISE	194	5740	5728
LEWISTON	171	5475	5452
POCATELLO	346	7437	6892
ILLINOIS			
CAIRO U	25	3388	3821
CHICAGO O HARE	178	6205	6567
CHICAGO MIDWAY	177	5858	6107
MOLINE	155	6341	6369
PEORIA	150	6026	[illegible]
ROCKFORD	164	6671	6770
SPRINGFIELD	114	5185	5411
INDIANA			
EVANSVILLE	64	4244	4435
FORT WAYNE	154	5884	6166
INDIANAPOLIS	89	5135	5660
SOUTH BEND	197	6024	[illegible]
IOWA			
BURLINGTON	147	6048	6081
DES MOINES	149	6462	6769
DUBUQUE	174	7244	7298
SIOUX CITY	156	6818	6912
WATERLOO	196	7810	7266
KANSAS			
CONCORDIA	151	5319	5461
DODGE CITY	129	4756	4977
GOODLAND	222	5628	6099
TOPEKA	109	4897	5170
WICHITA	109	4756	4614
KENTUCKY			
COVINGTON	116	4877	5241
LEXINGTON	96	4169	4683
LOUISVILLE	61	3971	4651
LOUISIANA			
ALEXANDRIA	5	1594	1921
BATON ROUGE	0	1122	1560
LAKE CHARLES	0	1041	1459
NEW ORLEANS	0	1029	1385
SHREVEPORT	0	1725	2184
MAINE			
CARIBOU	405	10002	9584
PORTLAND	379	7396	7400
MARYLAND			
BALTIMORE	94	4221	4654
MASSACHUSETTS			
BLUE HILL OBS R	288	6365	6299
BOSTON	250	5478	5598
WORCESTER	290	6779	6891
MICHIGAN			
ALPENA	376	8210	8350
DETROIT	165	5916	6190
DETROIT METRO	174	6285	6455
FLINT	192	6667	6810
GRAND RAPIDS	204	6755	6927
HOUGHTON LAKE	254	8108	8204
LANSING	219	6843	6840
MARQUETTE U	403	8497	8216
MUSKEGON	233	6781	6619
SAULT STE MARIE	314	9160	8847
MINNESOTA			
DULUTH	357	10171	9802
INTERNATIONAL FALLS	236	10615	10432
MINNEAPOLIS	204	8514	8301
ROCHESTER	219	8291	8202
ST CLOUD	237	9175	8774
MISSISSIPPI			
JACKSON	1	1716	2203
MERIDIAN	3	1757	2289
MISSOURI			
COLUMBIA REGIONAL	94	4609	5034
KANSAS CITY	71	4523	4711
ST JOSEPH	88	5214	5469
ST LOUIS	80	4428	4885
SPRINGFIELD	79	4051	4555
MONTANA			
BILLINGS	353	7731	6947
GLASGOW	305		
GREAT FALLS	368	7999	7564
HAVRE	281	9070	8538
HELENA	430	8437	7934
KALISPELL	381	8411	7984
MILES CITY	277	8262	7624
MISSOULA	338	7645	7906
NEBRASKA			
GRAND ISLAND	181	6029	6485
LINCOLN U	144	5621	5834
NORFOLK	204	6837	6931
NORTH PLATTE	250	6605	6627
OMAHA	147	5980	6188
SCOTTSBLUFF	273	6389	6598
VALENTINE	257	7192	7341
NEVADA			
ELKO	339	7316	7241
ELY	425	7599	7508
LAS VEGAS	6	[illegible]	[illegible]
RENO	259	6167	6143
WINNEMUCCA	218	6477	[illegible]
NEW HAMPSHIRE			
CONCORD	262	7525	[illegible]
MT WASHINGTON OBS	[illegible]	13171	13214
NEW JERSEY			
ATLANTIC CITY	187	5012	4797
ATLANTIC CITY U	209	4450	4717
NEWARK	93	4573	[illegible]
TRENTON U	127	4660	4968
NEW MEXICO			
ALBUQUERQUE	76	4254	4348
CLAYTON	171	4783	5137
ROSWELL	25	3211	3793
NEW YORK			
ALBANY	175	6912	6830
BINGHAMTON	205	7085	7187
BUFFALO	187	6490	6984
NEW YORK U	94	4658	[illegible]
NEW YORK KENNEDY	123	4423	5207
NEW YORK LA GUARDIA	164	4959	[illegible]
ROCHESTER	161	6466	6700
SYRACUSE	204	6674	6711
NORTH CAROLINA			
ASHEVILLE	116	3714	4457
CAPE HATTERAS R	39	2168	[illegible]
CHARLOTTE	47	3090	3191
GREENSBORO	76	3521	3805
RALEIGH	51	3123	3393
WILMINGTON	29	2061	2347
NORTH DAKOTA			
BISMARCK	243	9223	8734
FARGO	231	9463	9127
WILLISTON	291	9539	9102
OHIO			
AKRON	184	6133	5998
CINCINNATI ABBE OB	98	4615	4797
CLEVELAND	196	5768	6137
COLUMBUS	146	5487	5633
DAYTON	130	5265	5592
MANSFIELD	143	5573	5747
TOLEDO	158	6206	6434
YOUNGSTOWN	208	6256	6357
OKLAHOMA			
OKLAHOMA CITY	46	3462	3725
TULSA	47	3395	3860
OREGON			
ASTORIA	313	4923	4955
BURNS U	330	7346	6780
EUGENE	256	4932	4591
MEACHAM	461	7972	7535
MEDFORD	237	4869	4930
PENDLETON	171	5093	5064
PORTLAND	174	4424	4530
SALEM	267	4875	4610
SEXTON SUMMIT R	412	6572	5975
PENNSYLVANIA			
ALLENTOWN	127	5524	5786
ERIE	287	6584	6829
HARRISBURG	108	4863	5239
PHILADELPHIA	86	4536	5089
PITTSBURGH	128	5471	[illegible]
SCRANTON	168	6235	6221
WILLIAMSPORT	141	5868	[illegible]
RHODE ISLAND			
BLOCK ISLAND	350	5487	5705
PROVIDENCE	226	5727	5903
SOUTH CAROLINA			
CHARLESTON	8	1644	2033
CHARLESTON U	6	1449	1794
COLUMBIA	12	[illegible]	2484
GRNVLLE-SPRTNBRG	48	3023	3044
SOUTH DAKOTA			
ABERDEEN	201	8691	[illegible]
HURON	210	8227	[illegible]
RAPID CITY	322	7571	7219
SIOUX FALLS	236	[illegible]	[illegible]
TENNESSEE			
BRISTOL	86	3774	4143
CHATTANOOGA	62	3174	3254
KNOXVILLE	47	3200	3494
MEMPHIS	27	2733	3232
NASHVILLE	36	3047	3578
OAK RIDGE R	67	3569	[illegible]
TEXAS			
ABILENE	12	2275	2624
AMARILLO	106	4094	3985
AUSTIN	[illegible]	1262	1711
BROWNSVILLE	0	[illegible]	600
CORPUS CHRISTI	0	541	914
DALLAS	0	1826	[illegible]
DEL RIO	0	[illegible]	[illegible]
EL PASO	3	[illegible]	2700
FORT WORTH	1	1861	2405
GALVESTON U	[illegible]	698	1235
HOUSTON INTERCON	0	1109	1676
LUBBOCK	40	[illegible]	3578
MIDLAND	12	2310	2591
PORT ARTHUR	[illegible]	1150	1447
SAN ANGELO	3	1883	[illegible]
SAN ANTONIO	[illegible]	[illegible]	[illegible]
VICTORIA	0	801	1173
WACO	2	1642	2030
WICHITA FALLS	12	2727	2832
UTAH			
MILFORD	265	6330	6410
SALT LAKE CITY	168	5820	5968
WENDOVER	117	5835	5727
VERMONT			
BURLINGTON	281	7864	8179
VIRGINIA			
LYNCHBURG	73	3830	[illegible]
NORFOLK	[illegible]	[illegible]	3421
RICHMOND	58	3552	[illegible]
ROANOKE	99	3942	4150
WALLOPS ISLAND	142	3742	
WASHINGTON			
OLYMPIA	315	5733	5059
QUILLAYUTE	354	5914	5469
SEATTLE-TACOMA	222	5006	4986
SPOKANE	274	7094	6520
STAMPEDE PASS R	600	9056	[illegible]
WALLA WALLA U	147	4849	4760
YAKIMA	192	6280	5872
WEST VIRGINIA			
BECKLEY	204	5008	5352
CHARLESTON	90	3950	4467
ELKINS	217	[illegible]	5627
HUNTINGTON	110	4182	4434
PARKERSBURG U	92	4414	4748
WISCONSIN			
GREEN BAY	215	8143	7930
LA CROSSE	154	7603	7520
MADISON	212	7590	7761
MILWAUKEE	[illegible]	7440	7500
WYOMING			
CASPER	393	7746	7281
CHEYENNE	419	7050	7176
LANDER	402	7863	7717
SHERIDAN	339	7905	7533

[illegible]
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	93	198	
HUNTSVILLE	91	167	
MOBILE	300	584	
MONTGOMERY	194	341	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0		
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	419	942	
TUCSON	236	401	
WINSLOW	30	30	
YUMA	428	885	
ARKANSAS			
FORT SMITH	107	165	
LITTLE ROCK	174	260	
CALIFORNIA			
BAKERSFIELD	261	355	
BISHOP	45	46	
BLUE CANYON	14	14	
EUREKA U	0	0	
FRESNO	195	230	
LONG BEACH	97	109	
LOS ANGELES	34	45	
LOS ANGELES U	122	187	
MT SHASTA R	5	5	
OAKLAND	11	14	
RED BLUFF	165	181	
SACRAMENTO	129	140	
SANDBERG R	55	57	
SAN DIEGO	33	37	
SAN FRANCISCO	7	8	
SAN FRANCISCO U	1	4	
SANTA MARIA	1	3	
STOCKTON	144	162	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	2	
DENVER	6	6	
GRAND JUNCTION	86	86	
PUEBLO	34	36	
CONNECTICUT			
BRIDGEPORT	8	8	
HARTFORD	30	33	
DELAWARE			
WILMINGTON	35	37	
DIST.OF COLUMBIA			
WASHINGTON DULLES	25	34	
WASHINGTON NATIONAL	50	58	
FLORIDA			
APALACHICOLA U	282	501	
DAYTONA BEACH	299	682	
FORT MYERS	420	1195	
JACKSONVILLE	255	499	
KEY WEST	501	1258	
LAKELAND	330	857	
MIAMI	398	1238	
ORLANDO	391	1005	
PENSACOLA	287	530	
TALLAHASSEE	254	462	
TAMPA	365	811	
WEST PALM BEACH	436	1240	
GEORGIA			
ATHENS	81	141	
ATLANTA	72	131	
AUGUSTA	126	206	
COLUMBUS	181	339	
MACON	151	271	
ROME	78	135	
SAVANNAH	214	394	
HAWAII			
HILO	256	1107	
HONOLULU	386	1290	
KAHULUI	308	1105	
LIHUE	368	1235	
IDAHO			
BOISE	62	62	
LEWISTON	52	52	
POCATELLO	7	7	
ILLINOIS			
CAIRO U	174	222	
CHICAGO O HARE	64	64	
CHICAGO MIDWAY	83	84	
MOLINE	102	105	
PEORIA	103	103	
ROCKFORD	89	89	
SPRINGFIELD	114	120	
INDIANA			
EVANSVILLE	99	122	
FORT WAYNE	60	60	
INDIANAPOLIS	95	103	
SOUTH BEND	47	47	
IOWA			
BURLINGTON	91	93	
DES MOINES	77	80	
DUBUQUE	95	95	
SIOUX CITY	93	96	
WATERLOO	74	74	
KANSAS			
CONCORDIA	59	71	
DODGE CITY	72	87	
GOODLAND	41	42	
TOPEKA	74	101	
WICHITA	88	116	
KENTUCKY			
COVINGTON	65	72	
LEXINGTON	47	58	
LOUISVILLE	81	109	
LOUISIANA			
ALEXANDRIA	205	401	
BATON ROUGE	307	580	
LAKE CHARLES	289	556	
NEW ORLEANS	281	570	
SHREVEPORT	235	426	
MAINE			
CARIBOU	21	21	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	29	35	
MASSACHUSETTS			
BLUE HILL OBS R	9	9	
BOSTON	26	26	
WORCESTER	9	9	
MICHIGAN			
ALPENA	1	1	
DETROIT	41	41	
DETROIT METRO.	36	36	
FLINT	18	18	
GRAND RAPIDS	37	37	
HOUGHTON LAKE	11	11	
LANSING	12	12	
MARQUETTE U	14	14	
MUSKEGON	43	43	
SAULT STE MARIE	12	12	
MINNESOTA			
DULUTH	8	8	
INTERNATIONAL FALLS	70	70	
MINNEAPOLIS	94	94	
ROCHESTER	73	73	
ST CLOUD	56	56	
MISSISSIPPI			
JACKSON	221	414	
MERIDIAN	182	323	
MISSOURI			
COLUMBIA REGIONAL	106	141	
KANSAS CITY	146	197	
ST JOSEPH	97	117	
ST LOUIS	129	169	
SPRINGFIELD	94	147	
MONTANA			
BILLINGS	12	12	
GLASGOW	20	20	
GREAT FALLS	19	19	
HAVRE	19	19	
HELENA	2	2	
KALISPELL	7	7	
MILES CITY	34	34	
MISSOULA	11	11	
NEBRASKA			
GRAND ISLAND	70	78	
LINCOLN U	99	111	
NORFOLK	72	74	
NORTH PLATTE	43	43	
OMAHA	74	77	
SCOTTSBLUFF	16	16	
VALENTINE	56	56	
NEVADA			
ELKO	3	3	
ELY	0	0	
LAS VEGAS	308	456	
RENO	12	12	
WINNEMUCCA	40	40	
NEW HAMPSHIRE			
CONCORD	17	17	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	11	11	
ATLANTIC CITY U	0	0	
NEWARK	41	48	
TRENTON U	31	35	
NEW MEXICO			
ALBUQUERQUE	52	57	
CLAYTON	19	32	
ROSWELL	133	208	
NEW YORK			
ALBANY	12	12	
BINGHAMTON	19	19	
BUFFALO	12	12	
NEW YORK U	47	52	
NEW YORK KENNEDY	11	11	
NEW YORK LA GUARDIA	8	10	
ROCHESTER	24	24	
SYRACUSE	9	9	
NORTH CAROLINA			
ASHEVILLE	6	30	
CAPE HATTERAS R	74	95	
CHARLOTTE	43	83	
GREENSBORO	21	47	
RALEIGH	36	78	
WILMINGTON	101	172	
NORTH DAKOTA			
BISMARCK	37	37	
FARGO	74	74	
WILLISTON	28	28	
OHIO			
AKRON	13	13	
CINCINNATI ABBE OB.	83	96	
CLEVELAND	5	6	
COLUMBUS	24	25	
DAYTON	42	46	
MANSFIELD	35	35	
TOLEDO	22	22	
YOUNGSTOWN	8	8	
OKLAHOMA			
OKLAHOMA CITY	133	243	
TULSA	144	260	
OREGON			
ASTORIA	0	0	
BURNS U	14	14	
EUGENE	11	11	
MEACHAM	7	7	
MEDFORD	27	27	
PENDLETON	50	50	
PORTLAND	27	27	
SALEM	10	10	
SEXTON SUMMIT R	13	13	
PACIFIC AREA			
GUAM TAGUAC R	440	1930	
JOHNSTON	420	1931	
KOROR R	553	2522	
KWAJALEIN	548	2563	
MAJURO	509	2436	
PAGO PAGO	468	2340	
PONAPE R	472	2386	
TRUK MOEN ISLAND	521	2470	
WAKE	463	1702	
YAP R	503	2404	
PENNSYLVANIA			
ALLENTOWN	18	18	
ERIE	2	2	
HARRISBURG	33	33	
PHILADELPHIA	47	50	
PITTSBURGH	34	34	
SCRANTON	20	20	
WILLIAMSPORT	25	25	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	7	8	
SOUTH CAROLINA			
CHARLESTON	163	271	
CHARLESTON	173	281	
COLUMBIA	126	218	
GRNVLLE-SPRTNBRG	49	97	
SOUTH DAKOTA			
ABERDEEN	73	73	
HURON	62	62	
RAPID CITY	21	21	
SIOUX FALLS	60	60	
TENNESSEE			
BRISTOL	22	33	
CHATTANOOGA	35	86	
KNOXVILLE	51	104	
MEMPHIS	179	277	
NASHVILLE	117	180	
OAK RIDGE R	40	81	
TEXAS			
ABILENE	189	430	
AMARILLO	59	107	
AUSTIN	272	692	
BROWNSVILLE	398	1265	
CORPUS CHRISTI	380	1081	
DALLAS	329	594	
DEL RIO	315	833	
EL PASO	159	248	
FORT WORTH	249	507	
GALVESTON U	360	735	
HOUSTON INTERCON	275	632	
LUBBOCK	119	253	
MIDLAND	183	401	
PORT ARTHUR	262	517	
SAN ANGELO	191	508	
SAN ANTONIO	252	675	
VICTORIA	350	869	
WACO	266	568	
WICHITA FALLS	174	349	
UTAH			
MILFORD	15	15	
SALT LAKE CITY	34	34	
WENDOVER	49	49	
VERMONT			
BURLINGTON	14	14	
VIRGINIA			
LYNCHBURG	20	45	
NORFOLK	40	68	
RICHMOND	52	89	
ROANOKE	13	39	
WALLOPS ISLAND	7	9	
WASHINGTON			
OLYMPIA	8	8	
QUILLAYUTE	11	11	
SEATTLE-TACOMA	22	22	
SPOKANE	28	28	
STAMPEDE PASS R	0	0	
WALLA WALLA U	65	65	
YAKIMA	42	42	
WEST INDIES			
SAN JUAN P.R.	525	2190	
WEST VIRGINIA			
BECKLEY	4	6	
CHARLESTON	56	80	
ELKINS	3	3	
HUNTINGTON	30	47	
PARKERSBURG U	61	71	
WISCONSIN			
GREEN BAY	52	52	
LA CROSSE	113	113	
MADISON	41	41	
MILWAUKEE	3	3	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	1	1	
SHERIDAN	9	9	

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHERS			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS
Alabama								5	4			4	3	1		3												5	4
Alaska*																													
Arizona	Storm Summary Report not received																												
Arkansas															1														
California*																													
Colorado	3	3			3			4	5			4	4																
Connecticut*																													
Delaware																													
Florida	2	2			4			5						1	1	1													
Georgia	1	1			3			4	5			1				4													
Hawaii*																													
Idaho									2			1				3													
Illinois	2	1						1	3			3	3																
Indiana	2	1		20	6			3	5			4	4		1	4													4
Iowa	1	1			4			1	1			5			2														
Kansas	18	3			4				5			4	5	1	1														
Kentucky												4	C		2	4													
Louisiana	3	2			5							5	5																
Maine*																													
Maryland																5													
Massachusetts												3				3													
Michigan	2	2			3			3							3	4													
Minnesota	1	1						5	1			5			1	5													
Mississippi	9	1		3	5			6	C		1	4																	
Missouri											2	4																	
Montana														1		3													
Nebraska	15	3			4			5	4		1	6	4			4													
Nevada*																													
New Hampshire	2	1			5																								
New Jersey*																													
New Mexico	7	3			4				5			2				4													
New York	2	2			5																							5	
North Carolina	1	1		2	6			5	6			5	4			5												4	4
North Dakota	2	2			4			3	3			3				3													3
Ohio							6					4				3												4	
Oklahoma	5	3			5				4			4																	2
Oregon																4													
Pacific Area																												6	C
Pennsylvania	1	1		3	4						3	4				4												5	4
Puerto Rico*																													
Rhode Island*																													
South Carolina									3			4																	
South Dakota	15	7			4			5	4	1	2	5				4													
Tennessee	1	1		3	4			4	3			5				5													
Texas	43	13		26	6			6	6		6	5	3	2	1	4										22	200		4
Utah*																													
Vermont																													
U.S. Virgin Is.*																													
Virginia																													
Washington*																													
West Virginia*																													
Wisconsin	2	2										4				3													
Wyoming								5	C																				

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5 Million
7	$5 Million to $50 Million
8	$50 Million to $500 Million
9	$500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

MAY 1972

Elmer R. Nelson, Office of Hydrology

The most damaging floods during May were the flash floods in south-central Texas along the Guadalupe River around the cities of New Braunfels and Sequin, the Cibolo Creek area in Bexar County, and Purgatory Creek at San Marcos. Eighteen people drowned. Property damage was estimated at $17.5 million. Several thousand people were evacuated.

Only flood events resulting in loss of life and/or damage during the month are summarized. They are listed by drainage basins below:

HUDSON BAY DRAINAGE

Red River of the North Basin

Date May	FLOOD EVENT	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
21-22	Flash floods, due to 5 inches or more of rain, affected Tagus, Donnybrook, Carpio, and Foxholm, N. Dak., on the Des Lacs River. Farmlands, railroads, highways, and several residences were affected.	0	N.A.
28	Very heavy rains (over 6 inches) over sections of the southern portion of the Red River Basin caused the Wild Rice River at Abercrombie and the Red River at Fargo, N. Dak., to rise above flood stage. Damage occurred to farm crops and delayed planting of small grains over a large area due to wet conditions.	0	N.A.

ATLANTIC SLOPE DRAINAGE

Date May	FLOOD EVENT	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
3-6	Considerable lowland flooding occurred along Otter Creek near Center Rutland, Vt. Damage occurred to highways.	0	$ 30
16	Localized flash flooding occurred during the evening in the Ludlow, Cavindish, and Chester, Vt., area.	0	30

EAST GULF OF MEXICO DRAINAGE

Date May	FLOOD EVENT	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
7	Heavy precipitation along the Mississippi Gulf Coast, coinciding with high tide, caused widespread flash flooding over the area. Civil Defense and other agencies evacuated 50 families. By mid-week the water had subsided and the situation returned to normal.	0	120

MISSISSIPPI SYSTEM

Missouri Basin

Date May	FLOOD EVENT	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
18	Heavy rains up to 4 inches in the Hebron, N. Dak., area caused flash flooding of the Little Knife Creek, threatening homes and washing out newly seeded grain crops. Most of the damage was agricultural.	0	N.A.
27-29	Flash flooding occurred on creeks and the Big Sioux River north of Brookings, S. Dak., due to heavy rain. Estelline, N. Dak., reported 6 inches unofficially. Deer Creek was reported 1/2-mile wide on the 28th. Some roads were closed.	0	4
22	Heavy rainfall (3.4 inches) during the night in east-central Nebraska caused flash flooding on Fish Creek and Wallace Creek east of Scotia, Nebr. An unofficial measurement of nearly 5.5 inches of rain was reported. Lowlands were temporarily under water and some basement flooding occurred. According to newspaper reports, this was the first flood of consequence on Fish Creek since 1935.	0	N.A.
1-6	Two to 4-inch rains in east-central Kansas during the night of April 30-May 1 on the upper Marais des Cygnes	0	258

Date May	FLOOD EVENT MISSISSIPPI SYSTEM - Continued Missouri Basin - Continued	Lives Lost	Preliminary estimate of property damage thousands of dollars
	produced substantial agricultural overflows downstream through the 4th and near bankfull lower reaches through the 6th. Considerable erosion and crop damage resulted, but was limited somewhat since spring seeding of crops was not yet complete.		
27	Heavy local rains during the evening of the 27th caused flash flooding on Sappa Creek near Goodland, Kans. Considerable basement flooding occurred within the city.	0	$ 25
7-11	The most significant flooding in Kansas during the month occurred along the Grand River where stages 3 to 6 feet above bankfull were recorded. The Corps of Engineers reported 50,000 acres of unprotected land flooded in the basin as of the 9th.	0	760
	Ohio Basin		
*1-16	The flooding on the lower Ohio during April and May was the greatest since March 1963.	0	8,709
	Lower Mississippi Basin		
*1-13	Estimates on flood damage in the Lower Mississippi Basin during April and May are based on flood damage data from previous years.	0	595
	WEST GULF OF MEXICO DRAINAGE		
27	Flash flooding occurred in Little Field, Tex., along the Double Mountain Fork of the Brazos River, due to 2 to 3 inches of rain.	0	N.A.
12-13	Moderate flooding occurred on the West Fork of the Trinity River near Antelope and Bridgeport, Tex., Highway 281, south of Antelope, was flooded to a depth of 3 feet.	0	Minor
11-12	Intense rain during the night of the 11th in south-central Texas along the Balcones Escarpment caused severe flash flooding in and along the Guadalupe River around the cities of New Braunfels and Sequin, the Cibblo Creek area in Bexar County, and Purgatory Creek at San Marcos, Tex. The Soil Conservation Service bucket survey reported unofficial estimates of 6 to 16 inches of rainfall. The rainfall averaged 8.3 inches over an area of 356 square miles. The Guadalupe River rose 28 feet in 2 hours.	18	17,500
6-26	The flooding along the middle and lower Nueces River in Texas was minor. However, there was one fatality - a swimmer drowned near Calallen, Tex., on the 21st.	1	Minor
	PACIFIC SLOPE DRAINAGE		
	Columbia Basin		
16-1/	Major flooding occurred on the Okanogan River in both Canada and the United States. It reached a record high flow of 45,000 c.f.s. (22.54 feet) near Tonasket, Wash., on June 2. The previous record high flow was 40,900 c.f.s. in May 1948.	1	942

FLOOD EVENT

Date May	PACIFIC SLOPE DRAINAGE (Continued) Columbia Basin - Continued	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
29-6/2	The Methow River near Pateros, Wash., crested 1.5 feet above flood stage on the 31st.	0	$200
30-6/1	The Wenatchee River crested 0.6 feet above flood stage at Peshastin, Wash., on the 31st.	0	825
	ALASKA		
15-31	The worst ice-jam flooding in memory of long time residents occurred on the Kuskokwim and Yukon Rivers in Alaska. The towns of Oscarville and Napaskiak were completely inundated. Anvik, on the Yukon, had its worst flooding in over 40 years. The last time the Yukon and Kuskokwim Rivers "flowed as one" was about 1890.	0	N.A.

* Flooding began during the preceding month

1/ Flooding continued at the end of the month

NA Flood damage not available

FLOOD STAGE DATA

[illegible]

River and station	Flood stage	Above flood stages -dates				Crest *		
		From–		To–		Stage	Date	
	Ft.					*Ft*		
HUDSON BAY DRAINAGE								
Red River of the North Basin								
Wild Rice:								
Abercrombie, N. Dak.	10		28		28	10.7		28
Souris:								
Bantry 8 E, N. Dak.	11	Mar	28		5	12.4	Apr	24
Westhope 7 NNE, N. Dak.	10	Mar	26		19	13.3	Apr	21
Red River of the North:								
Fargo, N. Dak.	17		24 30	 June	26 3	17.75 19.05	 June	25 1
ST. LAWRENCE DRAINAGE								
Lake Ontario								
Canaseraga Creek:								
Groveland, N. Y.	11		9		9	12.0		9
ATLANTIC SLOPE DRAINAGE								
Otter Creek:								
Center Rutland, Vt.	7		3		6	9.9		5
Passumpsic:								
Passumpsic, Vt.	14		3		6	16.9		5
Connecticut:								
White River Junction, Vt.	18		3		9	21.5		5
Montague City, Mass.	28		4		10	29.4		5
Hartford, Conn.	16		3		13	20.6		6
Bodkin Rock, Conn.	8		3		14	11.7		7
Schroon:								
Riverbank, N. Y.	7		4		11	9.2		6
Hudson:								
North Creek, N. Y.	10		4		8	10.6		4
Hadley, N. Y.	14		3		6	16.1		5
Chemung:								
Chemung, N. Y.	12		9		10	12.95		10
Susquehanna:								
Bainbridge, N. Y.	13		9		10	13.4		10
Conklin, N. Y.	11		10		11	11.6		10
Dan:								
Danville, Va.	11		15		16	11.6		16
Roanoke:								
Randolph, Va.	21		5 15		5 15	21.6 21.25		5 15
Williamston, N. C.	10		9	June	9	11.2		29-31
Neuse:								
Neuse, N. C.	14		17		19	15.6		18
Smithfield, N. C.	13		17		21	15.5		20
Cape Fear:								
Elizabethtown, N. C.	20		18		18	20.0		18
Lumber:								
Lumberton, N. C.	9		26		30	9.8		28
Pee Dee:								
Cheraw, S. C.	30		16		17	30.4		17
Peedee, S. C.	19		18		28	20.7		21-22
Broad:								
Blair, S. C.	14		15 22		17 23	19.0 16.1		16 23
Savannah:								
Clyo, Ga.	11		29		31	#11.3		31
EAST GULF OF MEXICO DRAINAGE								
Etowah:								
Canton, Ga.	17		14		15	19.5		14

River and station	Flood stage	Above flood stages -dates				Crest *		
		From–		To–		Stage	Date	
	Ft.					*Ft*		
EAST GULF OF MEXICO DRAINAGE (Continued)								
Pearl:								
Bogalusa, La.	15		8		18	18.9		9
Pearl River, La.	12		12		18	13.7		15
MISSISSIPPI SYSTEM								
Upper Mississippi Basin								
Crow:								
Delano, Minn.	8		31	June	6	9.4	June	2
Minnesota:								
Montevideo, Minn.	14		30	June	13	15.8	[illegible]	4
Plum:								
Savanna, Ill.	22		8		9	22.9		9
Wapsipinicon:								
DeWitt, Iowa	10		8		15	11.1		13
Pope Creek:								
Keithsburg, Ill.	17		2 14		11 15	24.4		8
Illinois:								
Chillicothe, Ill.	45	Apr	24		8	#46.1	Apr	27
Havanna, Ill.	14	Apr	22		20	15.9	Apr	29
Beardstown, Ill.	14	Apr	22		18	17.1		1
Meredosia, Ill.	32	Apr	25		5	33.7		1
Big Muddy:								
Murphysboro, Ill.	16	Apr	16		3	26.45	Apr	26
Mississippi:								
Libby, Minn.	13		2		15	14.0		7
Fort Ripley, Minn.	10		7		11	10.05		8
Dubuque, Iowa	17	Apr	27		2	17.7	Apr	29
Clinton, Iowa	16	Apr	30		[illegible]	16.5		1-3
LeClaire, Iowa	10	Apr	30		5	10.45		2
Davenport, Iowa	15		3		[illegible]	15.0		3
Muscatine, Iowa	16		1		[illegible]	16.3		3
Keithsburg, Ill.	12	Apr	24		16	13.8		3
Burlington, Iowa	15	Apr	30		13	15.8		11
Quincy, Ill.	17		10		13	17.2		12-13
Hannibal, Mo.	16		1		16	17.5		12
Louisiana, Mo.	15		3		16	16.0		12
Clarksville, Mo.	25		2		16	26.3		13
Winfield, Mo.	26		5 12		7 16	26.1 26.3		6 13-14
Grafton, Ill.	18		4		16	18.8		6
Cape Girardeau, Mo.	32		25		27	32.3		26
Missouri Basin								
Big Hole:								
Divide, Mont.	6.5		31	June	13	9.6	June	10
Melrose, Mont.	6		31	June	14	8.05	June	10
James:								
Stratford, S. Dak.	14	Mar	30		[illegible]	15.4	Apr	13
Forestburg, S. Dak.	12		7	June	8	13.55	June	1
Mitchell, S. Dak.	14		27	June	7	15.0		30
Scotland, S. Dak.	13		23	June	15	14.3	June	6
Big Sioux:								
Watertown, S. Dak.	8		29	June	1	8.3		30
Brookings, S. Dak.	6		2		20	9.7		4
Brandon, S. Dak.	10		2	June	8	11.65 12.2	 June	5 4
Little Sioux:								
Spencer, Iowa	10		3		3	11.0		3

FLOOD STAGE DATA

(All dates in May unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft			Ft.	
Missouri Basin - Continued					
Platte:					
Agency, Mo.	20	7	9	22.3	8
Salt Creek:					
Lyndon, Kans.	10	1	1	11.05	1
Wakarusa:					
[illegible] 1 E, Kans.	23	2	2	25.95	1
Stranger Creek:					
Easton, Kans.	15	7	8	15.9	7
Blue:					
Kansas City (Bannister Rd), Mo.	21	1	1	23.6	1
Grand:					
Pattonsburg, Mo.	25	7	9	29.5	8
Gallatin, Mo	21	7	9	23.15	9
Chillicothe, Mo.	24	7	10	27.3	9
Sumner, Mo.	26	7	11	31.4	10
Brunswick, Mo.	12	8	11	14.1	9
Lamine:					
Clifton City, Mo.	19	2	2	19.6	2
Blackwater:					
Valley City, Mo.	22	1 12	2 13	26.45 25.0	1 13
Marais des Cygnes:					
Reading, Kans.	18	1 7	2 7	18.65 20.0	1 7
Quenemo, Kans.	28	1	2	33.0	1
Pomona, Kans.	20	1	3	27.6	1
Ottawa, Kans.	27	1	2	31.9	1
Osawatomie, Kans.	28	2	4	33.5	3
La Cygne, Kans.	25	2	6	28.85	5
Missouri:					
Lexington, Mo.	22	8	8	22.0	8
Waverly, Mo.	18	8	9	18.2	8
Ohio Basin					
Muscatatuck:					
Austin, Ind.	16	9	11	22.0	10
White:					
Petersburg, Ind.	16	Apr 12	1	22.7	Apr 22
Hazleton, Ind.	16	Apr 14	[illegible]	23.8	Apr 23
Little Wabash:					
Carmi, Ill.	27	Apr 16	5	33.2	Apr 26
Wabash:					
Montezuma, Ind.	14	Apr 8	3	24.25	Apr 23
Clinton, Ind.	18	[illegible]	[illegible]	24.0	Apr 23
Terre Haute, Ind.	14	Apr 10	3	20.2	Apr 24
Hutsonville, Ill.	20	Apr 8	1	23.1	Apr 25
Riverton, Ind.	18	Apr 22	2	20.2	Apr 26
Vincennes, Ind.	16	Apr 18	4	20.7	Apr 27
Mt Carmel, Ill.	17	Apr 15	4	24.3	Apr 27
New Harmony, Ind.	15	Apr 16	5	18.4	Apr 24 Apr 29
French Broad:					
Rosman, N. C.	8	3	3	10.0	3
South Chickamauga Creek:					
Chickamauga, Tenn.	10	13	15	13.8	15
Tennessee:					
Paducah (nr), Ky.	320	Apr 30	12	328.35	1
Ohio Basin - Continued					
Ohio:					
Dam 47, Newburgh, Ind.	38	Apr 13	2	45.4	Apr 22
Evansville, Ind.	42	Apr 19	Apr 29	43.2	Apr 22
Dam 48, Cypress, Ind.	38	Apr 14	3	45.9	Apr 23
Mt. Vernon, Ind.	35	Apr 14	4	44.4	Apr 24
Dam 49, Uniontown, Ky.	37	Apr 14	5	47.7	Apr 25
Shawneetown, Ill.	33	Apr 13	6	47.7	Apr 25
Dam 50, Fords Ferry, Ky.	34	Apr 13	7	50.7	Apr 26
Dam 51, Golconda, Ill.	40	Apr 19	5	46.4	Apr 28
Paducah, Ky.	39	Apr 22	6	41.6	May 1
Dam 52, Brookport, Ill.	37	Apr 18	9	43.7	May 2
Dam 53, Grand Chain, Ill.	42	Apr 17	13	49.7	Apr 28
Cairo, Ill.	40	Apr 17	16	49.1	Apr 26
White Basin					
Black:					
Pocahontas, Ark.	17	Apr 25	8	19.1 19.2	Apr 27 3
Black Rock, Ark.	14	Apr 22	13	21.0	3
Cache:					
Patterson, Ark.	7	Mar 31	20	8.3 8.8	Apr 29 7
White:					
Clarendon, Ark.	26	10	18	26.3	14
St. Charles, Ark.	25	12	19	25.1	14
Arkansas Basin					
Cottonwood:					
Emporia, Kans.	20	1	3	22.0	2
North Canadian:					
Seiling, Okla.	11	15	15	11.1	15
Lower Mississippi Basin					
St. Francis:					
Fisk, Mo.	20	Apr 17	8	24.5	Apr 26
St. Francis, Ark.	18	Apr 18	13	20.9 21.2	Apr 25 2
Big Black:					
West, Miss.	12	6	17	19.5	11
Mississippi:					
New Madrid, Mo.	34	Apr 23	10	37.4	Apr 28
Caruthersville, Mo.	32	Apr 22	12	36.5	Apr 29-30
WEST GULF OF MEXICO DRAINAGE					
Navidad:					
Ganado, Tex.	21	8	19	29.8	14
Lavaca:					
Edna, Tex.	21	8 12 17	11 16 19	25.5 24.9 23.9	9 12 18
San Antonio:					
Falls City, Tex.	12	10	12	12.3	10
Guadalupe:					
Gonzales, Tex.	21	8 11	9 15	23.0 34.6	8 13
Cuero, Tex.	20	8	19	35.8	14-15
Victoria, Tex.	21	8	20	30.4	16
Atascosa:					
Whitsett, Tex.	20	8 12	9 13	25.0 23.5	8 12
Nueces:					
Tilden 11 S, Tex.	14	6 14	9 23	16.5 18.7	9 20
Mathis 3 SW, Tex.	15	11	24	24.75	13
Calallen, Tex.	7	12	26	8.5	15
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Okanogan:					
Tonasket (nr), Wash.	15	16	June 20	17.7 22.5 H 21.7	24 June 2 June 12

FLOOD STAGE DATA

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Crest * Date
	Ft			Ft	
PACIFIC SLOPE DRAINAGE - Cont.					
Columbia Basin - Cont.					
Methow:					
Pateros, Wash.	10	29	June 2	H11.5	31
Wenatchee:					
Peshastin, Wash.	13	30	June 1	H13.6	31
Yakima:					
Parker, Wash.	10	14 22	16 23	10.3 10.2	14 22
Henrys Fork:					
Rexburg (nr) Idaho	9	9 19	10 24	9.5	22
Portneuf:					
Pocatello, Idaho	8	9	12	8.2	10
Big Wood:					
Hailey, Idaho	4.5	29	June 18	5.5	31
Clearwater:					
Orofino, Idaho	17	31	June 3	17.7	31
PACIFIC SLOPE DRAINAGE - Cont.					
Columbia Basin - Cont.					
Willamette:					
Portland, Oreg.	18	21 30	27 June 26	18.8 20.8	23-25 June 12
Columbia:					
Vancouver, Wash.	16	17	[illegible]	19.4 21.5	24-25 June [illegible]
ALASKA					
Kuakokwim:					
McGrath, Alaska	21	15	22	27.7	17
Aniak, Alaska	90	[illegible]	F	[illegible]	[illegible]
Bethel, Alaska	9	24	[illegible]	[illegible]	[illegible]
Oscarville, Alaska	[illegible]	F	F	[illegible]	[illegible]
Napakiak, Alaska	[illegible]	[illegible]	F	[illegible]	U
Kobuk:					
Kobuk, Alaska	U	[illegible]	[illegible]	U	U
Yukon:					
Grayling, Alaska	[illegible]	[illegible]	F	[illegible]	[illegible]

*	Provisional
#	Highest Stage observed
1	Continued at end of the month
F	Flooding occurred but data not available.
H	Hydrograph analysis
M	Missing
U	Unknown

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	12.1	8.2	24	.6
1000	27	161	11.6	4.8	26	.8
950	31	580	11.3	3.9	28	1.2
900	31	1,031	9.7	1.9	28	1.7
850	31	1,503	7.4	-1.4	28	3.1
800	31	2,001	4.8	-4.3	27	3.7
750	31	2,524	1.9	-6.8	27	4.5
700	31	3,078	-.9	-10.8	27	5.7
650	31	3,666	-4.1	-13.5	28	6.5
600	31	4,294	-7.5	-17.3	27	7.0
550	31	4,966	-11.5	-23.3	27	8.1
500	31	5,691	-16.1	-28.5	27	9.1
450	31	6,475	-22.0	-34.4	27	10.5
400	31	7,331	-28.5	-40.5	26	11.6
350	31	8,276	-35.7	-46.1	26	12.7
300	31	9,328	-43.9		26	14.2
250	31	10,529	-52.1		26	15.2
200	31	11,949	-59.8		27	16.5
175	31	12,779	-61.6		27	15.6
150	31	13,736	-60.2		27	15.3
125	31	14,876	-59.4		27	11.7
100	30	16,280	-58.3		27	9.9
80	30	17,685	-58.0		28	7.2
70	30	18,528	-57.1		29	5.1
60	30	19,505	-56.6		29	3.3
50	30	20,666	-54.8		31	1.9
40	30	22,098	-53.5		36	.7
30	29	23,954	-51.5		08	1.6
25	29	25,141	-50.5		10	2.0
20	27	26,606	-48.7		08	3.1
15	25	28,507	-45.2		07	3.5
10	18	31,225	-39.7		10	3.0
7						
5						

ALBUQUERQUE, N. MEX.
837 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	10.1	-5.3	11	2.1
800	31	2,000	13.0	-7.2	13	1.4
750	31	2,539	9.8	-10.6	27	1.8
700	31	3,107	5.5	-13.5	28	4.2
650	31	3,708	.8	-16.5	27	5.2
600	31	4,344	-4.5	-20.0	25	6.1
550	31	5,022	-10.1	-24.3	24	7.6
500	31	5,748	-15.9	-29.8	25	9.5
450	31	6,535	-21.1	-38.3	25	11.0
400	31	7,393	-27.6	-44.5	25	12.7
350	31	8,343	-34.8	-49.7	25	14.8
300	31	9,397	-43.3	-52.9	25	17.8
250	31	10,601	-52.1		25	22.9
200	31	12,019	-59.8		26	26.5
175	31	12,849	-61.3		26	25.7
150	31	13,805	-61.6		26	22.6
125	31	14,935	-61.9		26	18.0
100	30	16,315	-62.2		26	14.1
80	29	17,696	-61.3		26	4.9
70	29	18,526	-61.2		23	2.0
60	28	19,481	-60.9		23	.6
50	28	20,620	-58.8		07	.9
40	28	22,029	-56.4		08	1.4
30	26	23,869	-52.9		36	1.2
25	25	25,048	-51.0		30	.8
20	23	26,515	-48.6		29	1.1
15	23	28,422	-45.0		28	2.1
10	19	31,170	-40.0		30	1.4
7	5	33,594	-34.1			

AMARILLO, TEXAS
891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	12.6	6.9	18	2.1
850	31	1,496	13.4	4.8	20	5.0
800	31	2,005	11.6	-.5	21	4.9
750	31	2,542	8.7	-4.9	24	5.1
700	31	3,108	4.8	-9.5	26	5.2
650	30	3,707	.8	-14.5	27	6.8
600	31	4,345	-4.0	-19.1	27	7.4
550	31	5,025	-9.2	-23.9	28	8.5
500	31	5,754	-15.0	-28.4	27	8.9
450	31	6,542	-20.8	-35.2	26	10.6
400	31	7,402	-27.1	-42.3	26	12.8
350	31	8,353	-34.4	-47.9	26	14.1
300	31	9,410	-42.4	-50.7	26	17.5
250	31	10,618	-51.5		26	21.9
200	31	12,039	-59.8		26	26.8
175	31	12,869	-61.9		26	26.3
150	31	13,822	-61.6		26	24.1
125	31	14,953	-61.9		27	19.0
100	31	16,331	-62.2		27	14.2
80	31	17,711	-62.2		27	6.4
70	31	18,539	-61.0		27	3.4
60	31	19,497	-60.7		32	1.2
50	31	20,637	-58.9		02	.8
40	31	22,046	-56.1		03	1.0
30	30	23,889	-52.7		03	1.2
25	30	25,071	-50.9		01	.8
20	30	26,533	-48.4		30	.9
15	28	28,433	-45.3		26	3.8
10	17	31,178	-40.1		30	3.2

* **ANCHORAGE, ALASKA**
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	4.0	-.3	17	2.8
1000	29	124	4.8	-1.3	16	2.4
950	30	536	3.4	-3.2	15	3.1
900	30	975	.4	-4.7	14	3.1
850	30	1,431	-2.9	-6.8	13	3.5
800	30	1,909	-5.8	-10.2	14	6.2
750	30	2,412	-8.5	-14.6	15	6.3
700	30	2,944	-11.1	-18.9	16	6.6
650	30	3,510	-14.3	-21.4	16	6.6
600	30	4,113	-17.8	-24.5	16	5.8
550	30	4,759	-21.9	-30.0	16	5.0
500	30	5,453	-26.9	-33.5	16	5.0
450	30	6,206	-31.9	-38.1	16	5.1
400	30	7,028	-38.0	-44.0	16	4.6
350	30	7,938	-44.2		18	4.6
300	30	8,955	-50.1		19	4.8
250	30	10,135	-53.6		21	5.2
200	30	11,579	-50.4		20	3.7
175	30	12,453	-49.6		21	2.4
150	29	13,463	-49.8		20	2.7
125	29	14,655	-50.3		20	1.9
100	28	16,114	-50.7		16	1.9
80	27	17,570	-50.4		15	2.5
70	27	18,443	-50.0		13	2.2
60	27	19,450	-50.1		12	2.9
50	27	20,642	-50.0		11	3.3
40	27	22,101	-49.8		10	4.4
30	24	23,987	-49.2		09	5.5
25	23	25,189	-48.5		09	6.7
20	22	26,666	-47.2		09	8.1
15	21	28,590	-44.5		09	8.5
10	17	31,313	-40.6		08	9.7
7	12	33,764	-36.3			

* **ANNETTE, ALASKA**
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	6.3	3.2	11	.2
1000	31	151	7.5	2.6	12	1.2
950	31	572	5.3	.3	14	3.2
900	31	1,012	2.8	-2.2	16	4.1
850	31	1,473	.0	-4.7	18	4.6
800	31	1,957	-2.2	-8.4	19	5.3
750	31	2,467	-4.8	-11.7	20	5.1
700	31	3,007	-7.8	-15.5	20	6.0
650	31	3,580	-11.1	-19.8	21	6.6
600	31	4,191	-14.8	-23.9	21	7.4
550	31	4,844	-18.8	-28.2	21	8.0
500	31	5,548	-23.6	-32.5	22	9.6
450	31	6,311	-28.5	-37.3	22	11.0
400	31	7,145	-34.5	-42.1	23	11.7
350	31	8,068	-41.1	-41.2	23	11.2
300	31	9,096	-48.5		23	10.8
250	31	10,279	-54.1		24	9.4
200	31	11,705	-55.5		24	8.4
175	31	12,559	-54.5		23	7.6
150	31	13,548	-53.7		22	6.4
125	29	14,718	-53.0		23	5.0
100	29	16,156	-53.3		22	3.8
80	27	17,602	-52.8		21	3.6
70	27	18,465	-52.6		19	2.1
60	27	19,461	-52.6		15	1.3
50	27	20,639	-52.6		12	2.3
40	26	22,088	-51.9		08	3.2
30	24	23,958	-50.9		08	5.4
25	23	25,150	-49.7		08	6.7
20	23	26,616	-48.1		09	8.2
15	23	28,525	-45.1		09	8.6
10	22	31,262	-40.6		08	9.9
7	21	33,717	-35.1		08	11.4
5	12	36,041	-29.8			

ATHENS, GEORGIA
987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	14.5	12.4	02	1.1
1000						
950	31	570	15.4	10.2	07	2.6
900	31	1,028	13.1	7.6	08	2.5
850	31	1,507	10.3	4.4	07	1.4
800	31	2,009	7.2	2.0	30	.3
750	31	2,539	5.1	-5.3	27	2.6
700	31	3,099	1.9	-8.7	28	3.7
650	31	3,694	-1.5	-12.8	28	4.3
600	31	4,328	-4.9	-18.5	27	5.0
550	31	5,007	-8.8	-25.0	27	5.4
500	31	5,739	-13.6	-29.4	27	6.6
450	31	6,531	-18.9	-34.3	27	8.7
400	31	7,398	-25.1	-40.9	27	10.2
350	31	8,357	-32.5	-45.5	27	12.5
300	31	9,421	-41.1	-49.1	27	14.3
250	31	10,636	-50.4		27	16.7
200	31	12,061	-59.0		28	19.9
175	31	12,893	-61.4		27	21.9
150	31	13,848	-61.8		28	20.4
125	31	14,976	-62.1		27	17.5
100	31	16,353	-63.0		27	13.2
80	31	17,726	-62.4		28	9.2
70	31	18,552	-61.8		29	5.8
60	31	19,508	-60.9		30	3.0
50	31	20,646	-59.1		32	1.3
40	31	22,057	-55.6		04	.8
30	30	23,904	-52.5		03	.7
25	29	25,087	-50.8		36	.7
20	29	26,549	-48.5		02	.7
15	25	28,450	-45.8		26	.5
10	12	31,182	-41.8		29	3.1
7						

* **BARROW, ALASKA**
1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	8	-8.6	-10.3	09	3.0
1000	29	157	-8.4	-9.7	10	3.2
950	29	558	-4.6	-10.4	11	2.5
900	29	985	-4.7	-11.9	10	1.5
850	29	1,433	-6.0	-13.7	12	1.0
800	29	1,906	-8.2	-17.8	18	.7
750	29	2,405	-10.6	-20.1	23	1.0
700	29	2,933	-13.3	-24.1	22	1.2
650	29	3,494	-16.6	-26.5	23	1.6
600	29	4,091	-20.2	-30.2	26	2.4
550	29	4,731	-24.0	-34.1	26	3.3
500	29	5,420	-28.5	-37.1	27	3.9
450	29	6,167	-33.6	-42.0	28	4.5
400	29	6,984	-39.6	-44.6	28	5.3
350	29	7,888	-45.8		28	6.1
300	29	8,897	-51.6		30	7.3
250	28	10,083	-52.6		30	5.6
200	29	11,533	-48.7		30	4.9
175	29	12,412	-48.1		29	4.2
150	29	13,429	-48.1		29	3.9
125	29	14,631	-48.2		30	2.6
100	29	16,102	-48.2		29	1.8
80	29	17,574	-47.8		33	.3
70	28	18,449	-47.6		06	.7
60	28	19,468	-47.5		07	1.5
50	28	20,674	-47.1		08	1.9
40	28	22,153	-47.0		08	2.8
30	24	24,067	-46.7		08	4.3
25	23	25,272	-46.1		08	4.4
20	15	26,770	-45.0		07	4.5
15	12	28,705	-43.6		09	6.1
10	8	31,440	-39.7			

BARTER IS., ALASKA
1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-9.2	-10.6	09	2.6
1000	31	151	-7.1	-9.0	09	2.6
950	31	554	-4.0	-9.7	13	.6
900	31	981	-3.6	-11.2	25	.8
850	31	1,432	-5.2	-12.9	28	2.2
800	31	1,906	-7.5	-14.5	28	3.3
750	31	2,406	-10.2	-17.1	28	3.9
700	31	2,935	-13.2	-20.2	28	4.4
650	31	3,496	-16.4	-23.5	28	5.7
600	31	4,094	-20.1	-27.9	29	5.9
550	31	4,734	-24.1	-31.7	29	6.3
500	31	5,423	-28.6	-36.5	29	7.5
450	31	6,169	-33.9	-40.6	29	8.0
400	31	6,985	-39.7	-43.5	30	8.9
350	31	7,888	-45.9		30	9.6
300	31	8,900	-50.5		29	9.8
250	31	10,088	-50.4		29	8.8
200	31	11,554	-47.6		27	6.5
175	30	12,437	-46.8		28	5.7
150	30	13,459	-46.9		28	4.3
125	30	14,667	-47.2		28	3.3
100	30	16,144	-47.2		28	2.3
80	30	17,621	-47.1		31	1.1
70	30	18,506	-46.7		36	.9
60	29	19,530	-46.5		05	.9
50	29	20,741	-46.4		07	1.6
40	29	22,224	-46.2		08	2.9
30	23	24,131	-46.1		07	4.2
25	23	25,344	-46.0		08	5.1
20	21	26,843	-44.6		07	5.9
15	17	28,783	-42.7		07	6.6
10	14	31,523	-38.2			

BETHEL, ALASKA
1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	.6	-1.2	06	.7
1000	24	120	1.6	-3.1	10	.4
950	31	505	1.2	-5.0	12	3.5
900	31	938	-1.5	-7.4	14	4.3
850	31	1,391	-4.2	-10.2	16	4.8
800	31	1,867	-6.1	-14.8	15	4.3
750	31	2,370	-8.2	-17.7	14	3.9
700	31	2,904	-10.6	-21.3	13	3.9
650	31	3,471	-13.6	-23.5	13	4.2
600	31	4,076	-17.1	-27.1	13	4.4
550	31	4,724	-20.9	-31.6	13	4.7
500	31	5,421	-25.6	-36.0	13	3.6
450	31	6,178	-30.7	-40.1	12	2.6
400	31	7,004	-36.8	-43.0	11	2.7
350	31	7,918	-43.2		11	2.5
300	31	8,939	-49.1		09	3.0
250	31	10,128	-51.8		10	2.1
200	31	11,579	-49.9		07	.6
175	31	12,454	-49.1		22	.9
150	31	13,465	-49.2		14	.8
125	31	14,660	-49.9		17	1.5
100	31	16,118	-50.0		11	1.6
80	30	17,580	-49.8		12	2.6
70	29	18,454	-49.6		12	2.7
60	29	19,464	-49.5		10	3.6
50	29	20,659	-49.4		10	3.4
40	29	22,122	-49.3		10	4.4
30	28	24,011	-48.9		09	5.9
25	26	25,213	-48.3		08	6.5
20	26	26,687	-46.9		08	7.7
15	23	28,600	-45.2		08	8.3
10	8	31,375	-39.2			

* **BISMARCK, N. DAK.**
956 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	9.4	6.4	09	1.1
950	26	565	8.7	4.8	08	1.4
900	31	1,003	10.4	3.1	11	1.6
850	31	1,477	8.3	-1.0	14	.4
800	31	1,976	5.6	-3.9	26	.5
750	31	2,501	2.5	-7.4	29	1.4
700	31	3,055	-.9	-9.9	29	2.3
650	31	3,643	-4.5	-13.3	26	3.6
600	31	4,270	-8.0	-19.1	27	3.6
550	31	4,941	-12.3	-23.8	27	5.0
500	31	5,662	-17.6	-27.5	26	5.0
450	31	6,443	-22.8	-33.7	25	5.8
400	31	7,296	-29.2	-39.1	25	7.1
350	31	8,238	-36.8	-44.4	24	7.4
300	31	9,282	-45.5		24	9.4
250	31	10,473	-54.6		25	10.9
200	31	11,880	-59.7		26	9.0
175	31	12,714	-59.8		26	8.4
150	31	13,682	-57.5		27	7.8
125	31	14,836	-57.1		28	6.5
100	31	16,247	-57.2		29	5.3
80	31	17,658	-56.6		30	4.3
70	31	18,507	-55.9		32	3.3
60	31	19,488	-55.6		33	2.4
50	30	20,654	-54.7		02	2.2
40	30	22,085	-53.8		05	3.0
30	30	23,941	-52.1		07	5.3
25	29	25,127	-51.1		07	6.5
20	27	26,582	-49.0		08	6.8
15	24	28,489	-45.7		08	7.0
10	21	31,214	-40.4		08	6.9
7	15	33,658	-34.3			

BOISE, IDAHO
914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	9.9	1.3	14	1.7
1000						
950						
900	31	999	12.0	.7	14	1.2
850	31	1,478	11.9	-2.8	14	.1
800	31	1,983	8.3	-5.0	26	.7
750	31	2,512	4.2	-7.1	25	2.1
700	31	3,069	.1	-11.0	26	3.9
650	31	3,658	-3.9	-14.8	26	4.9
600	31	4,285	-8.3	-19.0	25	5.2
550	31	4,955	-12.9	-23.6	25	6.7
500	31	5,674	-18.2	-29.8	25	8.3
450	31	6,452	-23.8	-36.4	26	9.5
400	31	7,301	-30.3	-41.5	26	10.1
350	31	8,240	-37.6	-46.0	27	10.2
300	31	9,282	-45.9		27	10.3
250	31	10,473	-54.3		27	11.3
200	31	11,886	-58.8		28	10.9
175	31	12,724	-59.0		27	9.1
150	31	13,692	-58.7		27	7.0
125	31	14,839	-57.8		27	5.8
100	30	16,250	-57.3		26	3.4
80	30	17,659	-57.6		27	2.0
70	30	18,503	-57.0		28	1.6
60	30	19,479	-57.2		31	.5
50	30	20,633	-56.8		04	1.6
40	30	22,051	-55.6		08	3.5
30	30	23,894	-53.5		07	3.6
25	29	25,067	-52.3		07	4.1
20	29	26,518	-50.3		07	5.3
15	29	28,413	-46.4		08	5.0
10	20	31,141	-40.7		09	6.4

BOOTHVILLE, LA.
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	21.4	19.4	03	.4
1000	31	121	22.2	17.9	04	1.2
950	31	566	19.9	13.3	04	1.8
900	31	1,031	16.9	9.7	36	1.2
850	31	1,515	13.7	5.0	33	2.2
800	31	2,024	11.0	-.4	32	2.9
750	31	2,560	8.2	-7.2	31	3.8
700	31	3,126	4.8	-11.2	31	5.7
650	31	3,727	1.5	-14.8	30	7.5
600	31	4,367	-2.3	-18.7	29	9.8
550	31	5,053	-6.6	-23.3	29	11.4
500	31	5,790	-11.6	-26.5	28	12.3
450	31	6,589	-16.9	-30.7	28	14.0
400	31	7,463	-22.9	-36.2	28	15.9
350	31	8,432	-29.9	-43.4	28	18.2
300	31	9,508	-38.1	-50.1	28	22.1
250	31	10,738	-47.6		28	26.7
200	31	12,179	-57.7		28	32.5
175	31	13,013	-62.2		28	33.9
150	31	13,957	-65.3		28	31.2
125	31	15,066	-65.9		28	24.4
100	31	16,412	-68.1		28	17.8
80	30	17,752	-67.5		28	8.5
70	29	18,560	-65.2		29	3.3
60	28	19,508	-62.8		06	.6
50	28	20,641	-59.4		07	1.5
40	27	22,051	-55.6		09	2.1
30	26	23,901	-51.7		08	3.4
25	26	25,090	-49.4		09	2.0
20	26	26,561	-46.9		04	.8
15	21	28,484	-44.0		27	2.2
10	11	31,221	-39.9			

* **BROWNSVILLE, TEXAS**
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	22.1	20.1	11	1.7
1000	31	105	23.8	21.9	12	2.7
950	31	553	21.1	18.7	14	5.5
900	31	1,021	18.9	13.6	15	5.1
850	31	1,511	17.4	5.1	16	4.6
800	31	2,028	15.3	1.0	18	3.4
750	31	2,572	12.2	-2.7	20	2.6
700	31	3,147	9.0	-5.6	27	2.5
650	31	3,756	4.9	-9.5	30	4.9
600	31	4,404	.5	-13.3	30	7.9
550	31	5,096	-4.4	-16.7	29	11.5
500	31	5,839	-10.1	-21.0	28	13.7
450	31	6,644	-14.9	-26.1	28	15.0
400	31	7,525	-20.7	-33.3	27	17.5
350	31	8,502	-27.6	-40.6	28	21.3
300	31	9,589	-36.2	-48.3	27	24.9
250	31	10,828	-46.0		27	27.5
200	31	12,276	-57.2		27	33.3
175	31	13,110	-62.7		27	34.6
150	31	14,048	-67.3		27	34.7
125	31	15,141	-69.9		27	29.2
100	30	16,464	-71.4		27	16.9
80	29	17,783	-71.6		28	7.0
70	29	18,576	-69.0		28	2.3
60	27	19,513	-64.6		06	2.0
50	26	20,637	-60.0		09	4.9
40	26	22,040	-56.7		10	4.0
30	25	23,887	-52.1		08	6.4
25	25	25,075	-49.4		09	6.8
20	24	26,546	-47.0		09	5.9
15	23	28,462	-44.0		08	3.1
10	11	31,185	-40.8			

BUFFALO, N. Y.
991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	11.4	6.6	19	.9
950	31	574	12.5	3.5	21	1.6
900	31	1,026	10.4	.9	26	1.2
850	31	1,500	7.8	-.7	30	1.8
800	30	1,997	4.8	-3.8	29	3.3
750	31	2,522	2.3	-7.9	28	3.9
700	31	3,076	-.8	-13.3	28	4.5
650	31	3,665	-3.9	-16.2	28	4.7
600	31	4,292	-7.6	-20.2	28	5.2
550	31	4,964	-11.7	-25.8	28	6.0
500	31	5,687	-16.7	-29.9	29	5.6
450	31	6,470	-22.4	-35.5	28	6.3
400	31	7,325	-28.9	-41.9	29	6.9
350	31	8,269	-36.2	-47.7	29	7.8
300	30	9,313	-44.6		28	8.6
250	31	10,516	-53.0		27	10.9
200	31	11,931	-59.8		27	13.7
175	30	12,758	-60.6		26	13.0
150	31	13,724	-59.5		27	11.0
125	30	14,867	-58.7		27	10.4
100	30	16,270	-58.3		27	9.1
80	29	17,673	-57.7		28	7.1
70	29	18,516	-57.8		28	5.4
60	28	19,488	-56.9		30	4.3
50	28	20,647	-55.4		32	2.1
40	28	22,076	-53.8		04	1.1
30	27	23,927	-51.8		05	2.0
25	27	25,114	-50.2		07	2.4
20	25	26,581	-48.4		07	2.5
15	20	28,493	-44.4		09	3.9
10	15	31,272	-38.4		08	4.6

CAPE HATTERAS, N. C.
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	16.9	14.7	04	1.8
1000	31	134	18.2	13.4	07	1.4
950	31	573	16.1	10.8	12	1.5
900	31	1,031	13.2	7.9	14	1.5
850	31	1,510	10.5	3.1	18	.8
800	31	2,013	8.0	-3.2	22	2.0
750	31	2,543	5.0	-4.6	23	3.7
700	31	3,103	1.9	-11.2	24	4.8
650	31	3,698	-.8	-16.6	24	5.5
600	31	4,334	-4.1	-20.6	24	7.0
550	31	5,014	-8.3	-24.1	24	8.8
500	31	5,747	-13.2	-29.9	24	9.3
450	31	6,542	-18.6	-34.6	24	9.6
400	31	7,409	-24.8	-39.4	24	11.5
350	31	8,369	-32.1	-44.8	25	12.5
300	31	9,436	-40.7	-52.1	25	15.1
250	31	10,651	-50.4		25	17.6
200	31	12,074	-60.1		26	21.0
175	30	12,901	-62.8		27	20.8
150	30	13,849	-62.9		26	18.7
125	29	14,973	-62.3		26	17.9
100	29	16,350	-62.9		27	13.1
80	29	17,727	-62.1		28	8.4
70	29	18,554	-61.4		29	5.4
60	29	19,514	-59.9		29	2.9
50	29	20,659	-57.7		33	1.1
40	27	22,077	-54.8		30	.3
30	27	23,931	-51.8		35	1.1
25	27	25,118	-50.2		34	.2
20	26	26,579	-48.0		23	.8
15	23	28,482	-45.5		24	1.8
10	14	31,202	-39.0		28	3.4

See reference note at end of table

RAWINSONDE DATA

Average monthly values

*** CARIBOU, MAINE — 994 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	190	4.2	[illegible]	25	1.0
1000						
950	31	560	7.0	[illegible]	29	3.5
900	31	[illegible]	5.4	[illegible]	29	[illegible]
850	31	1,469	3.1	[illegible]	29	7.1
800	31	1,959	.8	[illegible]	29	8.3
750	31	2,475	[illegible]	[illegible]	29	9.4
700	31	3,021	-4.6	-17.3	29	10.7
650	31	3,602	-7.6	-20.5	29	11.9
600	31	4,221	-11.1	-23.9	29	14.0
550	31	4,884	-15.0	-28.6	29	15.4
500	31	5,598	-19.8	-35.2	28	17.2
450	31	6,373	-24.8	[illegible]	29	[illegible]
400	31	7,219	-30.6	-43.8	29	19.9
350	31	8,159	-37.3	-47.9	29	21.5
300	31	[illegible]	-45.0		29	24.0
250	31	[illegible]	-53.0		27	24.2
200	31	[illegible]	-58.3		27	24.0
175	31	12,665	-59.0		27	22.3
150	30	13,637	-56.8		28	17.2
125	30	14,792	-56.9		28	14.8
100	29	16,212	-56.2		28	9.7
80	29	17,631	-55.8		28	7.4
70	29	[illegible]	-55.1		29	4.3
60	29	19,465	-54.5		28	3.0
50	29	20,636	-53.3		29	1.0
40	28	22,077	-52.1		08	1.3
30	28	23,945	-51.1		09	2.5
25	27	25,136	-49.7		08	3.3
20	26	26,608	-47.5		09	4.5
15	24	28,512	-45.0		09	5.6
10	23	31,253	-39.4		09	6.6
7	16	33,747	-33.4		08	[illegible]
5	5	36,231	-27.2			

CHARLESTON, S. C. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	13	17.2	15.4	01	1.7
1000	31	124	18.1	[illegible]	04	[illegible]
950	31	564	[illegible]	[illegible]	06	[illegible]
900	31	1,023	14.2	[illegible]	19	[illegible]
850	31	1,504	[illegible]	[illegible]	23	1.4
800	31	2,008	8.6	.5	24	2.5
750	31	2,540	5.9	[illegible]	25	2.9
700	31	[illegible]	2.4	-8.4	25	4.4
650	31	3,697	-.8	-13.5	25	5.2
600	31	4,332	-4.3	[illegible]	25	5.8
550	31	5,013	-8.1	-21.9	25	7.0
500	31	5,747	-12.8	[illegible]	25	8.4
450	31	6,543	-18.1	-31.6	25	9.8
400	31	7,412	-24.6	-39.2	25	11.5
350	31	8,373	-31.9	[illegible]	25	13.2
300	31	9,440	-40.5	[illegible]	26	14.1
250	31	10,657	-50.2		26	17.0
200	31	12,084	-59.1		27	21.7
175	31	12,916	-61.8		27	21.5
150	31	13,867	-62.7		27	19.8
125	31	14,990	-63.3		27	[illegible]
100	31	16,359	-64.2		27	12.6
80	31	17,726	-63.3		28	7.6
70	31	18,549	-62.4		29	4.8
60	30	19,501	-61.2		30	2.4
50	30	20,640	-58.9		33	2.0
40	29	22,051	-55.1		07	1.2
30	29	23,906	-51.3		10	.9
25	27	25,094	-50.5		30	.7
20	26	26,554	-48.4		31	1.4
15	21	28,478	-45.6		21	.6
10	18	31,209	-39.2		12	.4
7						
5						

CHATHAM, MASS. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	16	9.7	6.5	28	.7
1000	31	149	10.8	4.5	24	1.3
950	31	578	11.4	2.4	24	2.5
900	31	1,029	9.9	[illegible]	24	[illegible]
850	31	1,502	7.8	[illegible]	26	3.5
800	31	2,000	5.1	-5.4	26	4.3
750	31	2,524	2.2	[illegible]	27	5.5
700	31	3,078	-.8	-13.7	27	6.7
650	31	3,667	-3.5	-15.6	27	7.8
600	31	4,296	-7.2	-21.2	27	8.7
550	31	4,969	-11.2	-25.4	27	10.0
500	30	5,691	-16.1	-30.7	27	11.5
450	30	6,476	-21.6	-34.5	27	12.8
400	30	7,333	-27.8	-39.7	27	13.1
350	30	8,282	-35.4	-44.5	26	14.7
300	30	9,336	-44.1	-47.7	26	15.4
250	30	10,538	-52.8		26	17.8
200	28	11,941	-59.7		26	19.7
175	28	12,771	-62.2		26	19.9
150	28	13,723	-61.2		27	16.2
125	28	[illegible]	-60.0		27	13.5
100	28	16,256	-59.5		27	10.8
80	28	17,656	-58.5		28	7.4
70	27	18,496	-58.2		28	5.5
60	27	19,469	-57.3		27	3.5
50	27	20,625	-55.9		28	1.5
40	27	22,052	-54.1		07	.7
30	24	23,910	-51.9		08	1.2
25	24	25,095	-50.7		09	1.8
20	20	26,550	-48.5		09	2.3
15	19	28,451	-45.4		11	2.6
10	17	31,172	-39.5		09	2.9
7	16	33,634	-34.7		09	1.2
5	9	35,994	-29.8			

CHIHUAHUA, MEXICO — 855 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	1,428	[illegible]	.3	22	.5
1000						
950						
900						
850	29	1,481	17.4	1.9	25	.8
800	31	2,000	[illegible]	.6	27	2.4
750	31	2,547	[illegible]	-2.5	27	2.2
700	31	3,122	8.6	-5.5	25	3.2
650	31	3,730	[illegible]	-8.8	24	4.9
600	31	4,375	[illegible]	-13.0	23	6.3
550	31	5,062	[illegible]	-18.5	24	9.5
500	30	5,800	[illegible]	-24.3	25	12.1
450	31	6,602	-16.6	[illegible]	25	14.5
400	31	7,477	[illegible]	-33.4	26	17.0
350	31	8,444	[illegible]	[illegible]	26	19.5
300	31	9,521	-38.4	-47.5	26	23.7
250	31	10,749	-48.1		26	[illegible]
200	31	12,187	-58.2		26	32.4
175	31	13,019	-62.6		26	31.5
150	30	13,962	-65.2		26	31.2
125	31	15,070	-66.5		26	25.2
100	31	16,414	-68.4		26	17.7
80	31	17,752	-67.3		27	10.4
70	31	18,562	-65.4		27	4.1
60	31	19,503	-63.8		26	1.1
50	30	20,636	-59.5		09	.3
40	30	22,044	-56.3		10	1.6
30	30	23,887	-52.5		10	1.6
25	30	[illegible]	-50.7		11	1.1
20	30	26,534	-47.9		04	.2
15	27	28,448	-45.3		30	1.2
10	14	31,180	-39.5			
7						
5						

*** COLD BAY, ALASKA — 1005 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	[illegible]	[illegible]	.6	[illegible]	[illegible]
1000	31	117	1.6	-1.2	16	[illegible]
950	31	481	.1	-2.1	[illegible]	[illegible]
900	31	913	-1.9	-4.8	[illegible]	4.1
850	31	1,367	-3.6	[illegible]	[illegible]	3.4
800	31	1,845	-4.8	-9.5	16	2.9
750	31	2,351	-7.1	[illegible]	[illegible]	[illegible]
700	31	2,886	-10.1	-16.8	19	2.4
650	31	3,454	-13.1	-19.7	20	2.8
600	31	4,060	-16.4	-24.6	20	2.5
550	31	4,710	-20.3	-28.9	23	3.1
500	31	5,410	[illegible]	-32.5	24	3.1
450	31	6,167	-30.5	-38.1	25	2.6
400	31	6,994	-36.7	-43.3	27	3.1
350	31	7,909	-42.8	-42.8	28	4.1
300	31	8,933	[illegible]		29	5.4
250	31	10,122	-51.4		28	6.0
200	31	11,573	-50.5		28	4.2
175	31	12,444	-50.5		28	4.1
150	31	13,450	-50.2		28	3.5
125	31	14,638	-51.1		27	2.3
100	31	16,087	-51.6		27	1.2
80	31	17,535	-51.4		14	.3
70	31	18,404	-50.9		12	1.4
60	30	19,412	-51.0		12	2.0
50	29	20,600	-50.9		11	2.3
40	29	22,052	-50.9		10	3.5
30	27	23,935	-50.5		10	4.7
25	26	25,131	-49.3		09	5.1
20	24	26,596	-47.7		08	6.5
15	19	28,485	-45.7		08	7.2
10	17	31,227	-41.0		09	8.6
7	13	33,649	-38.5			
5	7	35,980	-35.6			

DAYTON, OHIO — 981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	299	12.2	8.5	08	.4
1000						
950	31	569	14.5	5.5	20	1.6
900	31	1,025	12.4	3.3	25	1.6
850	31	1,502	9.3	.9	26	1.9
800	31	2,002	6.1	-2.5	27	2.1
750	31	2,528	2.8	-6.5	26	3.2
700	31	3,084	-.2	-14.6	27	2.9
650	31	3,673	-3.4	-18.0	27	3.1
600	31	4,303	-6.7	-24.1	27	3.7
550	31	4,976	-11.1	-27.9	27	3.6
500	31	5,700	-16.2	-33.2	26	3.8
450	31	6,485	-21.9	-37.0	26	4.7
400	31	7,341	-28.2	-42.5	27	6.0
350	31	8,287	-35.8	-46.5	27	6.7
300	31	9,338	-44.1		27	8.3
250	31	10,537	-52.7		27	10.3
200	31	11,955	-59.4		27	13.5
175	31	12,788	-60.6		27	13.4
150	31	13,750	-59.6		27	12.5
125	31	14,892	-59.5		27	11.1
100	31	16,288	-59.6		28	7.8
80	31	17,689	-58.5		28	6.4
70	31	18,528	-59.0		28	4.7
60	31	19,496	-58.4		29	3.5
50	31	20,647	-56.8		31	1.9
40	30	22,066	-54.5		36	1.4
30	29	23,917	-51.8		06	1.5
25	29	25,102	-50.8		06	1.0
20	28	26,568	-48.3		09	2.0
15	27	28,475	-44.7		07	1.5
10	7	31,193	-39.8			
7						

DEL RIO, TEXAS — 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	314	19.9	17.4	11	3.3
1000						
950	31	553	19.3	16.5	14	6.2
900	31	1,018	17.5	14.4	16	8.6
850	31	1,506	15.4	11.4	15	8.2
800	31	2,020	13.9	4.7	17	6.4
750	31	2,563	11.8	-3.5	18	3.4
700	31	3,136	7.9	-7.6	24	1.9
650	31	3,743	3.7	-11.9	28	3.8
600	31	4,386	-1.4	-15.2	28	6.3
550	31	5,073	-6.7	-19.4	27	9.6
500	31	5,810	-12.0	-22.7	27	12.9
450	31	6,609	-16.9	-29.6	27	15.7
400	31	7,483	-23.1	-36.4	27	18.3
350	31	8,450	-30.1	-43.4	27	21.3
300	31	9,527	-38.2	-50.3	27	25.7
250	31	10,756	-47.9		27	29.8
200	31	12,194	-58.2		27	33.1
175	30	13,026	-62.3		27	35.6
150	30	13,971	-65.1		27	33.9
125	30	15,079	-66.4		27	25.6
100	30	16,424	-67.7		27	17.7
80	30	17,766	-67.1		27	7.7
70	30	18,576	-65.4		27	2.5
60	30	19,519	-62.8		32	.2
50	30	20,652	-59.8		09	1.2
40	30	22,059	-56.0		11	1.5
30	30	23,907	-52.2		07	2.3
25	30	25,092	-50.3		08	1.6
20	30	26,558	-47.5		06	.4
15	28	28,473	-43.9		29	2.1
10	25	31,224	-39.6		33	2.3
7	9	33,661	-35.3			

DENVER, COLO. — 838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	1,611	8.0	3.4	20	1.4
1000						
950						
900						
850						
800	31	1,992	9.4	-2.5	26	1.7
750	31	2,525	6.8	-6.7	29	2.4
700	31	3,088	3.1	-10.3	29	3.8
650	31	3,684	-1.3	-13.8	28	5.2
600	31	4,316	-5.9	-18.9	29	6.3
550	31	4,991	-10.9	-24.0	28	7.2
500	31	5,716	-16.5	-29.3	27	7.9
450	31	6,499	-22.2	-37.2	26	8.0
400	31	7,353	-29.1	-44.5	27	8.9
350	31	8,296	-36.6	-50.6	26	9.8
300	31	9,342	-44.9		27	10.2
250	31	10,538	-53.4		26	12.1
200	31	11,952	-59.8		26	13.8
175	31	12,784	-60.5		26	13.1
150	31	13,748	-59.1		27	13.0
125	31	14,894	-58.4		27	10.7
100	31	16,297	-58.8		27	7.3
80	31	17,699	-58.6		26	4.8
70	31	18,538	-58.4		27	3.6
60	31	19,509	-58.4		30	1.9
50	31	20,656	-57.8		02	1.6
40	31	22,071	-55.6		04	2.1
30	30	23,916	-53.0		05	2.8
25	30	25,095	-51.6		06	3.3
20	30	26,551	-49.2		06	2.6
15	29	28,453	-45.3		04	.9
10	22	31,184	-40.0		28	2.0
7						

DODGE CITY, KANS. — 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	791	11.9	6.9	24	.7
1000						
950						
900	31	1,013	14.1	6.4	24	2.0
850	31	1,495	12.8	1.8	25	4.7
800	31	2,002	10.1	-1.7	26	5.7
750	31	2,536	6.9	-5.8	27	6.1
700	31	3,099	3.1	-8.4	28	6.7
650	31	3,695	-.9	-11.4	28	6.7
600	31	4,329	-5.4	-16.1	28	8.3
550	31	5,006	-10.2	-23.4	28	9.1
500	31	5,733	-15.6	-28.5	28	9.4
450	31	6,520	-21.2	-33.3	28	9.9
400	31	7,378	-27.6	-39.3	27	11.0
350	31	8,327	-34.9	-44.9	26	12.1
300	31	9,381	-43.6		26	13.9
250	30	10,578	-52.6		26	17.1
200	30	11,994	-60.1		26	20.6
175	30	12,824	-61.3		26	21.2
150	30	13,783	-59.8		27	17.2
125	30	14,923	-60.2		27	14.0
100	30	16,312	-60.4		27	10.1
80	30	17,703	-60.5		27	5.7
70	28	18,541	-60.0		28	4.3
60	28	19,504	-59.8		29	2.4
50	27	20,652	-58.3		33	.9
40	27	22,064	-55.9		02	1.4
30	27	23,908	-53.0		05	1.9
25	26	25,090	-51.2		06	1.5
20	24	26,553	-48.8		03	.3
15	24	28,456	-45.6		29	1.1
10	17	31,190	-39.7		28	.8
7						

EL PASO, TEXAS — 880 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	1,193	15.0	-1.9	09	.3
1000						
950						
900						
850	31	1,487	18.4	.3	15	.5
800	31	2,003	15.3	-3.0	25	1.6
750	31	2,546	11.3	-6.2	24	3.7
700	31	3,117	6.6	-9.5	23	4.1
650	31	3,720	.9	-12.8	24	5.1
600	31	4,359	-3.2	-16.8	23	7.2
550	31	5,041	-8.5	-21.4	24	9.4
500	31	5,772	-14.0	-25.6	24	10.0
450	31	6,564	-19.7	-31.5	25	11.8
400	31	7,428	-25.6	-37.5	25	16.2
350	31	8,386	-32.6	-43.5	25	20.4
300	31	9,451	-40.7	-49.0	26	23.3
250	31	10,667	-50.2		26	26.9
200	31	12,091	-60.1		26	31.7
175	31	12,919	-62.7		26	31.3
150	31	13,867	-63.5		26	28.4
125	30	14,984	-64.2		26	22.8
100	29	16,345	-65.5		26	16.7
80	28	17,701	-64.8		27	8.3
70	27	18,520	-63.8		27	3.5
60	27	19,468	-62.3		27	1.0
50	27	20,600	-60.0		06	1.4
40	25	22,002	-56.9		10	1.0
30	24	23,845	-52.9		08	1.5
25	22	25,025	-51.2		03	.8
20	21	26,480	-49.2		05	.3
15	21	28,382	-45.9		26	4.3
10	16	31,129	-40.3		32	1.6
7						

ELY, NEV. — 808 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	1,908	2.7	-6.5	19	3.5
1000						
950						
900						
850						
800	30	1,989	6.8	-4.3	19	2.6
750	31	2,519	7.4	-6.8	15	1.3
700	31	3,083	3.5	-9.8	22	2.7
650	31	3,679	-1.1	-12.5	24	4.5
600	31	4,312	-6.1	-16.3	24	5.5
550	31	4,986	-11.5	-21.2	24	[illegible]
500	31	5,709	-17.1	-27.5	25	5.3
450	31	6,491	-22.6	[illegible]	25	5.6
400	31	7,344	-29.3	[illegible]	26	6.8
350	31	8,286	-36.7	[illegible]	27	7.8
300	31	9,332	-45.0	-49.0	27	7.6
250	31	10,529	-53.2		27	9.5
200	31	11,944	-59.3		28	9.5
175	31	12,777	-60.2		27	9.5
150	30	13,740	-59.9		28	9.8
125	30	14,882	-58.7		27	7.8
100	30	16,263	[illegible]		27	5.6
80	30	17,685	-58.6		26	2.8
70	30	18,525	-58.2		26	1.9
60	30	19,496	-58.2		26	.5
50	30	20,644	-58.2		06	1.4
40	30	22,055	-56.5		07	2.0
30	29	23,890	-53.9		07	3.2
25	25	25,071	-51.9		07	2.8
20	24	26,526	-49.2		07	1.9
15	24	28,429	-45.5		06	1.7
10	21	31,181	-40.1		08	.8
7	19	33,600	-35.6			

EMPALME, MEXICO — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	12	19.0	7.0	36	1.2
1000	31	87	22.7	9.0	35	1.6
950	31	535	23.8	4.2	35	1.8
900	31	1,005	21.4	2.4	31	1.3
850	31	1,497	18.5	-.4	23	2.7
800	31	2,014	15.5	-3.5	22	4.8
750	31	2,557	12.0	-6.7	22	6.4
700	31	3,130	8.0	-8.6	22	7.7
650	31	3,737	3.8	-11.7	23	9.5
600	31	4,382	-.7	-15.8	23	12.4
550	31	5,071	-5.3	-20.0	24	14.8
500	31	5,811	-10.8	-24.4	24	17.0
450	31	6,612	-16.6	-28.0	25	19.6
400	31	7,487	-22.8	-34.0	25	21.9
350	31	8,456	-29.7	-39.6	25	25.7
300	31	9,533	-38.1	-47.3	25	29.5
250	31	10,762	-47.9		25	33.5
200	30	12,200	-58.3		25	37.1
175	30	13,032	-62.3		25	37.8
150	29	13,978	-65.6		25	34.7
125	29	15,083	-67.1		25	28.9
100	29	16,425	-68.4		25	20.6
80	29	17,764	-67.5		26	10.6
70	29	18,572	-65.6		24	5.2
60	28	19,518	-63.7		04	[illegible]
50	28	20,645	-59.8		08	[illegible]
40	27	22,051	-56.5		09	[illegible]
30	27	23,896	-52.6		09	4.2
25	27	25,079	-50.6		10	4.4
20	25	26,547	-48.0		08	2.9
15	21	28,445	-45.3		07	[illegible]
10	11	31,174	-40.4			
7						

*** FAIRBANKS, ALASKA — 997 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	135	4.5	-2.1	34	1.3
1000	[illegible]	154	6.1	-4.7	35	1.7
950	31	529	5.2	-5.2	06	1.6
900	31	968	2.5	-7.1	09	.6
850	31	1,428	-.7	-8.6	16	.9
800	31	1,909	-4.1	-11.0	18	2.0
750	31	2,415	-7.5	-14.0	18	2.3
700	31	2,949	-10.8	-16.2	19	2.4
650	31	3,515	-14.3	-21.4	20	2.4
600	31	4,117	-18.0	[illegible]	21	2.3
550	31	4,763	-22.0	-29.9	21	2.4
500	31	5,457	-26.9	[illegible]	20	2.5
450	31	6,209	-32.2	-39.3	22	2.5
400	31	7,030	-38.2	-43.1	23	2.7
350	31	7,938	-45.1		24	[illegible]
300	30	8,952	-51.5		24	5.9
250	30	10,128	-53.6		24	[illegible]
200	30	11,572	-50.6		24	4.6
175	30	12,446	-49.6		24	3.2
150	30	13,457	-49.4		24	3.2
125	30	14,651	-49.5		[illegible]	1.8
100	30	16,112	-49.8		19	1.0
80	30	17,572	-49.6		15	1.1
70	30	18,447	-49.3		11	1.5
60	30	19,458	-49.4		09	2.4
50	30	20,654	-49.2		09	3.2
40	30	22,119	-49.0		09	4.3
30	29	24,012	-48.4		09	5.2
25	28	25,221	-47.5		09	6.3
20	26	26,697	-46.5		09	6.9
15	21	28,652	-43.4		09	8.1
10	[illegible]	31,457	-38.1			
7						

FLINT, MICH. — 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	236	10.0	6.3	18	.4
1000						
950	31	567	12.9	4.2	19	.8
900	31	1,020	11.0	.9	30	.7
850	31	1,495	8.3	-1.7	31	2.2
800	31	1,993	5.4	-4.8	30	2.6
750	31	2,518	2.5	-9.3	29	3.2
700	31	3,072	-.5	-12.5	28	3.4
650	31	3,662	-3.8	-17.1	28	3.8
600	31	4,290	-7.2	-22.9	27	4.9
550	31	4,962	-11.6	-27.6	27	4.1
500	31	5,686	-16.6	-32.4	27	4.4
450	31	6,469	-22.3	-37.7	26	4.4
400	31	7,323	-28.8	-42.1	27	5.4
350	31	8,268	-36.1	-46.8	27	6.4
300	31	9,317	-44.4		27	7.0
250	31	10,516	-52.6		27	9.0
200	31	11,935	-58.9		28	10.8
175	31	12,772	-59.4		27	10.2
150	31	13,738	-58.6		27	10.0
125	30	14,883	-58.2		28	8.6
100	30	16,290	-57.7		28	8.0
80	30	17,701	-57.0		29	7.4
70	30	18,547	-56.9		29	5.9
60	29	19,526	-56.2		29	3.8
50	29	20,687	-55.4		33	1.8
40	29	22,116	-53.8		02	1.6
30	29	23,973	-51.8		07	2.3
25	27	25,165	[illegible]		09	3.5
20	27	26,627	-48.2		08	3.6
15	26	28,543	-44.8		08	4.0
10	13	31,298	-39.3			
7						

FORT WORTH, TEXAS — 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	180	17.8	13.3	20	.3
1000						
950	31	561	19.0	11.4	19	2.5
900	31	1,025	17.1	7.9	21	2.4
850	31	1,510	14.3	3.5	23	2.0
800	31	2,020	11.8	-2.4	25	1.5
750	31	2,557	8.7	-5.4	28	2.7
700	31	3,124	4.9	-9.5	29	4.2
650	31	3,724	.8	-13.9	28	4.5
600	31	4,362	-3.7	-18.3	29	5.9
550	31	5,043	-8.3	-22.2	28	7.9
500	31	5,776	-13.4	-26.8	28	9.0
450	31	6,570	-18.3	-30.8	27	11.1
400	31	7,439	-24.4	[illegible]	27	14.1
350	31	8,400	-31.7	-42.6	27	17.8
300	31	9,470	-39.8	-49.6	27	21.3
250	31	10,690	-49.3		27	26.4
200	31	12,121	-59.1		27	31.2
175	30	12,953	-62.5		27	32.6
150	30	13,902	-63.4		27	29.3
125	30	15,023	-63.4		27	23.6
100	29	16,392	-64.6		28	15.7
80	29	17,756	-63.9		27	7.8
70	29	18,578	-62.5		28	4.2
60	29	19,532	-61.4		33	1.6
50	29	20,670	-58.6		08	1.1
40	28	22,084	-55.3		08	.9
30	26	23,933	[illegible]		09	1.2
25	24	25,122	-50.3		29	1.1
20	22	26,591	-47.7		29	1.6
15	17	28,497	-43.6		31	2.7
10	8	31,239	-39.9			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 935 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	8.2	4.9	03	.7
900	3.	1,013	9.6	2.0	35	1.6
850	31	1,486	7.3	-1.4	35	1.9
800	31	1,983	4.5	-4.2	33	1.9
750	3.	2,506	1.6	-7.7	31	2.2
700	3.	3,058	-1.9	-11.8	30	3.0
650	31	3,644	-5.4	-15.1	29	3.7
600	31	4,268	-9.4	-21.4	28	4.3
550	31	4,935	-13.9	-25.9	27	5.0
500	31	5,651	-18.9	-29.7	27	5.3
450	3.	6,428	-24.4	-34.9	26	5.5
400	31	7,275	-30.9	-41.2	26	6.4
350	31	8,211	-38.0	-46.2	26	7.5
300	31	9,252	-46.1		24	7.8
250	3.	10,442	-54.2		24	10.7
200	31	11,858	-57.9		26	9.7
175	3.	12,700	-57.9		26	8.6
150	3.	13,676	-56.2		27	6.7
125	3.	14,835	-56.4		28	6.2
100	31	16,251	-56.7		29	5.0
80	31	17,668	-55.8		30	4.1
70	31	18,519	-55.7		32	2.8
60	31	19,502	-55.3		35	1.7
50	31	20,667	-54.5		03	2.1
40	31	22,100	-53.5		06	3.2
30	31	23,957	-52.0		07	4.7
25	31	25,141	-51.0		08	5.9
20	31	26,599	-49.4		08	7.0
15	31	28,498	-46.0		08	7.4
10	27	31,230	-40.5		09	7.5
7	9	33,540	-36.4			

GRAND JUNCTION, COLO. 851 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	10.5	-6.2	13	3.0
850	19	1,503	10.6	-5.8	12	3.0
800	31	1,989	11.6	-6.1	13	3.3
750	31	2,525	8.4	-9.0	19	1.8
700	31	3,090	4.0	-11.9	25	3.4
650	31	3,688	-.7	-14.4	25	4.7
600	31	4,321	-6.0	-17.0	25	6.4
550	31	4,995	-11.3	-21.9	25	6.7
500	31	5,718	-17.0	-27.4	25	7.6
450	31	6,500	-22.5	-34.0	26	7.7
400	31	7,354	-29.1	-40.4	25	8.4
350	31	8,297	-36.5	-46.6	25	9.4
300	31	9,343	-45.0		24	10.7
250	31	10,538	-53.9		25	13.1
200	31	11,949	-60.0		26	13.6
175	31	12,781	-60.6		27	13.6
150	31	13,742	-60.2		26	11.7
125	31	14,882	-59.1		26	11.3
100	30	16,278	-59.0		27	7.5
80	30	17,679	-58.5		26	3.9
70	30	18,518	-58.6		26	2.5
60	30	19,487	-58.6		27	1.2
50	30	20,633	-58.1		01	1.2
40	30	22,045	-56.3		04	2.0
30	29	23,889	-53.4		06	2.8
25	29	25,068	-51.5		05	2.1
20	29	26,525	-49.0		05	2.2
15	26	28,416	-45.5		34	.5
10	17	31,145	-40.2		26	1.5

*** GREAT FALLS, MONT. 889 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	6.2	2.1	24	2.9
850	31	1,486	7.6	-1.6	26	2.8
800	31	1,983	4.8	-4.0	28	1.8
750	31	2,506	1.1	-6.5	27	2.3
700	31	3,058	-2.5	-10.3	27	3.5
650	31	3,642	-6.0	-15.4	28	4.7
600	31	4,264	-9.8	-21.3	27	5.9
550	31	4,930	-14.2	-27.7	27	6.8
500	31	5,646	-19.4	-33.5	26	7.5
450	31	6,420	-25.2	-39.1	25	7.6
400	31	7,264	-31.8	-43.4	25	7.3
350	31	8,197	-38.7	-46.9	25	7.9
300	31	9,236	-46.1		25	9.3
250	31	10,428	-53.6		26	9.5
200	31	11,846	-57.5		27	10.3
175	31	12,690	-56.9		28	8.7
150	31	13,668	-56.5		27	6.4
125	30	14,829	-55.9		27	5.8
100	30	16,247	-56.4		28	3.9
80	30	17,662	-56.5		30	2.9
70	30	18,512	-55.9		31	2.5
60	30	19,492	-56.0		35	1.8
50	30	20,655	-55.2		03	2.0
40	30	22,084	-53.7		07	3.3
30	30	23,941	-52.1		07	4.4
25	30	25,124	-51.3		07	5.7
20	30	26,580	-49.4		07	6.7
15	27	28,469	-46.9		08	7.2
10	26	31,188	-41.2		08	7.3
7	20	33,630	-35.4		08	7.1
5	16	35,978	-29.5			
4	7	37,712	-26.1			

GREEN BAY, WIS. 991 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	9.3	5.7	02	.6
950	3.	564	13.3	1.1	13	.9
900	31	1,018	11.3	-1.3	15	.2
850	31	1,492	8.3	-2.7	23	.5
800	31	1,990	4.8	-6.4	33	.8
750	31	2,514	1.7	-11.0	34	1.0
700	3.	3,066	-1.8	-14.8	31	1.3
650	31	3,652	-4.9	-19.8	29	1.8
600	31	4,277	-8.5	-25.1	29	2.2
550	31	4,947	-12.6	-29.1	28	2.8
500	31	5,668	-17.2	-32.5	27	3.9
450	31	6,450	-22.8	-37.7	27	4.9
400	31	7,302	-29.4	-44.8	28	4.8
350	31	8,244	-36.8	-49.4	29	5.7
300	31	9,289	-45.2		29	6.8
250	31	10,484	-53.5		28	8.4
200	31	11,897	-59.5		28	9.5
175	31	12,730	-60.5		28	9.3
150	31	13,694	-58.9		28	8.7
125	31	14,841	-58.4		28	8.3
100	31	16,246	-57.8		28	7.6
80	30	17,652	-57.4		29	5.9
70	30	18,498	-56.7		29	4.9
60	30	19,476	-56.4		31	4.0
50	30	20,637	-55.3		36	2.3
40	30	22,066	-53.9		06	2.5
30	30	23,923	-51.6		07	3.8
25	30	25,109	-50.5		08	4.3
20	26	26,567	-48.7		08	4.4
15	23	28,475	-45.6		08	5.1
10	18	31,206	-38.8		08	4.8

GREENSBORO, N. C. 985 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	12.8	10.3	01	1.1
950	31	576	14.2	8.7	36	1.0
900	31	1,032	12.2	5.6	04	.8
850	31	1,509	9.3	4.6	05	.5
800	31	2,010	6.7	-1.0	26	.6
750	31	2,538	4.5	-7.1	27	1.5
700	31	3,097	1.6	-11.0	26	3.7
650	31	3,691	-1.8	-14.8	26	4.8
600	31	4,324	-5.4	-18.1	26	5.0
550	31	5,001	-9.6	-23.3	25	6.0
500	31	5,731	-14.4	-30.1	26	7.0
450	31	6,521	-19.8	-35.7	25	8.7
400	31	7,385	-26.1	-40.0	26	11.3
350	31	8,340	-33.2	-46.2	25	12.6
300	31	9,401	-41.7	-50.2	25	13.9
250	31	10,612	-51.2		26	16.4
200	31	12,033	-59.6		27	18.9
175	31	12,865	-61.3		27	18.7
150	31	13,821	-61.3		27	16.4
125	31	14,953	-61.5		27	15.0
100	31	16,335	-61.9		27	11.5
80	31	17,719	-60.9		28	7.4
70	31	18,550	-60.9		29	5.2
60	31	19,511	-59.8		30	3.2
50	31	20,656	-57.8		32	1.7
40	31	22,075	-54.7		35	.5
30	29	23,929	-52.0		04	.7
25	29	25,114	-50.4		05	.7
20	26	26,576	-48.2		26	.2
15	24	28,481	-44.9		23	1.0
10	19	31,214	-39.5		26	2.7

GUADALUPE IS., MEXICO 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	16	23	14.8	12.1	34	8.9
1000	.6	128	12.5	9.4	33	9.6
950	16	558	13.7	-.9	31	7.3
900	15	1,015	15.2	-8.4	31	5.1
850	16	1,497	13.9	-12.0	29	4.2
800	16	2,005	11.5	-15.8	28	2.7
750	15	2,541	8.3	-18.7	27	3.0
700	15	3,106	4.5	-21.6	26	3.8
650	16	3,706	1.2	-24.1	25	4.5
600	16	4,345	-2.6	-27.1	25	6.2
550	.6	5,028	-7.3	-29.1	26	6.5
500	.6	5,763	-12.7	-33.4	26	7.9
450	15	6,557	-18.4	-36.4	26	8.3
400	15	7,424	-25.1	-40.8		
350	15	8,385	-31.8	-46.2		
300	15	9,454	-39.8	-55.8		
250	14	10,669	-49.7			
200	12	12,095	-59.5			
175	12	12,923	-62.8			
150	12	13,869	-64.3			
125	12	14,985	-64.7			
100	10	16,341	-66.8			
80	9	17,691	-64.5			
70	9	18,511	-63.0			
60	9	19,464	-61.8			
50	9	20,596	-60.3			
40	9	22,001	-56.6			
30	9	23,840	-53.2			
25	9	25,020	-51.2			
20	8	26,464	-49.0			
15	8	28,371	-44.9			
10	6	31,089	-41.9			

*** GUAM, MARIANA IS. 998 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	24.7	22.2	08	3.6
950	30	545	22.6	20.0	09	9.4
900	30	1,015	20.0	16.2	08	8.7
850	30	1,507	17.8	10.5	09	7.4
800	30	2,025	15.8	4.3	09	6.3
750	30	2,571	13.3	.4	08	5.4
700	30	3,149	10.8	-6.2	08	4.9
650	30	3,763	7.3	-9.7	08	4.7
600	30	4,417	3.6	-15.4	08	4.8
550	30	5,118	-.2	-20.2	07	4.7
500	30	5,874	-4.6	-24.6	07	4.6
450	30	6,696	-9.4	-29.3	08	4.2
400	30	7,596	-15.4	-33.7	08	3.4
350	30	8,594	-22.3	-40.0	06	1.9
300	30	9,705	-30.5	-47.1	29	1.4
250	30	10,974	-40.6	-54.8	26	4.3
200	30	12,455	-52.6		25	6.1
175	29	13,305	-59.3		24	6.1
150	29	14,253	-67.1		23	4.7
125	29	15,338	-73.1		28	.9
100	28	16,626	-78.7		09	4.1
80	28	17,895	-78.0		07	3.8
70	28	18,664	-74.8		07	3.0
60	28	19,573	-68.7		08	2.7
50	26	20,680	-63.2		07	4.6
40	24	22,071	-58.6		08	7.5
30	24	23,900	-54.1		09	13.6
25	24	25,078	-50.9		09	17.9
20	23	26,542	-47.5		09	21.1
15	23	28,457	-44.3		09	23.2
10	12	31,194	-39.9			

HILO, HAWAII 1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	20.2	17.4	25	1.8
1000	31	151	21.0	17.2	24	1.1
950	31	594	17.8	15.1	10	2.4
900	31	1,055	14.6	11.9	09	3.6
850	31	1,536	11.2	9.2	09	3.5
800	31	2,041	9.4	.7	09	4.1
750	31	2,576	8.2	-6.7	10	3.4
700	31	3,144	5.9	-17.1	10	2.0
650	31	3,747	3.4	-20.3	01	.1
600	31	4,392	-.1	-24.1	29	1.5
550	31	5,063	-4.4	-26.0	28	3.1
500	31	5,826	-9.2	-29.8	27	5.2
450	31	6,633	-14.3	-32.7	27	7.5
400	31	7,516	-20.5	-37.4	27	10.4
350	31	8,493	-27.5	-43.4	27	14.6
300	31	9,581	-35.6	-48.9	27	19.4
250	31	10,825	-44.8		27	26.8
200	31	12,280	-56.3		27	32.3
175	31	13,117	-62.3		27	33.9
150	31	14,056	-68.0		27	32.4
125	30	15,138	-72.1		27	27.6
100	30	16,446	-73.1		27	17.5
80	30	17,756	-71.5		27	7.7
70	30	18,553	-67.2		27	3.1
60	30	19,491	-63.9		14	.9
50	30	20,617	-61.0		10	4.6
40	30	22,013	-57.6		09	6.6
30	30	23,851	-53.1		09	9.9
25	29	25,032	-50.8		09	12.4
20	29	26,493	-48.6		09	13.4
15	26	28,408	-44.8		09	14.3
10	23	31,138	-41.0		09	13.5
7	10	33,624	-37.3			

HUNTINGTON W. VA. 987 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	11.7	9.2	17	.3
950	31	570	14.7	6.6	20	1.8
900	31	1,027	12.8	4.0	23	2.2
850	31	1,504	9.7	.8	25	2.0
800	31	2,005	6.5	-2.4	27	2.1
750	31	2,532	3.6	-6.2	28	2.6
700	31	3,089	.4	-10.9	29	2.6
650	31	3,680	-2.9	-15.5	28	2.9
600	31	4,311	-6.5	-21.8	27	2.9
550	31	4,985	-10.5	-28.3	27	4.3
500	31	5,712	-15.3	-31.9	26	5.8
450	31	6,500	-20.8	-36.3	27	6.6
400	31	7,359	-27.3	-42.0	27	8.0
350	31	8,310	-34.6	-46.3	26	10.0
300	31	9,365	-42.8	-46.2	27	11.2
250	31	10,572	-51.6		27	12.7
200	30	11,993	-59.0		27	14.8
175	30	12,828	-60.3		27	15.9
150	30	13,791	-59.8		27	13.3
125	29	14,935	-59.5		27	11.5
100	29	16,329	-60.0		27	9.2
80	29	17,727	-58.9		28	6.6
70	29	18,565	-59.0		28	5.3
60	29	19,533	-58.4		29	3.9
50	28	20,684	-57.0		32	1.7
40	28	22,107	-54.4		02	.9
30	27	23,969	-51.7		06	1.3
25	27	25,156	-50.3		06	.7
20	27	26,620	-48.0		04	1.4
15	22	28,526	-44.8		08	1.4
10	6	31,259	-38.9			

*** INTERNATIONAL FALLS, MINN. 973 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	9.2	5.5	07	.8
950	31	561	11.9	4.8	19	1.3
900	31	1,014	10.8	1.7	20	2.8
850	31	1,488	8.0	-1.5	21	2.2
800	31	1,986	4.8	-4.8	22	2.1
750	31	2,509	1.3	-8.1	23	1.8
700	31	3,061	-2.3	-11.5	23	1.7
650	31	3,646	-5.9	-16.4	25	1.9
600	31	4,268	-9.8	-21.2	26	2.7
550	31	4,935	-13.7	-27.1	26	2.9
500	31	5,653	-18.3	-33.0	28	4.3
450	31	6,431	-23.9	-37.2	28	5.4
400	31	7,280	-30.3	-42.4	29	7.5
350	31	8,218	-37.4	-48.6	29	8.4
300	31	9,261	-45.8		29	10.3
250	31	10,452	-54.3		28	12.3
200	31	11,859	-60.5		28	11.8
175	31	12,689	-61.1		28	10.1
150	31	13,652	-58.1		29	9.1
125	31	14,803	-57.7		29	7.1
100	31	16,212	-57.5		30	6.4
80	31	17,626	-56.2		31	4.3
70	31	18,476	-55.6		32	3.3
60	31	19,460	-54.9		35	2.5
50	31	20,629	-53.7		02	3.1
40	31	22,066	-53.0		05	3.7
30	30	23,926	-52.0		07	5.1
25	30	25,111	-50.8		07	5.7
20	30	26,570	-49.0		08	7.3
15	30	28,473	-45.6		08	7.8
10	28	31,211	-40.0		09	7.7
7	25	33,675	-34.0		09	7.7
5	20	36,098	-29.2			
4	7	37,696	-27.8			

JACKSON, MISS. 1003 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	16.4	15.5	08	.5
1000	29	132	17.6	14.1	08	1.1
950	31	571	18.8	10.6	02	1.4
900	31	1,034	16.2	8.3	33	1.2
850	31	1,518	12.8	5.0	29	2.6
800	31	2,025	10.0	-.8	30	3.5
750	31	2,559	7.1	-7.7	30	4.3
700	31	3,123	4.1	-12.9	30	5.7
650	31	3,722	.8	-19.3	30	7.1
600	31	4,360	-3.3	-22.9	30	8.4
550	31	5,043	-7.5	-26.6	29	8.8
500	31	5,777	-12.7	-29.5	29	9.9
450	31	6,573	-17.8	-34.0	29	11.5
400	31	7,444	-23.9	-37.8	28	13.1
350	30	8,408	-31.3	-44.6	28	15.2
300	30	9,478	-39.8	-50.6	28	19.1
250	30	10,699	-49.2		28	23.5
200	29	12,127	-59.4		28	28.6
175	29	12,956	-62.9		28	30.4
150	29	13,902	-63.9		28	27.4
125	29	15,019	-64.1		28	23.5
100	29	16,383	-64.7		27	15.3
80	29	17,742	-65.0		28	9.0
70	29	18,560	-62.9		29	5.2
60	29	19,512	-62.0		32	1.6
50	29	20,648	-58.9		03	.4
40	29	22,059	-55.8		08	1.3
30	29	23,905	-52.5		06	1.0
25	29	25,088	-50.6		01	.6
20	26	26,553	-48.0		34	.8
15	24	28,468	-44.7		30	2.6
10	16	31,201	-40.9		05	1.4

JOHN F. KENNEDY INT. AP NY 1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	13.0	8.5	03	.8
1000	30	145	12.6	7.0	02	1.3
950	30	576	12.6	4.4	07	.5
900	30	1,029	11.1	2.0	14	.4
850	30	1,504	8.5	-.6	24	1.2
800	30	2,003	5.6	-4.3	25	2.0
750	30	2,529	2.8	-8.0	26	3.1
700	30	3,084	-.4	-10.4	27	4.6
650	30	3,674	-3.5	-16.8	26	5.7
600	30	4,303	-6.9	-21.9	25	6.6
550	30	4,977	-10.8	-26.4	26	7.2
500	30	5,703	-15.8	-30.9	26	9.3
450	30	6,489	-21.3	-33.8	26	11.2
400	30	7,347	-27.7	-39.3	26	12.4
350	30	8,295	-34.9	-44.2	25	14.0
300	30	9,350	-43.3	-45.0	26	15.2
250	30	10,553	-52.0		26	18.1
200	29	11,976	-59.7		26	20.9
175	28	12,805	-62.2		26	19.6
150	26	13,751	-60.7		26	16.7
125	26	14,889	-60.1		27	14.5
100	26	16,284	-59.9		27	11.3
80	26	17,681	-58.9		28	7.6
70	26	18,519	-58.7		28	6.0
60	25	19,484	-57.7		28	4.2
50	25	20,639	-56.0		31	2.0
40	25	22,065	-54.2		04	.8
30	25	23,921	-51.9		13	.4
25	23	25,128	-50.8		08	1.2
20	22	26,570	-48.6		09	2.2
15	18	28,494	-44.8		07	1.9
10	7	31,279	-38.4			

JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	25.3	21.8	08	9.2
1000	31	123	24.1	20.6	08	9.8
950	31	571	20.3	19.0	08	11.0
900	31	1,038	17.6	15.0	09	10.6
850	31	1,525	14.8	12.1	09	8.6
800	31	2,037	12.2	7.3	09	6.5
750	31	2,577	10.1	.8	09	4.3
700	31	3,150	8.4	-5.7	08	2.5
650	31	3,759	5.3	-7.1	09	.9
600	31	4,409	1.3	-9.5	27	.6
550	30	5,104	-2.6	-14.5	28	2.6
500	30	5,855	-6.8	-20.9	27	3.9
450	29	6,670	-12.0	-24.5	28	6.2
400	29	7,561	-17.8	-30.5	28	8.7
350	29	8,550	-24.5	-36.0	27	11.2
300	29	9,652	-32.6	-44.2	27	15.4
250	29	10,910	-42.8		27	20.3
200	29	12,377	-54.6		27	24.7
175	29	13,219	-61.3		28	27.3
150	29	14,160	-68.0		28	26.5
125	28	15,239	-73.8		28	21.9
100	28	16,527	-77.7		28	15.1
80	26	17,810	-75.3		29	7.8
70	26	18,592	-70.6		29	3.6
60	25	19,518	-65.3		06	1.1
50	25	20,641	-61.1		09	4.4
40	24	22,037	-58.2		09	7.4
30	23	23,866	-53.9		09	11.0
25	21	25,046	-51.7		09	13.9
20	21	26,504	-48.6		09	17.4
15	19	28,420	-44.7		09	18.4
10	18	31,154	-40.8		09	19.1
7	14	33,596	-38.3			

KEY WEST, FLA. 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	25.2	21.3	10	.9
1000	31	115	24.7	21.1	08	.8
950	31	564	21.3	18.2	16	1.1
900	31	1,031	18.6	13.1	21	1.6
850	31	1,520	15.6	8.7	23	2.2
800	31	2,032	12.7	4.9	23	2.8
750	31	2,572	9.7	-.8	26	3.4
700	31	3,142	7.1	-7.9	27	4.8
650	31	3,748	3.7	-13.0	29	5.3
600	31	4,394	.1	-18.0	29	7.5
550	31	5,085	-4.1	-21.6	28	8.9
500	31	5,831	-8.4	-27.8	28	10.8
450	31	6,640	-14.0	-32.7	28	13.0
400	31	7,523	-20.3	-37.0	28	15.5
350	31	8,501	-27.6	-42.9	28	17.8
300	31	9,587	-36.2	-50.8	28	19.3
250	31	10,828	-45.6		28	23.3
200	31	12,280	-56.3		28	30.2
175	31	13,119	-61.3		28	32.4
150	31	14,065	-65.6		28	30.3
125	31	15,163	-69.2		28	22.6
100	31	16,488	-71.3		28	15.4
80	31	17,808	-70.3		30	5.2
70	29	18,602	-67.3		32	1.1
60	29	19,541	-63.7		07	1.6
50	29	20,671	-59.2		08	3.9
40	26	22,083	-55.9		07	4.4
30	22	23,937	-51.3		09	5.0
25	18	25,132	-48.7			
20	10	26,565	-46.4			

KING SALMON, ALASKA 989 MB

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOROR, CAROLINE IS.
1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	30	28.5	24.2	02	1.2
1000	31	90	27.3	22.1	03	1.3
950	31	543	23.8	19.4	03	1.4
900	31	1,014	20.6	15.5	36	.9
850	31	1,507	17.8	11.5	32	1.3
800	31	2,024	15.5	7.5	31	1.8
750	31	2,570	13.0	2.4	31	1.5
700	31	3,145	10.2	-3.1	32	1.5
650	30	3,752	6.9	-8.0	32	1.0
600	30	4,415	3.4	-12.9	01	.5
550	31	5,115	-.6	-17.8	34	.5
500	31	5,871	-4.8	-22.4	03	1.1
450	31	6,592	-9.4	-27.8	05	2.0
400	31	7,593	-14.9	-32.7	05	2.0
350	31	8,593	-21.8	-39.1	04	2.3
300	31	9,706	-30.1	-46.7	07	2.1
250	31	10,976	-40.6	-55.1	11	3.7
200	31	12,455	-53.0		10	6.0
175	30	13,304	-59.9		10	7.5
150	30	14,250	-67.1		08	7.4
125	30	15,331	-74.2		06	5.1
100	30	16,617	-77.8		06	3.9
80	31	17,890	-77.2		32	.9
70	31	18,666	-72.8		27	4.7
60	31	19,582	-68.5		27	7.4
50	31	20,687	-64.0		27	4.2
40	30	22,073	-59.3		09	4.8
30	30	23,893	-55.2		09	18.9
25	30	25,065	-52.6		09	24.3
20	30	26,519	-48.8		09	26.9
15	28	28,428	-44.9		10	28.1
10	24	31,173	-38.6		09	32.6
7	9	33,644	-35.6			

KWAJALEIN, MARSHALL IS.
1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	4	27.1	24.4	10	3.3
1000	31	84	26.6	24.1	10	3.8
950	31	538	23.8	22.0	10	4.5
900	31	1,010	21.1	18.4	11	4.3
850	31	1,505	18.5	15.4	11	3.9
800	31	2,024	16.2	12.2	11	3.5
750	31	2,572	13.3	9.1	11	3.4
700	31	3,151	10.1	5.4	11	2.9
650	31	3,764	5.5	2.5	11	2.6
600	31	4,418	2.7	-1.0	13	2.3
550	31	5,118	-1.3	-4.6	13	2.2
500	31	5,874	-5.4	-9.4	14	1.7
450	31	6,695	-9.9	-14.8	16	1.5
400	31	7,595	-15.4	-21.7	19	2.1
350	31	8,591	-22.1	-30.0	20	2.4
300	31	9,706	-30.5	-38.0	21	3.1
250	31	10,975	-40.8	-48.3	23	4.8
200	31	12,452	-53.6	-60.7	24	6.5
175	31	13,296	-61.0		24	7.1
150	31	14,235	-69.0		25	6.8
125	29	15,303	-76.9		26	6.1
100	19	16,565	-82.0		27	5.1
80	16	17,819	-78.6		27	6.2
70	16	18,590	-73.5		27	7.5
60	14	19,501	-69.5		28	6.5
50	14	20,604	-64.4		33	1.6
40	14	21,983	-60.0		09	8.5
30	14	23,796	-56.3		09	19.0
25	14	24,959	-54.1		09	23.3
20	14	26,403	-50.6		09	25.9
15	14	28,298	-46.4		09	29.0
10	6	31,019	-42.5			

LAKE CHARLES, LA.
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	29	5	18.8	17.5	02	1.4
1000	29	118	21.2	14.1	02	1.9
950	29	562	19.6	11.1	04	1.1
900	29	1,027	17.2	8.1	05	.5
850	29	1,512	14.1	3.5	36	.4
800	29	2,021	11.2	-1.5	31	1.8
750	29	2,557	8.6	-7.7	30	3.2
700	29	3,124	5.3	-11.9	30	4.2
650	29	3,726	1.6	-14.5	29	5.4
600	28	4,368	-2.4	-19.8	28	7.1
550	28	5,052	-7.0	-23.4	28	8.1
500	28	5,788	-11.7	-28.3	28	10.4
450	28	6,587	-17.2	-34.8	28	13.2
400	28	7,460	-23.4	-40.6	28	15.8
350	29	8,426	-30.3	-44.9	28	19.2
300	28	9,502	-38.3	-50.9	28	22.9
250	28	10,731	-47.9		28	28.2
200	28	12,170	-57.6		28	34.8
175	28	13,005	-62.1		28	36.1
150	28	13,950	-64.7		28	33.0
125	28	15,062	-65.7		28	25.9
100	29	16,415	-67.1		27	16.3
80	28	17,762	-66.4		28	9.0
70	28	18,574	-64.2		29	3.6
60	28	19,523	-62.4		35	1.1
50	28	20,658	-58.7		06	1.2
40	28	22,068	-56.2		09	2.6
30	28	23,913	-52.0		09	2.5
25	28	25,100	-50.0		08	2.6
20	28	26,569	-47.0		07	1.1
15	27	28,486	-44.5		30	1.3
10	15	31,239	-39.8		34	2.9

LANDER, WYO.
83[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,697	5.9	-1.3	21	1.1
800	31	1,947	6.8	-4.7	30	.9
750	31	2,524	3.8	-7.3	29	1.9
700	31	3,081	.0	-9.9	27	3.1
650	31	3,671	-3.6	-15.2	26	4.3
600	31	4,298	-7.7	-22.4	26	6.2
550	31	4,969	-12.6	-26.1	27	8.2
500	31	5,669	-18.0	-30.8	27	8.6
450	31	6,468	-23.8	-36.5	27	9.2
400	31	7,317	-30.4	-43.5	27	10.3
350	31	8,254	-37.9	-47.5	27	11.4
300	31	9,295	-46.3		27	12.4
250	31	10,483	-54.8		27	12.5
200	31	11,892	-59.8		27	11.9
175	31	12,726	-59.5		27	10.0
150	31	13,695	-58.0		27	9.0
125	31	14,844	-58.1		27	6.5
100	31	16,249	-57.9		27	5.0
80	31	17,656	-57.8		28	3.6
70	31	18,499	-57.5		29	2.5
60	31	19,473	-57.5		32	1.7
50	31	20,626	-57.0		03	1.7
40	31	22,043	-55.8		06	2.2
30	31	23,884	-53.8		06	4.5
25	31	25,060	-52.2		07	5.3
20	30	26,514	-50.0		07	5.5
15	29	28,408	-46.6		07	4.8
10	21	31,121	-40.1		09	2.4

LIHUE, KAUAI, HAWAII
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	36	23.4	19.3	07	4.4
1000	31	161	22.1	17.8	07	5.4
950	31	605	18.2	16.6	07	7.0
900	31	1,067	14.9	12.1	08	7.0
850	31	1,549	11.8	7.4	08	6.4
800	31	2,055	9.9	1.4	08	6.1
750	31	2,590	8.5	-8.0	08	4.5
700	31	3,158	5.0	-12.5	08	2.4
650	31	3,762	2.9	-17.5	07	1.0
600	31	4,405	-.5	-20.9	36	1.0
550	31	5,096	-4.2	-25.1	32	1.3
500	31	5,840	-9.1	-28.5	31	2.6
450	31	6,647	-14.7	-32.1	29	3.7
400	31	7,527	-21.1	-36.4	29	6.1
350	31	8,503	-28.1	-43.3	29	8.5
300	30	9,588	-36.5	-49.7	28	12.1
250	30	10,826	-46.4		28	17.6
200	30	12,273	-57.1		28	24.6
175	30	13,107	-62.9		28	27.6
150	30	14,043	-68.2		28	27.5
125	30	15,131	-70.5		28	21.0
100	30	16,446	-72.9		28	15.4
80	29	17,758	-70.7		28	8.0
70	29	18,557	-66.6		28	3.6
60	28	19,501	-62.7		23	.5
50	28	20,631	-60.6		10	3.8
40	26	22,031	-57.2		10	6.0
30	26	23,872	-52.6		09	8.8
25	26	25,056	-50.2		09	9.8
20	26	26,522	-47.5		09	9.8
15	23	28,436	-44.2		09	11.7
10	20	31,170	-39.9			
7	6	33,620	-36.5			

LITTLE ROCK, ARK.
1005 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	79	15.1	12.3	27	.6
1000	30	126	17.3	12.4	27	.6
950	31	565	18.6	9.1	28	.9
900	31	1,027	15.6	6.7	29	1.2
850	31	1,509	12.4	3.4	28	1.9
800	31	2,015	9.2	-1.3	28	2.3
750	31	2,547	6.0	-6.8	29	4.1
700	31	3,109	2.9	-12.4	29	5.5
650	31	3,705	-.7	-16.4	30	6.4
600	31	4,340	-4.4	-23.6	30	7.3
550	31	5,020	-8.9	-27.1	29	7.5
500	31	5,751	-13.8	-31.6	29	8.6
450	31	6,543	-19.4	-35.9	28	10.3
400	31	7,407	-25.8	-41.1	28	12.9
350	31	8,364	-32.9	-47.8	28	15.0
300	31	9,428	-41.0	-51.3	28	18.6
250	31	10,643	-50.3		28	23.3
200	31	12,068	-59.6		28	27.2
175	31	12,898	-62.1		28	27.2
150	29	13,851	-61.6		28	23.4
125	29	14,980	-62.0		28	18.6
100	29	16,359	-62.2		28	12.6
80	29	17,737	-62.1		28	7.4
70	29	18,565	-60.5		30	4.5
60	28	19,528	-59.7		34	2.2
50	26	20,671	-58.0		04	1.1
40	25	22,087	-55.0		09	1.0
30	25	23,940	-51.8		34	.8
25	24	25,125	-49.8		31	.9
20	23	26,596	-47.0		30	1.8
15	23	28,516	-43.6		05	.9
10	6	31,272	-39.2			
7						
5						
4						

MCGRATH, ALASKA
1000 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	103	3.4	-1.0	27	1.0
1000	18	137	4.0	-4.0	27	1.0
950	30	523	3.5	-5.1	17	.8
900	30	960	.7	-6.7	15	2.3
850	30	1,416	-2.4	-8.1	15	2.8
800	30	1,895	-4.9	-10.5	15	4.0
750	30	2,400	-7.7	-15.7	15	3.9
700	30	2,934	-10.8	-18.0	15	4.3
650	30	3,501	-14.0	-21.3	14	4.6
600	30	4,104	-17.5	-25.2	15	5.4
550	30	4,751	-21.7	-30.3	15	5.2
500	30	5,446	-26.4	-35.2	15	5.4
450	30	6,199	-31.5	-40.2	15	4.5
400	30	7,023	-37.3	-44.8	14	4.2
350	30	7,936	-43.7		14	3.2
300	30	8,954	-50.2		36	3.0
250	30	10,132	-54.1		35	3.3
200	30	11,576	-50.3		02	1.7
175	30	12,451	-49.1		33	1.4
150	29	13,460	-48.9		16	.0
125	29	14,655	-49.6		18	.8
100	29	16,116	-49.9		12	1.5
80	29	17,575	-49.6		11	2.2
70	29	18,451	-49.4		11	2.6
60	29	19,462	-49.2		10	2.5
50	27	20,656	-49.2		09	3.6
40	26	22,120	-49.2		09	4.5
30	24	24,004	-48.8		09	5.3
25	20	25,212	-47.8		08	6.1
20	20	26,689	-46.5		09	6.9
15	19	28,599	-44.6		09	6.7
10	14	31,356	-39.8		09	8.5

MAJURO, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	3	28.6	24.5	09	2.4
1000	30	94	27.0	21.0	10	3.0
950	31	547	23.7	19.3	11	3.8
900	31	1,019	21.1	16.0	12	3.2
850	31	1,512	18.4	12.5	13	3.1
800	31	2,031	16.0	9.8	13	2.8
750	31	2,578	13.2	6.7	12	2.1
700	31	3,156	10.0	3.0	13	1.5
650	30	3,769	7.0	-.5	13	1.4
600	30	4,425	3.5	-4.8	12	1.2
550	31	5,126	-.3	-9.2	11	1.3
500	31	5,884	-4.3	-14.2	08	1.5
450	30	6,707	-8.7	-20.4	15	1.0
400	30	7,611	-14.0	-27.1	18	1.3
350	31	8,615	-20.8	-34.3	24	1.7
300	31	9,733	-29.0	-43.2	22	2.3
250	31	11,009	-39.6	-52.6	23	4.1
200	30	12,494	-52.2		24	6.0
175	31	13,346	-59.1		25	6.2
150	31	14,294	-66.8		26	5.9
125	30	15,374	-75.1		28	5.4
100	30	16,649	-78.9		27	6.8
80	31	17,927	-76.0		28	10.1
70	31	18,704	-72.0		28	11.1
60	31	19,626	-66.1		27	8.7
50	31	20,743	-62.0		25	2.4
40	31	22,135	-58.2		09	8.4
30	31	23,960	-54.6		09	19.2
25	31	25,136	-50.9		09	23.3
20	31	26,604	-47.0		09	25.9
15	30	28,523	-43.1		09	27.5
10	27	31,291	-37.1		09	32.4
7	7	33,802	-33.0			

MEDFORD, OREG.
969 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	401	7.4	5.2	21	.2
950	31	564	10.3	5.4	25	.8
900	31	1,015	9.9	2.6	27	1.0
850	31	1,488	7.9	.4	14	.3
800	31	1,987	6.1	-5.8	19	1.0
750	31	2,513	3.1	-10.5	23	2.9
700	31	3,069	.0	-15.8	24	3.9
650	31	3,658	-3.5	-21.9	24	4.1
600	31	4,286	-7.4	-24.1	25	4.9
550	31	4,958	-11.8	-28.5	25	6.2
500	31	5,681	-17.0	-32.0	26	7.5
450	31	6,463	-22.6	-36.4	26	8.7
400	31	7,316	-29.4	-42.3	26	9.5
350	31	8,258	-36.8	-46.8	26	10.1
300	31	9,304	-45.0	-54.4	27	11.1
250	31	10,499	-53.4		27	12.2
200	31	11,914	-59.4		27	12.3
175	31	12,748	-60.5		27	11.3
150	31	13,710	-59.2		26	9.2
125	31	14,857	-58.0		26	7.0
100	31	16,265	-57.5		25	4.4
80	31	17,678	-56.5		23	2.2
70	31	18,526	-56.5		23	1.5
60	30	19,502	-56.7		21	.8
50	30	20,659	-56.3		08	1.4
40	30	22,079	-55.3		07	2.7
30	28	23,921	-53.4		08	4.1
25	26	25,100	-51.9		07	4.7
20	26	26,553	-49.8		07	4.2
15	25	28,459	-45.3		07	4.8
10	24	31,213	-38.2		07	4.9
7	20	33,709	-32.0		11	3.5
5	13	36,076	-28.0			
4	5	37,572	-25.6			

MERIDA, MEXICO
1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	11	23.2	21.1	10	.8
1000	29	99	24.2	21.6	11	3.4
950	30	549	22.5	19.1	13	7.6
900	30	1,020	21.3	13.2	12	6.4
850	30	1,514	18.9	9.2	12	3.1
800	30	2,032	15.8	6.3	18	.4
750	30	2,578	12.7	-.3	30	1.0
700	30	3,154	9.9	-9.1	31	3.5
650	30	3,766	6.2	-11.2	32	4.5
600	30	4,417	2.1	-15.6	32	5.7
550	30	5,113	-2.3	-20.0	31	6.5
500	30	5,864	-6.2	-26.4	31	8.0
450	30	6,681	-11.0	-30.9	30	9.0
400	30	7,575	-17.1	-35.5	29	10.8
350	30	8,565	-24.4	-40.5	29	12.8
300	30	9,666	-32.9	-46.2	28	15.6
250	30	10,923	-42.7		28	19.9
200	30	12,392	-53.8		27	23.8
175	30	13,239	-59.7		27	25.7
150	30	14,189	-65.8		27	26.6
125	30	15,281	-71.6		27	23.8
100	30	16,584	-75.0		27	15.1
80	30	17,879	-74.1		28	6.4
70	30	18,665	-70.0		36	1.3
60	30	19,596	-64.8		06	3.0
50	30	20,722	-60.1		08	5.8
40	30	22,126	-56.6		09	7.6
30	30	23,974	-51.3		09	10.0
25	29	25,165	-48.5		09	10.5
20	28	26,643	-45.6		09	11.1
15	25	28,572	-42.7		09	12.2
10	14	31,332	-38.0			

MIAMI, FLA.
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	4	22.4	20.6	23	.5
1000	31	116	23.1	19.7	20	.6
950	31	563	20.7	17.5	19	2.0
900	31	1,030	17.8	13.3	20	2.6
850	31	1,517	14.9	9.4	22	3.0
800	31	2,028	12.1	5.0	24	3.3
750	31	2,567	9.1	.0	25	4.2
700	31	3,136	6.3	-6.6	26	5.2
650	31	3,740	3.0	-10.8	27	6.1
600	31	4,384	-.7	-16.3	27	6.9
550	31	5,074	-4.6	-20.7	28	8.6
500	31	5,818	-9.1	-25.8	28	10.4
450	31	6,625	-14.5	-30.5	28	12.2
400	31	7,507	-20.8	-36.5	28	14.3
350	31	8,483	-27.8	-44.0	28	16.1
300	31	9,569	-36.1	-50.8	28	18.9
250	31	10,810	-45.7		28	20.5
200	31	12,262	-56.2		28	25.5
175	30	13,101	-60.9		28	28.6
150	30	14,051	-64.9		28	28.0
125	30	15,155	-67.5		28	24.0
100	30	16,490	-69.9		28	16.6
80	28	17,818	-68.8		29	8.4
70	28	18,623	-65.9		31	2.9
60	28	19,565	-63.1		01	1.5
50	27	20,696	-59.4		08	3.5
40	27	22,106	-55.4		09	4.4
30	26	23,959	-51.0		10	5.3
25	26	25,153	-48.7		09	5.0
20	24	26,629	-46.3		09	5.0
15	24	28,553	-43.6		08	3.4
10	19	31,294	-38.1		09	.9

MIDLAND, TEXAS
915 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	874	15.5	13.7	14	2.3
900	31	1,010	16.3	12.0	16	4.6
850	31	1,498	16.1	6.2	17	7.9
800	31	2,012	14.5	-.1	18	5.0
750	31	2,554	11.3	-4.8	21	2.3
700	31	3,126	7.1	-10.1	27	2.4
650	31	3,730	2.5	-13.1	28	3.5
600	31	4,371	-2.6	-18.3	27	5.5
550	31	5,054	-8.1	-20.5	26	8.9
500	31	5,787	-13.6	-25.9	26	11.3
450	31	6,580	-18.9	-32.5	26	12.7
400	31	7,447	-24.9	-38.4	26	15.2
350	31	8,407	-31.8	-44.7	26	19.0
300	31	9,476	-39.9	-50.0	26	23.8
250	30	10,692	-49.4		26	28.9
200	30	12,121	-59.3		26	33.1
175	30	12,951	-62.5		26	34.2
150	30	13,899	-63.8		27	30.8
125	30	15,020	-63.7		27	23.8
100	30	16,383	-65.2		27	16.5
80	28	17,740	-64.5		27	7.8
70	28	18,557	-63.7		26	4.2
60	27	19,504	-62.5		30	1.5
50	27	20,637	-59.3		05	.8
40	27	22,048	-55.8		11	1.3
30	26	23,890	-52.7		06	1.1
25	24	25,072	-50.9		12	.5
20	22	26,536	-48.5		30	1.5
15	20	28,448	-44.8		29	4.6
10	14	31,180	-39.2			

MONTERREY, MEXICO
961 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	423	21.0	20.5	12	.9
950	30	554	20.5	19.7	12	2.3
900	30	1,021	18.0	16.4	13	5.2
850	30	1,510	16.2	10.9	14	6.2
800	31	2,024	14.8	4.5	14	5.7
750	31	2,568	12.8	-4.2	15	2.9
700	31	3,144	9.6	-9.4	26	1.9
650	30	3,754	5.5	-12.6	28	5.4
600	30	4,403	.5	-15.3	28	8.4
550	30	5,094	-4.9	-17.0	27	11.3
500	30	5,835	-10.5	-22.9	26	13.6
450	30	6,638	-15.4	-30.2	27	15.2
400	30	7,518	-21.0	-35.1	27	18.5
350	30	8,494	-27.8	-42.6	27	21.4
300	30	9,580	-36.3	-51.0	26	24.4
250	30	10,818	-46.6		26	28.0
200	30	12,262	-57.8		26	32.6
175	30	13,094	-62.8		26	33.7
150	30	14,033	-67.4		26	32.3
125	30	15,124	-70.0		26	27.4
100	30	16,444	-71.9		26	18.5
80	30	17,764	-71.0		26	7.0
70	30	18,559	-68.5		26	1.8
60	29	19,492	-64.8		07	1.7
50	28	20,615	-60.0		09	4.1
40	28	22,019	-57.0		09	4.4
30	28	23,801	-52.2		08	4.7
25	27	25,044	-50.2		08	4.5
20	26	26,510	-47.4		08	4.3
15	23	28,417	-44.6		08	4.0
10	12	31,164	-40.0			

MONETT, MO.
964 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	28	438	12.9	10.4	15	1.0
950	28	565	15.7	9.5	18	1.4
900	28	1,024	14.3	5.5	25	3.7
850	28	1,505	11.4	1.9	27	5.0
800	28	2,009	8.4	-3.4	28	5.7
750	28	2,539	5.7	-9.3	29	7.0
700	28	3,100	2.0	-11.9	30	8.2
650	28	3,694	-1.4	-15.9	30	7.9
600	28	4,327	-5.2	-22.2	30	8.1
550	28	5,004	-9.9	-26.9	29	7.9
500	28	5,732	-15.0	-32.2	29	8.3
450	28	6,521	-20.5	-38.0	29	9.2
400	28	7,381	-26.9	-43.1	29	9.4
350	28	8,333	-34.4	-48.3	29	10.5
300	27	9,389	-43.0		29	13.8
250	27	10,594	-51.8		28	18.0
200	27	12,016	-59.1		29	20.5
175	26	12,850	-61.5		28	20.5
150	26	13,807	-60.6		28	17.3
125	25	14,945	-60.5		28	15.1
100	24	16,330	-61.3		28	11.1
80	24	17,715	-60.6		28	7.0
70	24	18,548	-59.9		30	4.5
60	22	19,522	-59.1		31	2.3
50	22	20,670	-57.3		03	1.3
40	22	22,090	-54.9		04	1.3
30	21	23,937	-52.1		05	1.1
25	21	25,122	-50.5		35	.8
20	20	26,586	-47.8		01	.7
15	15	28,483	-44.5		31	1.9
10	11	31,221	-38.8			

MONTGOMERY, ALA.
1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	57	16.7	14.1	04	.9
1000	31	127	17.2	13.5	07	1.5
950	31	566	16.8	11.2	09	2.4
900	31	1,026	14.6	9.2	09	.5
850	31	1,508	11.6	5.4	31	1.5
800	31	2,013	9.1	.3	30	3.0
750	31	2,545	6.1	-5.1	30	4.4
700	31	3,107	2.6	-10.5	30	5.8
650	31	3,703	-.5	-15.1	30	6.6
600	31	4,339	-4.0	-20.4	29	7.8
550	31	5,020	-8.0	-26.4	29	8.8
500	31	5,754	-12.7	-32.2	29	9.8
450	31	6,550	-18.2	-35.8	29	11.2
400	31	7,418	-24.6	-40.9	29	13.4
350	31	8,379	-31.8	-46.7	29	15.5
300	31	9,447	-40.4	-52.4	29	18.4
250	31	10,666	-49.6		29	23.4
200	30	12,097	-58.9		28	25.5
175	30	12,928	-62.2		28	26.2
150	30	13,879	-62.7		28	24.4
125	30	15,002	-63.3		28	20.3
100	30	16,370	-64.6		28	14.6
80	30	17,731	-64.2		28	8.9
70	30	18,552	-62.7		29	4.7
60	30	19,506	-61.2		31	1.9
50	30	20,644	-58.8		01	.5
40	30	22,058	-55.4		09	1.2
30	30	23,908	-51.7		06	1.4
25	30	25,096	-49.9		02	.7
20	28	26,554	-47.7		30	.8
15	27	28,463	-44.6		29	2.1
10	17	31,205	-39.9		29	1.0

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NASHVILLE, TENN.
994 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	14.1	11.8	16	.4
1000	7	192	11.9	7.0		
950	31	567	16.2	8.4	18	2.1
900	31	1,026	13.7	5.9	21	2.0
850	31	1,504	10.2	3.9	26	2.1
800	31	2,006	7.0	-.7	27	3.2
750	31	2,535	4.4	-6.6	28	3.8
700	31	3,093	1.1	-11.7	28	4.1
650	31	3,685	-2.2	-17.4	29	4.6
600	31	4,317	-5.7	-22.8	29	5.2
550	31	4,994	-10.0	-27.8	29	6.2
500	31	5,722	-15.0	-31.7	28	7.9
450	31	6,511	-20.3	-36.5	28	9.1
400	31	7,372	-26.8	-41.1	28	10.2
350	31	8,324	-34.2	-46.2	28	12.0
300	31	9,382	-42.4	-47.7	27	14.3
250	31	10,591	-51.2		28	17.9
200	31	12,013	-59.3		27	20.5
175	31	12,846	-61.0		27	20.8
150	31	13,803	-60.9		27	18.4
125	31	14,937	-60.9		28	15.8
100	31	16,322	-61.8		27	11.7
80	30	17,705	-61.1		28	7.8
70	30	18,536	-60.7		29	5.6
60	30	19,496	-60.1		31	2.9
50	30	20,640	-57.9		35	1.0
40	30	22,057	-55.1		32	.8
30	30	23,906	-52.5		35	.9
25	29	25,086	-50.8		34	.6
20	29	26,547	-48.6		33	.6
15	26	28,466	-45.3		26	.4
10	16	31,192	-39.8		26	1.1
7						

* **NOME, ALASKA**
1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	.5	-3.1	05	2.0
1000	29	112	1.6	-3.9	07	2.3
950	31	514	.1	-5.5	11	4.0
900	31	946	-2.1	-8.3	13	3.9
850	31	1,398	-4.3	-11.0	12	3.8
800	31	1,875	-6.3	-13.4	13	3.8
750	31	2,377	-8.8	-16.4	14	4.0
700	31	2,909	-11.5	-19.4	14	3.9
650	31	3,474	-14.3	-22.3	14	3.2
600	31	4,077	-17.9	-25.6	16	3.1
550	31	4,722	-22.0	-29.1	16	2.5
500	31	5,417	-26.6	-34.0	15	2.2
450	31	6,170	-31.6	-38.9	18	2.2
400	31	6,994	-37.4	-42.6	20	3.0
350	31	7,907	-43.2	-45.6	20	3.5
300	31	8,928	-49.3		22	1.2
250	31	10,113	-52.4		31	1.2
200	30	11,566	-50.5		27	.6
175	30	12,439	-49.6		15	.2
150	30	13,450	-49.4		08	.5
125	30	14,643	-49.7		13	1.4
100	30	16,104	-49.5		11	1.6
80	30	17,565	-49.5		12	2.8
70	30	18,441	-49.2		12	3.0
60	30	19,452	-49.1		10	3.2
50	30	20,650	-48.8		10	4.1
40	29	22,118	-48.5		10	4.8
30	27	24,004	-48.3		09	5.7
25	25	25,201	-47.8		09	6.5
20	21	26,691	-46.2		09	7.5
15	18	28,612	-44.1		08	7.9
10	14	31,349	-40.1		08	8.7
7	7	33,843	-35.0			

NORTH PLATTE, NEBR.
918 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	9.2	3.4	28	.3
1000						
950						
900	31	1,009	10.7	5.0	26	1.3
850	31	1,486	10.6	2.8	25	3.4
800	31	1,990	8.4	-1.6	27	3.1
750	31	2,520	5.1	-5.8	29	3.9
700	31	3,080	1.5	-10.3	30	4.7
650	31	3,673	-2.1	-14.8	31	5.4
600	31	4,304	-6.6	-18.3	30	5.8
550	31	4,977	-11.5	-23.2	30	7.4
500	31	5,701	-16.6	-29.3	30	7.6
450	31	6,484	-22.2	-34.3	29	7.5
400	31	7,338	-28.7	-39.9	28	7.3
350	31	8,283	-36.1	-47.0	28	8.4
300	31	9,332	-44.1		26	9.3
250	31	10,531	-53.0		26	10.1
200	30	11,945	-60.1		26	12.8
175	30	12,779	-59.7		27	12.7
150	30	13,746	-58.6		27	9.7
125	30	14,892	-58.4		27	8.8
100	30	16,296	-58.5		28	7.0
80	30	17,699	-58.1		28	5.1
70	30	18,541	-57.8		29	3.5
60	30	19,514	-57.6		30	2.3
50	30	20,668	-56.8		35	1.8
40	30	22,069	-54.7		04	2.5
30	30	23,940	-52.4		06	3.5
25	29	25,120	-50.9		07	3.6
20	29	26,582	-48.2		08	3.3
15	25	28,479	-45.1		06	2.0
10	10	31,170	-39.3			
7						

OAKLAND, CALIF.
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	11.0	8.7	25	1.4
1000	31	124	11.1	6.9	25	1.5
950	31	553	12.3	2.3	27	2.6
900	31	1,007	13.2	-3.8	29	3.3
850	31	1,486	11.8	-10.5	27	2.2
800	31	1,991	9.1	-14.3	23	2.1
750	31	2,522	6.1	-19.2	23	3.4
700	31	3,083	2.3	-21.1	22	4.1
650	31	3,677	-1.3	-25.0	23	3.9
600	31	4,309	-5.7	-28.9	23	3.5
550	31	4,985	-10.5	-31.6	25	3.5
500	31	5,710	-15.8	-37.6	27	4.7
450	31	6,496	-21.6	-41.2	27	5.0
400	31	7,352	-28.4	-44.7	27	6.4
350	31	8,298	-35.8	-50.7	28	7.4
300	31	9,347	-44.3	-57.1	28	8.0
250	31	10,547	-52.7		28	9.6
200	31	11,962	-60.0		28	11.2
175	31	12,792	-61.7		28	11.4
150	31	13,749	-60.7		27	10.9
125	30	14,878	-60.0		27	9.5
100	30	16,273	-59.8		26	6.9
80	30	17,670	-58.6		25	4.3
70	30	18,511	-58.1		23	2.3
60	30	19,483	-58.1		23	.6
50	30	20,631	-58.2		09	1.4
40	30	22,042	-56.6		09	2.3
30	30	23,878	-54.1		07	2.1
25	29	25,052	-52.7		07	1.7
20	28	26,499	-50.2		04	1.1
15	27	28,398	-46.2		33	1.6
10	23	31,140	-40.4		03	.7
7						

OMAHA, NEBR.
967 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	12.1	9.1	24	.1
1000						
950	31	550	13.3	8.0	19	1.1
900	31	1,006	12.5	4.9	22	1.4
850	31	1,483	9.5	2.7	28	2.4
800	31	1,984	6.7	-.2	29	3.4
750	31	2,512	3.9	-4.2	29	4.5
700	31	3,070	.7	-8.9	29	4.6
650	31	3,662	-2.6	-15.5	29	5.5
600	31	4,292	-6.6	-19.9	29	6.4
550	31	4,966	-11.0	-24.4	29	6.8
500	31	5,691	-16.1	-31.1	28	7.7
450	31	6,476	-21.6	-36.6	28	7.8
400	31	7,333	-28.0	-42.7	28	8.2
350	31	8,280	-35.4	-47.4	29	8.4
300	31	9,332	-43.6		28	9.1
250	31	10,534	-52.7		28	11.6
200	31	11,950	-59.1		27	12.2
175	31	12,783	-60.8		27	11.2
150	31	13,746	-59.2		27	11.4
125	31	14,892	-58.6		28	9.6
100	31	16,294	-58.8		28	7.5
80	30	17,698	-58.8		28	5.7
70	30	18,538	-58.5		29	4.4
60	30	19,509	-58.0		30	3.2
50	30	20,661	-56.8		35	2.0
40	30	22,082	-54.9		04	2.4
30	30	23,931	-52.6		07	2.9
25	28	25,118	-51.4		08	2.9
20	28	26,576	-48.9		08	3.0
15	27	28,481	-45.5		06	2.3
10	16	31,229	-40.6		09	2.9
7	5	33,698	-35.1			

+ **PAGO PAGO, AMERICAN SAMOA**
1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	29.0	23.7	09	1.8
1000	31	96	27.2	21.0	10	2.1
950	31	549	23.7	18.4	09	2.7
900	31	1,020	20.2	14.7	07	2.1
850	31	1,511	17.2	10.2	06	2.2
800	31	2,028	15.1	6.6	04	1.9
750	31	2,573	12.8	.9	36	1.9
700	31	3,150	10.1	-5.0	34	1.4
650	31	3,763	7.3	-9.8	30	1.9
600	31	4,417	3.9	-14.1	30	2.4
550	31	5,119	-.2	-18.7	30	2.8
500	31	5,876	-4.3	-24.2	31	1.8
450	31	6,699	-9.2	-29.1	29	2.3
400	31	7,599	-15.0	-33.8	26	2.1
350	31	8,599	-21.9	-40.0	23	3.4
300	31	9,711	-30.8	-47.3	22	5.8
250	31	10,979	-40.8	-55.3	21	8.2
200	31	12,459	-52.7		21	8.1
175	31	13,308	-59.5		21	8.0
150	31	14,255	-67.0		23	8.2
125	30	15,338	-74.1		23	7.9
100	30	16,617	-79.7		25	5.1
80	30	17,888	-76.1		26	2.6
70	30	18,667	-71.4		25	1.8
60	30	19,590	-66.5		15	.9
50	30	20,709	-60.9		07	3.2
40	30	22,110	-57.2		08	4.4
30	30	23,952	-52.7		09	8.9
25	28	25,131	-50.1		09	12.1
20	28	26,601	-46.7		09	15.8
15	27	28,529	-42.0		09	16.9
10	22	31,309	-36.4		09	15.9
7	10	33,808	-33.5			
5						

* **PEORIA, ILL.**
991 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	12.3	7.9	14	.9
1000						
950	31	560	15.5	5.6	21	2.1
900	31	1,017	13.1	3.7	24	3.1
850	31	1,495	9.7	1.2	24	3.2
800	31	1,996	6.2	-2.6	24	3.8
750	31	2,522	2.8	-7.1	24	3.5
700	31	3,077	-.3	-13.2	25	3.5
650	31	3,666	-3.6	-16.1	26	4.0
600	31	4,295	-7.2	-21.3	27	4.3
550	31	4,967	-11.5	-26.5	28	4.7
500	31	5,691	-16.4	-30.6	27	5.0
450	31	6,475	-22.0	-35.6	27	5.8
400	31	7,330	-28.6	-42.2	28	5.7
350	31	8,275	-35.9	-48.1	28	6.8
300	31	9,325	-44.1		28	7.7
250	31	10,525	-52.5		28	10.1
200	30	11,944	-59.3		28	11.8
175	29	12,782	-60.5		28	11.4
150	29	13,743	-59.8		28	10.3
125	29	14,885	-59.6		28	8.9
100	29	16,281	-59.4		28	8.0
80	29	17,681	-58.7		29	5.8
70	29	18,521	-58.3		29	4.6
60	28	19,490	-58.3		30	3.6
50	27	20,637	-57.0		34	2.3
40	27	22,057	-54.9		05	2.0
30	27	23,908	-52.4		07	1.7
25	27	25,092	-50.9		07	2.0
20	27	26,552	-48.5		06	2.3
15	27	28,459	-45.1		08	2.6
10	20	31,198	-39.2		08	2.2
7	17	33,668	-35.3		10	3.7
5	9	35,993	-31.9			

* **PITTSBURGH, PA.**
974 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	12.4	8.6	14	.6
1000						
950	31	568	12.8	6.2	19	1.7
900	31	1,022	11.5	2.8	23	2.6
850	31	1,497	8.7	-.3	27	2.6
800	31	1,996	5.6	-3.9	28	3.0
750	31	2,521	2.3	-6.4	29	3.1
700	31	3,076	-1.1	-11.1	28	3.4
650	31	3,663	-4.4	-14.8	27	3.2
600	31	4,290	-8.1	-20.1	26	3.3
550	31	4,960	-12.3	-26.3	27	3.9
500	31	5,682	-17.0	-33.2	27	4.9
450	31	6,464	-22.4	-38.7	27	5.6
400	31	7,319	-28.8	-43.5	27	5.8
350	31	8,264	-35.9	-48.7	27	6.9
300	31	9,313	-44.2		27	8.2
250	31	10,513	-52.6		27	11.6
200	31	11,930	-59.4		26	13.3
175	31	12,762	-61.1		27	12.9
150	31	13,720	-60.1		27	12.2
125	31	14,859	-60.0		27	10.5
100	31	16,253	-59.5		27	9.1
80	29	17,651	-59.1		27	6.2
70	29	18,488	-58.8		28	4.6
60	28	19,461	-58.4		29	3.8
50	28	20,612	-56.9		31	2.6
40	27	22,034	-54.6		03	1.0
30	26	23,885	-53.0		09	1.7
25	25	25,063	-51.4		07	1.2
20	25	26,518	-49.6		08	2.0
15	25	28,417	-45.9		08	3.0
10	24	31,164	-39.2		10	3.5
7	23	33,626	-34.5		14	1.6
5	8	35,957	-31.5			

+ **PONAPE, CAROLINE IS.**
1003 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	27.9	24.8	33	.3
1000	29	71	27.0	22.1	04	.6
950	31	519	23.7	19.2	16	.2
900	31	991	21.0	16.1	16	.4
850	31	1,485	18.3	13.1	18	.5
800	31	2,003	15.9	9.9	16	.6
750	31	2,550	13.2	6.4	14	.7
700	31	3,128	9.9	2.0	09	.9
650	31	3,741	6.7	-1.3	08	.7
600	31	4,395	3.1	-5.1	09	.6
550	31	5,096	-.6	-9.9	11	.8
500	31	5,852	-4.6	-15.2	08	.8
450	31	6,675	-9.2	-19.9	10	.5
400	31	7,578	-14.2	-27.4	04	.4
350	31	8,581	-20.9	-34.9	25	.6
300	31	9,699	-28.9	-43.7	18	1.8
250	31	10,976	-39.3	-54.1	18	3.8
200	31	12,463	-52.1		17	5.6
175	31	13,314	-59.1		16	5.7
150	31	14,262	-67.2		15	3.0
125	31	15,340	-75.2		05	1.0
100	30	16,618	-78.6		28	4.1
80	30	17,890	-77.1		28	8.0
70	30	18,666	-73.2		27	10.0
60	29	19,580	-68.2		27	10.3
50	29	20,689	-63.4		26	4.7
40	28	22,072	-59.5		10	4.7
30	27	23,894	-55.8		09	18.3
25	26	25,066	-53.0		09	23.3
20	26	26,521	-48.2		09	25.6
15	25	28,431	-44.7		09	27.3
10	16	31,177	-37.9			
7						
5						

PORTLAND, MAINE
1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	9.3	4.0	31	.6
1000	31	150	10.3	2.3	32	1.3
950	31	578	10.5	1.0	33	2.2
900	31	1,027	8.9	-.6	31	3.1
850	31	1,498	6.3	-2.6	29	4.4
800	31	1,994	4.3	-6.7	28	5.7
750	31	2,517	1.4	-9.7	28	6.2
700	31	3,069	-1.7	-11.5	28	7.2
650	31	3,656	-4.8	-15.1	28	8.4
600	31	4,282	-8.0	-18.9	28	10.6
550	31	4,953	-12.1	-23.8	28	12.0
500	31	5,676	-17.1	-29.9	28	13.3
450	31	6,458	-22.6	-35.9	27	13.5
400	31	7,311	-28.8	-40.7	27	15.0
350	31	8,256	-35.7	-44.9	27	16.3
300	31	9,307	-44.0		27	18.6
250	31	10,507	-52.5		26	20.1
200	31	11,925	-59.5		26	20.6
175	31	12,755	-61.5		26	19.9
150	31	13,713	-60.1		27	16.7
125	31	14,855	-59.1		27	13.6
100	31	16,257	-58.2		27	10.7
80	31	17,664	-57.5		28	7.6
70	31	18,509	-57.1		28	5.3
60	31	19,486	-56.3		28	3.7
50	31	20,650	-54.6		29	1.2
40	31	22,082	-53.5		08	.7
30	31	23,940	-51.9		09	2.8
25	31	25,126	-50.3		10	2.8
20	31	26,588	-48.6		09	3.1
15	29	26,494	-45.1		09	3.2
10	20	31,262	-39.4		10	5.8
7						
5						

* **QUILLAYUTE, WASH.**
1011 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	8.8	6.8	06	.3
1000	31	145	9.1	6.1	14	.4
950	31	570	8.7	3.8	16	.9
900	31	1,016	6.5	.5	18	1.1
850	31	1,484	4.8	-4.1	20	1.8
800	31	1,977	2.6	-8.0	21	2.0
750	31	2,496	-.4	-13.0	22	2.5
700	31	3,045	-3.2	-16.7	24	3.0
650	31	3,628	-6.4	-20.6	23	3.7
600	31	4,249	-10.1	-23.6	24	4.7
550	31	4,914	-14.5	-28.5	25	6.4
500	31	5,630	-19.2	-32.3	25	6.6
450	31	6,405	-24.8	-37.0	25	8.0
400	31	7,251	-31.4	-41.6	25	8.5
350	31	8,185	-38.6	-43.9	25	9.7
300	31	9,223	-46.6		25	10.7
250	31	10,411	-54.5		25	12.2
200	31	11,825	-58.3		25	11.1
175	31	12,668	-57.4		25	10.0
150	31	13,543	-56.8		24	7.6
125	31	14,801	-56.2		24	6.6
100	31	16,219	-56.1		23	4.4
80	31	17,639	-55.6		23	3.1
70	30	18,493	-55.4		22	1.8
60	30	19,476	-55.5		15	.5
50	29	20,638	-55.5		07	1.2
40	28	22,062	-54.6		08	2.5
30	26	23,916	-53.2		08	4.0
25	25	25,092	-52.1		08	5.5
20	22	26,545	-50.4		08	6.9
15	19	28,435	-47.3		08	7.3
10	17	31,140	-41.9		08	8.8
7	13	33,598	-36.2			
5	6	36,004	-31.9			

RAPID CITY, S. DAK.
905 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	8.2	4.9	34	3.3
1000						
950						
900	26	1,016	8.1	4.7	33	3.6
850	30	1,483	9.6	1.9	30	2.7
800	30	1,986	7.8	-1.3	28	3.0
750	30	2,515	4.7	-4.0	26	4.1
700	30	3,073	.7	-7.0	27	4.9
650	30	3,665	-3.0	-11.2	28	5.2
600	30	4,294	-7.1	-17.4	28	5.7
550	30	4,967	-11.8	-21.9	28	7.3
500	30	5,689	-17.3	-30.4	27	8.6
450	30	6,471	-22.9	-35.6	27	9.3
400	30	7,323	-29.5	-42.7	26	9.4
350	30	8,264	-36.9	-48.9	25	9.3
300	30	9,309	-45.3		24	8.8
250	30	10,502	-54.2		24	8.8
200	30	11,908	-60.8		25	9.7
175	30	12,740	-60.1		27	9.3
150	30	13,706	-58.5		27	8.0
125	30	14,854	-58.0		27	7.0
100	30	16,259	-58.2		28	4.9
80	30	17,665	-57.8		29	5.0
70	30	18,508	-57.4		30	3.7
60	30	19,483	-57.4		31	2.3
50	29	20,636	-56.5		35	1.5
40	28	22,058	-55.1		04	2.5
30	28	23,902	-53.2		06	4.9
25	28	25,080	-52.2		08	5.3
20	27	26,528	-49.6		07	5.2
15	26	28,423	-46.5		07	5.1
10	14	31,135	-41.3			
7						
5						

ST CLOUD, MINN.
979 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	9.8	7.4	07	1.2
1000						
950	31	566	12.7	6.8	17	1.8
900	31	1,020	11.2	3.9	19	2.2
850	31	1,495	8.2	1.2	19	1.9
800	31	1,994	5.3	-2.6	19	1.7
750	31	2,518	1.9	-7.4	19	1.7
700	31	3,072	-1.4	-11.3	23	1.1
650	31	3,659	-4.6	-15.8	24	2.0
600	31	4,265	-8.4	-21.0	24	2.6
550	31	4,955	-12.6	-26.3	26	2.9
500	31	5,676	-17.4	-30.5	26	3.4
450	31	6,457	-22.8	-35.5	28	4.1
400	31	7,310	-29.3	-40.4	28	4.5
350	31	8,253	-36.6	-45.9	28	5.7
300	31	9,299	-45.0		28	6.3
250	31	10,493	-54.0		28	9.0
200	31	11,901	-60.5		29	8.0
175	31	12,730	-61.2		28	8.3
150	31	13,692	-58.7		28	7.5
125	31	14,840	-58.4		29	7.2
100	31	16,245	-58.1		29	6.0
80	31	17,653	-57.3		30	4.5
70	31	18,499	-56.8		29	3.5
60	31	19,476	-56.3		31	2.4
50	31	20,637	-55.2		36	2.7
40	31	22,066	-54.3		05	3.1
30	31	23,918	-52.7		07	5.1
25	30	25,101	-51.3		08	5.0
20	29	26,557	-49.3		07	5.8
15	26	28,453	-46.0		08	6.0
10	17	31,205	-39.3		09	6.0
7						
5						

* **ST PAUL IS., ALASKA**
1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	-.4	-1.2	05	1.7
1000	24	107	-.3	-1.0	11	1.2
950	31	481	-.4	-3.9	11	3.2
900	31	913	-1.5	-5.8	12	3.2
850	31	1,367	-3.4	-8.8	12	3.1
800	31	1,845	-5.1	-11.1	12	2.5
750	31	2,350	-7.3	-13.9	13	2.3
700	31	2,886	-9.7	-18.1	14	1.5
650	31	3,455	-12.6	-21.5	14	1.5
600	31	4,062	-16.0	-24.4	17	.5
550	31	4,712	-19.8	-27.8	08	.6
500	31	5,413	-24.5	-32.9	05	.7
450	31	6,172	-30.0	-38.2	08	1.6
400	31	7,002	-35.6	-41.2	05	1.4
350	31	7,921	-42.0	-41.9	02	.9
300	31	8,947	-48.6		09	3.4
250	31	10,136	-51.5		07	3.0
200	30	11,582	-50.2		30	1.6
175	30	12,456	-49.6		29	1.8
150	30	13,464	-50.0		31	2.1
125	29	14,658	-50.5		30	1.6
100	29	16,111	-51.1		25	.3
80	28	17,565	-50.8		10	.5
70	28	18,435	-50.5		13	1.1
60	26	19,446	-50.2		10	2.0
50	26	20,637	-50.1		10	2.7
40	25	22,099	-50.0		10	3.9
30	25	23,979	-50.0		09	4.6
25	25	25,173	-49.4		09	5.9
20	25	26,641	-47.7		09	7.3
15	25	28,555	-44.5		09	7.6
10	19	31,321	-39.7		08	7.8
7	8	33,738	-37.9			
5						

SALEM, ILL.
994 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	13.3	10.9	29	.2
1000						
950	31	560	16.6	5.8	23	2.0
900	31	1,019	13.8	3.3	26	2.6
850	31	1,498	10.4	.7	28	2.6
800	31	1,999	6.8	-2.2	29	2.8
750	31	2,526	3.4	-7.3	28	3.3
700	31	3,083	.6	-14.4	28	3.9
650	31	3,674	-2.9	-19.0	28	4.3
600	31	4,303	-6.9	-24.3	28	5.0
550	31	4,977	-11.1	-28.5	28	6.4
500	31	5,702	-16.0	-34.6	28	7.6
450	31	6,487	-21.7	-39.4	28	8.5
400	31	7,343	-28.2	-45.9	28	9.9
350	31	8,290	-35.4	-50.4	28	10.6
300	31	9,343	-43.4		28	11.5
250	31	10,546	-52.0		28	14.0
200	31	11,967	-59.2		28	15.0
175	31	12,799	-61.0		28	16.0
150	31	13,758	-60.5		28	13.8
125	31	14,895	-60.2		28	11.9
100	31	16,287	-60.0		28	9.7
80	31	17,681	-59.7		28	7.0
70	31	18,517	-59.5		29	4.8
60	30	19,482	-59.5		31	3.2
50	30	20,629	-57.3		34	1.9
40	29	22,045	-55.2		02	1.3
30	29	23,894	-52.4		05	1.4
25	29	25,077	-50.8		05	1.2
20	28	26,539	-48.5		06	1.1
15	28	28,446	-45.2		08	.3
10	22	31,207	-39.0		06	1.9
7	5	33,611	-33.4			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, OREG. 10[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	61	7.8	4.8	22	.6
1000	31	144	10.4	6.7	31	.3
950	31	568	9.7	4.3	36	1.5
900	31	1,016	8.2	2.2	32	.4
850	31	1,487	6.2	-2.6	24	1.9
800	31	1,982	4.3	-8.2	25	2.[illegible]
750	31	2,505	1.7	-12.8	24	3.1
700	31	3,058	-1.3	-16.0	24	4.2
650	31	3,645	-4.8	-19.9	25	4.9
600	31	4,270	-8.9	-22.8	25	5.5
550	31	4,938	-13.3	-27.3	25	6.5
500	31	5,657	-18.2	-30.9	25	8.1
450	31	6,435	-23.9	-35.6	26	9.6
400	31	7,284	-30.4	-41.5	26	10.2
350	31	8,222	-37.5	-45.8	26	11.3
300	31	9,264	-45.8		27	11.8
250	31	10,456	-54.0		27	12.8
200	31	11,870	-58.7		27	13.6
175	31	12,708	-59.3		26	11.6
150	31	13,676	-58.1		26	8.6
125	30	14,833	-57.3		26	6.7
100	30	16,244	-57.1		24	4.5
80	30	17,658	-56.4		24	2.6
70	30	18,507	-56.2		23	1.8
60	30	19,486	-56.4		24	.4
50	30	20,645	-56.2		07	1.0
40	30	22,065	-55.1		08	2.5
30	29	23,908	-53.4		08	4.1
25	29	25,085	-52.2		08	4.9
20	29	26,535	-50.4		08	5.4
15	27	28,424	-47.2		08	6.5
10	22	31,156	-40.1		08	8.0
7	5	33,618	-35.1			
5						
4						

SALT LAKE CITY, UTAH 8[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	1,288	9.4	.0	16	3.5
1000						
950						
900						
850	31	1,482	13.5	-3.5	16	3.4
800	31	1,990	11.0	-6.2	18	2.3
750	31	2,525	7.3	-9.3	21	1.7
700	31	3,088	2.8	-12.1	24	3.0
650	31	3,683	-1.9	-15.[illegible]	27	4.6
600	31	4,313	-6.9	-18.7	27	6.2
550	31	4,986	-12.1	-23.3	26	7.[illegible]
500	31	5,707	-17.6	-28.5	26	6.7
450	31	6,487	-23.3	-33.4	26	7.5
400	31	7,338	-29.9	-40.5	28	7.9
350	31	8,277	-37.4	-46.1	25	8.5
300	31	9,320	-45.8		26	8.8
250	31	10,511	-54.0		26	11.1
200	31	11,923	-59.2		27	11.1
175	31	12,758	-59.9		28	10.5
150	31	13,723	-59.0		27	8.6
125	31	14,868	-58.4		26	7.3
100	31	16,271	-58.4		26	5.5
80	31	17,675	-58.1		26	3.2
70	31	18,517	-57.9		27	2.1
60	31	19,489	-58.0		30	1.0
50	31	20,639	-57.4		02	.8
40	31	22,054	-56.1		07	2.3
30	31	23,894	-53.8		07	3.8
25	29	25,076	-52.1		06	4.2
20	29	26,530	-49.7		05	3.8
15	27	28,424	-45.6		07	3.5
10	25	31,172	-39.8		09	2.7
7	10	33,670	-34.2			

SAN DIEGO, CALIF. [illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	[illegible]	[illegible]	[illegible]	[illegible]	.7
1000	[illegible]	136	[illegible]	9.0		
950	31	546	13.7	6.9	[illegible]	[illegible]
900	31	1,002	13.9	.3	[illegible]	[illegible]
850	31	1,482	12.7	-6.2	31	[illegible]
800	31	1,989	10.9	-10.0	29	2.6
750	31	2,524	7.8	-12.7	27	[illegible]
700	31	3,088	4.0	-16.2	26	2.1
650	31	3,686	[illegible]	-19.2	28	2.1
600	31	4,322	-4.3	-23.6	28	3.[illegible]
550	31	5,002	-8.9	-28.5	26	4.3
500	31	5,732	-14.1	-32.9	26	5.9
450	31	6,523	-19.9	-37.8	28	8.3
400	31	7,345	-26.5	-42.9	26	10.5
350	31	8,339	-34.0	-49.7	28	13.2
300	31	9,397	-42.4		28	15.7
250	31	10,675	-51.3		26	19.2
200	31	12,026	-54.4		26	22.5
175	31	12,856	-61.5		26	22.4
150	31	13,812	-61.1		26	20.4
125	31	14,944	-61.9		26	17.1
100	31	16,318	-63.0		26	13.0
80	31	17,695	-61.3		26	7.5
70	29	18,522	-61.0		26	3.2
60	29	19,482	-60.4		20	.8
50	28	20,618	-59.5		08	1.1
40	28	22,025	-56.2		08	2.0
30	28	23,867	-52.8		05	1.2
25	28	25,049	-51.0		34	.4
20	26	26,510	-48.4		31	1.4
15	26	28,421	-44.5		26	1.7
10	22	31,175	-39.4		29	3.6
7	14	33,616	-36.1			

SAN JUAN, P. R. [illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	6	25.[illegible]	19.7	[illegible]	7.[illegible]
1000	31	[illegible]	[illegible]	19.5	[illegible]	[illegible]
950	31	[illegible]	[illegible]	17.[illegible]	[illegible]	[illegible]
900	31	[illegible]	[illegible]	13.[illegible]	[illegible]	[illegible]
850	31	[illegible]	14.8	9.6	[illegible]	5.[illegible]
800	31	[illegible]	12.3	4.4	[illegible]	[illegible]
750	31	[illegible]	10.2	-4.1	11	2.9
700	31	[illegible]	[illegible]	-8.9	[illegible]	.8
650	31	3,770	4.6	-13.5	[illegible]	[illegible]
600	31	4,418	[illegible]	-17.6	[illegible]	[illegible]
550	31	[illegible]	-3.2	-22.4	28	1.2
500	31	5,859	-7.5	-27.3	26	2.9
450	31	6,672	-12.5	[illegible]	27	4.7
400	31	7,550	-18.7	-35.9	28	7.1
350	31	8,545	-25.8	-40.6	28	10.4
300	31	9,640	-34.2	-46.6	28	13.3
250	31	[illegible]	-44.0		29	16.7
200	31	12,350	-55.6		29	22.8
175	31	13,189	-61.7		29	[illegible]
150	31	[illegible]	-68.[illegible]		29	[illegible]
125	31	15,210	-73.5		29	21.8
100	31	16,501	-77.0		29	14.4
80	31	17,780	-74.6		30	6.6
70	30	18,572	-69.5		34	2.7
60	30	19,502	-64.7		[illegible]	3.4
50	30	20,527	-60.6		08	6.8
40	30	22,027	-57.4		09	9.[illegible]
30	30	23,866	-52.7		10	10.7
25	30	25,050	-50.3		10	13.1
20	29	26,513	-47.5		09	15.2
15	25	28,429	-43.0		09	16.1
10	14	31,181	-37.8		09	18.[illegible]

• SAULT STE. MARIE, MICH. [illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	221	7.8	3.5	[illegible]	[illegible]
1000						
950	31	[illegible]	11.0	[illegible]	[illegible]	1.4
900	31	1,018	9.9	-2.[illegible]	34	[illegible]
850	31	1,491	7.5	-3.[illegible]	33	3.1
800	31	1,988	4.4	-5.5	33	3.4
750	31	2,510	1.3	-8.[illegible]	32	3.5
700	31	3,062	-1.9	-12.1	31	3.7
650	31	3,648	-5.0	-17.[illegible]	31	4.9
600	31	4,273	-8.9	[illegible]	30	5.8
550	31	4,942	-12.9	-28.[illegible]	29	6.5
500	31	5,662	-17.7	-33.1	29	7.5
450	31	6,442	-23.2	-38.[illegible]	29	7.9
400	31	7,293	-29.8	-43.5	29	9.2
350	31	8,233	-37.[illegible]	-48.[illegible]	28	9.9
300	31	9,278	-45.4		28	[illegible]
250	31	10,471	-53.8		28	11.9
200	31	11,883	-59.5		29	10.9
175	31	[illegible]	-60.3		29	11.1
150	31	13,682	-58.6		28	10.0
125	31	14,832	-57.9		29	8.4
100	31	16,242	-57.1		28	7.4
80	31	17,656	-56.3		29	5.3
70	31	18,507	-55.4		30	4.0
60	31	19,491	-55.0		31	2.6
50	31	20,658	-54.0		01	1.4
40	31	22,095	-52.8		08	2.8
30	31	23,959	-51.2		08	4.6
25	30	25,143	-49.9		08	[illegible]
20	30	26,610	-47.8		08	6.4
15	28	28,532	-44.8		09	6.7
10	25	31,304	-38.1		09	7.0
7	23	33,793	-33.2		10	6.9
5	17	36,186	-28.1			
4	7	37,758	-25.1			

• SHEMYA, ALASKA 1005 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	38	2.8	1.5	28	1.4
1000	23	107	2.5	.0	26	1.0
950	31	489	.4	-1.5	26	2.5
900	31	922	-.9	-4.8	28	2.4
850	31	1,378	-1.7	-7.1	29	2.8
800	31	1,860	-3.0	-11.3	28	3.3
750	31	2,370	-4.8	-15.1	28	4.1
700	31	2,910	-7.4	-16.9	27	5.1
650	31	3,484	-10.4	-19.6	27	6.5
600	31	4,097	-14.0	-22.9	28	7.3
550	31	4,752	-18.0	-27.2	29	8.3
500	31	5,459	-22.6	-31.3	29	9.4
450	31	6,224	-27.6	-36.9	29	10.2
400	31	7,062	-33.4	-40.9	29	12.4
350	31	7,990	-39.8	-41.7	28	14.1
300	31	9,026	-46.2		29	14.8
250	31	10,223	-51.3		29	16.7
200	30	11,665	-53.8		29	14.4
175	29	12,518	-52.7		28	12.0
150	29	13,514	-52.9		28	10.8
125	28	14,691	-54.1		28	8.8
100	27	16,105	-54.2		28	6.3
80	27	17,538	-53.7		29	3.4
70	26	18,398	-53.2		28	1.8
60	26	19,392	-52.8		22	.3
50	25	20,572	-51.9		12	1.3
40	25	22,022	-51.1		10	2.5
30	25	23,897	-50.2		10	3.8
25	25	25,090	-49.3		10	4.3
20	25	26,559	-47.6		10	4.7
15	24	28,464	-45.3		09	6.4
10	17	31,210	-39.8		08	6.6
7	11	33,698	-35.0			

• SHREVEPORT, LA. 1005 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	79	16.7	14.6	06	.2
1000	31	123	18.6	13.3	09	.5
950	31	565	19.1	9.6	08	.8
900	31	1,028	16.8	5.9	33	.1
850	31	1,513	13.7	2.7	29	1.3
800	31	2,021	10.6	-1.7	29	2.4
750	31	2,557	7.9	-7.6	30	3.6
700	31	3,122	4.5	-11.6	30	4.3
650	31	3,722	.7	-16.9	29	4.7
600	31	4,359	-3.6	-20.6	29	5.4
550	31	5,041	-8.0	-24.3	28	7.0
500	31	5,775	-12.7	-28.8	27	9.6
450	31	6,570	-18.0	-33.0	28	12.0
400	31	7,440	-24.3	-39.1	28	15.2
350	31	8,402	-31.4	-42.6	28	17.5
300	31	9,472	-39.5	-50.2	28	20.5
250	31	10,695	-49.0		28	25.0
200	30	12,129	-59.3		28	30.8
175	30	12,957	-63.3		28	32.8
150	30	13,901	-63.8		28	29.7
125	30	15,020	-63.7		28	24.2
100	30	16,384	-65.0		28	15.0
80	30	17,743	-64.8		27	9.3
70	30	18,560	-63.5		28	4.8
60	30	19,511	-61.8		32	2.1
50	30	20,647	-59.0		04	1.3
40	30	22,057	-55.7		09	2.3
30	30	23,903	-52.7		05	1.0
25	29	25,084	-51.0		05	1.4
20	27	26,555	-48.2		36	.8
15	25	28,461	-44.8		30	2.1
10	17	31,182	-40.7		28	4.7
7	6	33,618	-35.4			

SPOKANE, WASH. 931 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	720	9.0	3.5	13	1.4
1000						
950						
900	31	1,003	10.7	2.0	18	2.0
850	31	1,478	8.6	-1.2	20	1.9
800	31	1,977	5.2	-3.2	21	2.5
750	31	2,500	1.4	-5.5	23	3.3
700	31	3,052	-2.2	-9.6	23	3.3
650	31	3,637	-5.8	-15.0	24	4.2
600	31	4,260	-9.6	-21.1	25	5.0
550	31	4,926	-14.0	-25.6	25	5.6
500	31	5,643	-19.2	-30.5	26	6.4
450	31	6,418	-24.8	-34.8	25	6.4
400	31	7,264	-31.2	-41.2	25	7.7
350	31	8,199	-38.3	-45.4	26	8.4
300	31	9,239	-46.2		26	9.2
250	31	10,430	-53.8		27	10.5
200	30	11,849	-57.0		27	11.8
175	30	12,694	-57.1		26	10.1
150	30	13,671	-56.5		26	7.6
125	30	14,829	-56.0		26	5.9
100	30	16,249	-56.1		26	4.3
80	30	17,668	-55.9		26	2.3
70	30	18,518	-55.6		27	1.4
60	30	19,501	-55.4		31	.8
50	30	20,665	-54.9		04	1.2
40	29	22,091	-53.9		06	2.0
30	29	23,945	-52.3		08	4.0
25	29	25,128	-51.2		08	5.2
20	28	26,580	-49.8		08	6.1
15	26	28,479	-46.5		08	6.7
10	18	31,206	-39.9		07	7.5

• SWAN ISLAND, W. I. 1010 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	10	26.3	22.8	09	4.0
1000	31	99	26.5	23.1	09	4.4
950	31	551	22.7	20.9	10	5.1
900	31	1,021	20.0	16.5	11	4.9
850	31	1,513	17.1	11.6	11	3.7
800	31	2,029	15.0	4.8	10	2.2
750	31	2,574	12.5	-.6	11	1.9
700	31	3,149	9.4	-4.0	12	.9
650	31	3,760	5.8	-7.3	25	.7
600	31	4,411	2.2	-12.6	29	1.4
550	31	5,109	-1.5	-17.0	30	2.4
500	31	5,863	-5.5	-24.0	30	4.6
450	31	6,682	-10.5	-27.7	31	5.4
400	31	7,577	-16.8	-33.0	31	7.3
350	30	8,570	-23.8	-37.8	30	9.3
300	30	9,674	-32.0	-44.4	29	11.0
250	30	10,935	-42.1		29	15.2
200	30	12,408	-53.8		28	18.3
175	29	13,249	-60.6		28	20.3
150	28	14,193	-67.8		29	19.7
125	28	15,272	-74.1		29	17.5
100	27	16,558	-78.0		30	11.1
80	27	17,837	-76.6		32	5.6
70	27	18,613	-72.4		01	2.4
60	27	19,533	-66.6		08	2.6
50	27	20,651	-60.9		09	3.9
40	26	22,051	-57.4		09	5.1
30	25	23,895	-52.8		09	8.7
25	24	25,078	-50.5		09	12.1
20	23	26,544	-47.3		09	15.3
15	20	28,464	-43.4		09	17.9
10	12	31,241	-38.3			

TAMPA, FLA. 1013 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	8	20.6	18.6	10	[illegible]
1000	31	120	21.2	18.[illegible]	[illegible]	1.3
950	31	565	19.5	15.[illegible]	[illegible]	[illegible]
900	31	1,029	16.8	11.5	23	1.7
850	31	1,514	13.6	7.6	26	3.3
800	31	2,023	10.8	3.4	26	3.7
750	31	2,559	8.0	-2.8	27	4.5
700	31	3,125	4.7	-7.4	27	5.[illegible]
650	31	3,726	1.5	-11.6	27	7.1
600	31	4,367	-2.1	-16.1	28	8.3
550	31	5,053	-6.4	-20.4	28	10.1
500	31	5,792	-10.9	-26.9	28	11.5
450	31	6,594	-15.9	-31.7	28	13.1
400	31	7,471	-22.0	-37.6	28	15.0
350	31	8,442	-29.4	-44.2	27	16.9
300	31	9,521	-37.8	-51.5	28	19.6
250	31	10,752	-47.1		28	23.1
200	31	12,196	-57.2		28	26.5
175	31	13,032	-61.2		28	28.4
150	31	13,982	-63.8		28	26.8
125	31	15,093	-66.5		28	22.6
100	31	16,436	-68.2		28	17.[illegible]
80	31	17,777	-67.7		28	8.0
70	31	18,585	-65.3		29	3.6
60	31	19,528	-63.2		[illegible]	1.6
50	31	20,659	-59.3		07	2.9
40	30	22,072	-55.7		10	4.0
30	29	23,921	-51.3		09	4.1
25	28	25,115	-49.2		09	3.6
20	27	26,590	-46.8		07	2.2
15	23	[illegible]	-43.7		33	.4
10	[illegible]	31,241	-38.7		30	1.0

TOPEKA, KANS. 964 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	268	12.6	10.4	30	1.0
1000						
950	31	560	15.0	8.7	23	2.3
900	31	1,017	12.7	6.3	25	3.2
850	31	1,495	9.8	3.5	28	4.1
800	31	1,997	7.5	-2.7	29	5.3
750	31	2,526	4.6	-6.3	29	6.0
700	31	3,085	1.2	-9.7	29	6.7
650	31	3,677	-2.4	-13.4	28	7.4
600	31	4,308	-6.2	-19.5	28	8.3
550	31	4,984	-10.5	-26.2	28	7.8
500	31	5,710	-15.6	-32.3	28	8.8
450	31	6,496	-21.2	-37.4	28	9.4
400	31	7,354	-27.8	-42.[illegible]	28	10.3
350	31	8,303	-35.0	-47.8	28	11.2
300	31	9,357	-43.4		27	14.5
250	31	10,558	-52.7		27	15.8
200	31	11,974	-59.8		27	17.3
175	31	12,805	-60.6		27	16.9
150	31	13,766	-59.[illegible]		27	15.2
125	31	14,908	-59.7		28	12.4
100	31	16,301	-59.7		28	9.1
80	31	17,697	-59.7		29	5.7
70	31	18,533	-58.8		30	4.2
60	31	19,501	-58.9		31	2.4
50	30	20,649	-57.5		34	1.4
40	30	22,067	-55.3		03	2.2
30	29	23,915	-52.8		04	1.8
25	29	25,096	-51.3		07	1.5
20	28	26,550	-49.0		07	1.1
15	24	28,472	-45.1		07	1.2
10	14	31,191	-40.1			
7						
5						

TRUK, CAROLINE IS. • 1009 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	2	28.5	24.9	02	2.5
1000	31	84	27.5	22.1	03	2.9
950	31	537	24.1	19.5	04	2.6
900	31	1,010	21.3	16.0	02	1.6
850	31	1,504	18.5	12.0	04	1.2
800	31	2,022	16.1	8.7	03	.7
750	30	2,569	13.5	3.8	02	.8
700	31	3,148	10.3	-.8	30	.6
650	31	3,762	7.0	-3.4	30	1.1
600	31	4,416	3.3	-6.5	35	.8
550	31	5,117	-.5	-11.5	08	.4
500	31	5,873	-4.6	-17.3	11	.4
450	31	6,696	-9.0	-22.0	08	.6
400	31	7,599	-14.4	-29.1	06	.6
350	31	8,601	-21.2	-36.6	30	.3
300	31	9,717	-29.5	-45.0	21	1.7
250	31	10,990	-40.1	-53.8	17	4.4
200	31	12,473	-52.6		18	5.[illegible]
175	31	13,322	-59.7		12	4.7
150	31	14,268	-67.4		09	4.3
125	30	15,349	-74.5		07	2.7
100	31	16,629	-78.9		31	2.2
80	30	17,903	-76.6		28	5.0
70	30	18,680	-72.4		27	7.7
60	30	19,597	-68.0		27	8.5
50	30	20,707	-63.1		27	3.6
40	30	22,094	-59.0		09	5.5
30	30	23,916	-55.1		09	19.3
25	29	25,092	-51.9		09	23.3
20	28	26,554	-47.8		09	26.0
15	28	28,467	-44.6		09	28.4
10	21	31,210	-39.6		09	32.8
7	7	33,663	-33.0			

• TUCSON, ARIZ. 922 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	789	14.9	-3.8	15	2.9
1000						
950						
900	31	993	19.7	-2.6	16	1.5
850	31	1,483	17.6	-5.1	19	.4
800	31	1,997	13.8	-7.6	20	1.1
750	31	2,537	9.8	-10.5	21	3.7
700	31	3,105	5.5	-13.7	21	5.3
650	31	3,706	1.1	-16.3	21	6.6
600	31	4,344	-3.4	-20.6	22	6.9
550	31	5,025	-8.4	-25.[illegible]	22	7.9
500	31	5,757	-13.7	-29.3	23	10.1
450	31	6,550	-19.3	-34.7	24	11.7
400	31	7,415	-25.8	-40.0	25	13.9
350	31	8,371	-32.9	-45.9	25	16.9
300	31	9,434	-41.2	-51.7	26	19.2
250	31	10,649	-50.1		26	23.3
200	31	12,076	-59.4		26	27.7
175	31	12,907	-61.9		26	27.3
150	29	13,859	-62.1		26	25.8
125	28	14,983	-62.8		26	22.3
100	28	16,354	-63.7		26	15.7
80	28	17,725	-62.5		26	8.1
70	27	18,551	-62.3		27	2.7
60	24	19,514	-60.8		27	.6
50	24	20,653	-58.6		09	1.5
40	23	22,062	-56.3		08	1.2
30	23	23,908	-51.8		08	.9
25	23	25,095	-49.9		07	.7
20	21	26,563	-47.6		24	1.1
15	[illegible]	28,479	-44.2		29	2.8
10	19	31,217	-39.7		29	3.7
7	15	33,703	-34.0		04	.4
5	[illegible]	36,079	-30.3			

• VANDENBERG AFB, CALIF. 1003 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	100	9.5	8.4	33	1.4
1000	28	126	9.8	8.2	34	1.6
950	31	551	13.2	5.1	36	3.6
900	31	1,007	13.9	1.0	01	3.5
850	31	1,488	12.6	-3.5	01	2.7
800	31	1,994	9.6	-6.3	36	1.7
750	31	2,527	6.8	-11.6	32	1.6
700	31	3,089	3.1	-14.7	30	1.6
650	31	3,685	-1.0	-18.4	28	1.6
600	31	4,319	-5.1	-22.6	28	2.2
550	31	4,996	-9.8	-27.2	28	2.9
500	31	5,724	-15.4	-31.5	28	3.4
450	31	6,510	-21.3	-36.8	28	4.5
400	31	7,367	-28.1	-42.2	28	6.1
350	31	8,314	-35.4	-47.5	28	7.6
300	31	9,367	-43.4		28	9.1
250	31	10,572	-51.5		28	11.4
200	31	11,994	-59.0		27	13.7
175	31	12,826	-61.6		27	14.7
150	31	13,781	-61.3		27	13.5
125	31	14,914	-61.5		27	12.2
100	31	16,298	-61.4		26	8.8
80	31	17,684	-60.1		27	5.0
70	31	18,519	-59.6		26	3.1
60	31	19,484	-59.6		19	.6
50	31	20,626	-58.9		10	1.1
40	31	22,034	-56.4		07	1.9
30	31	23,871	-53.7		08	.5
25	30	25,049	-52.1		12	.7
20	30	26,502	-49.3		33	1.4
15	[illegible]	28,405	-45.3		28	2.2
10	15	31,135	-40.4		27	1.8
7	19	33,519	-35.3			

VICTORIA, TEXAS 1010 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	33	19.4	17.9	06	1.7
1000	30	114	[illegible]	18.3	09	1.8
950	30	559	[illegible]	13.2	14	4.2
900	31	1,024	17.9	8.3	15	4.2
850	31	1,511	15.7	2.2	16	3.6
800	31	2,024	13.[illegible]	[illegible]	19	1.8
750	31	2,564	10.3	-5.7	27	.9
700	31	3,134	5.9	[illegible]	29	4.1
650	31	3,739	2.0	-12.8	29	5.7
600	31	4,381	-1.6	-16.5	29	8.5
550	30	5,068	-6.1	-24.0	28	10.7
500	31	5,807	-11.3	-27.6	28	13.1
450	31	6,608	[illegible]	[illegible]	28	[illegible]
400	31	7,484	[illegible]	-38.1	28	17.6
350	31	8,455	-29.[illegible]	[illegible]	28	20.7
300	31	9,536	-37.5	-51.4	28	23.8
250	31	10,766	-47.0		27	30.1
200	30	12,209	-57.5		27	34.[illegible]
175	30	13,043	-62.3		27	36.6
150	30	13,986	[illegible]		27	[illegible]
125	30	15,089	[illegible]		27	28.7
100	[illegible]	16,428	-68.0		28	16.8
80	[illegible]	17,767	-67.9		27	8.4
70	[illegible]	18,572	-66.5		28	3.9
60	[illegible]	19,514	[illegible]		[illegible]	[illegible]
50	[illegible]	20,646	[illegible]		[illegible]	[illegible]
40	[illegible]	22,052	[illegible]		09	2.9
30	[illegible]	23,897	-52.5		08	3.5
25	[illegible]	25,081	-50.5		07	[illegible]
20	[illegible]	26,547	[illegible]		08	[illegible]
15	[illegible]	28,467	[illegible]		31	.7
10	[illegible]	31,212	[illegible]		34	[illegible]
7	8	[illegible]	-35.9			

* See reference notes at end of table

RAWINSONDE DATA

Average monthly values

*** WAKE IS., PACIFIC AREA — 1014 MB**

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	5	25.4	22.2	07	7.9
1000	31	130	23.9	20.7	07	9.2
950	31	577	22.4	19.0	08	10.4
900	31	1,044	17.7	15.4	09	9.2
850	31	1,532	15.3	11.1	09	7.9
800	31	2,045	13.5	4.1	09	7.0
750	31	2,566	11.2	-3.1	10	5.2
700	31	3,159	8.0	-7.7	10	3.4
650	31	3,767	5.7	-15.9	09	3.1
600	31	4,419	2.9	-19.6	07	2.3
550	31	5,117	-1.2	-22.9	06	2.1
500	31	5,870	-6.0	-26.8	05	1.6
450	31	6,687	-11.3	-31.3	01	1.9
400	31	7,580	-17.5	-36.6	32	2.5
350	31	8,569	-24.7	-42.6	30	4.0
300	31	9,669	-33.2	-49.4	29	6.8
250	31	10,924	-43.0		27	12.5
200	31	12,392	-54.1		26	18.7
175	31	13,237	-60.3		26	20.6
150	31	14,183	-67.1		27	19.4
125	30	15,268	-73.0		28	14.8
100	29	16,558	-77.3		29	8.4
80	27	17,841	-76.1		32	3.3
70	26	18,622	-72.3		02	1.4
60	24	19,543	-66.3		07	2.5
50	24	20,664	-60.9		09	4.3
40	26	22,062	-57.7		08	7.1
30	25	23,899	-52.7		08	11.0
25	23	25,082	-50.3		08	13.2
20	21	26,548	-47.6		08	16.2
15	21	28,460	-44.7		09	16.9
10	12	31,192	-38.7			
7						

*** WALLOPS IS., VA. NASA — 1016 MB**

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	4	14.1	11.7	02	1.2
1000	30	140	14.5	10.6	35	.2
950	31	569	13.9	8.2	24	1.2
900	31	1,024	11.9	4.7	23	1.7
850	31	1,501	9.2	.7	22	2.1
800	31	2,001	6.6	-3.1	23	2.7
750	31	2,529	3.9	-7.7	23	3.4
700	31	3,087	1.0	-11.5	24	4.6
650	31	3,679	-2.3	-15.3	25	5.1
600	31	4,310	-5.8	-19.8	25	6.7
550	31	4,987	-10.1	-23.9	24	7.7
500	31	5,715	-14.8	-29.0	24	9.0
450	31	6,503	-20.5	-34.6	25	10.4
400	31	7,364	-26.9	-40.3	25	11.9
350	31	8,316	-34.0	-46.7	25	13.7
300	31	9,375	-42.4	-51.6	25	15.4
250	31	10,582	-51.9		26	17.4
200	31	11,997	-60.8		26	20.0
175	31	12,824	-62.5		26	17.3
150	31	13,775	-61.8		26	14.7
125	31	14,905	-61.6		27	13.9
100	31	16,290	-61.3		27	10.3
80	31	17,676	-60.7		28	6.6
70	31	18,509	-60.0		28	4.7
60	31	19,474	-59.0		29	2.5
50	29	20,620	-57.1		30	1.9
40	29	22,040	-54.6		03	.8
30	27	23,901	-51.8		09	.8
25	27	25,086	-50.5		09	.3
20	26	26,549	-48.1		05	.7
15	20	28,462	-44.9		10	.2
10	17	31,204	-38.9		08	2.3
7	12	33,692	-33.5			

WASHINGTON DULLES INT. AP — 1007 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	85	12.1	9.7	31	.6
1000	27	153	12.6	8.2	30	.6
950	31	573	13.5	3.2	34	1.0
900	31	1,027	11.7	.2	35	1.0
850	31	1,503	9.1	-2.2	24	.8
800	31	2,003	6.6	-4.7	27	1.0
750	31	2,531	3.8	-8.4	25	1.9
700	31	3,088	.4	-10.9	26	3.2
650	31	3,679	-2.7	-15.9	26	3.7
600	31	4,309	-6.3	-20.4	26	4.7
550	31	4,985	-10.1	-27.6	25	5.6
500	31	5,713	-15.1	-33.2	25	7.2
450	31	6,501	-20.7	-36.7	25	8.8
400	31	7,360	-27.2	-42.5	25	10.8
350	31	8,311	-34.4	-46.8	25	11.7
300	31	9,368	-42.8		25	13.2
250	31	10,575	-51.4		26	15.3
200	31	11,996	-59.6		26	15.9
175	31	12,826	-61.7		26	15.5
150	31	13,782	-61.1		26	13.4
125	31	14,918	-60.6		26	12.5
100	30	16,309	-60.4		27	9.5
80	30	17,702	-59.9		28	6.8
70	30	18,537	-59.3		28	4.8
60	30	19,505	-58.3		29	3.3
50	30	20,656	-56.9		31	1.9
40	30	22,079	-54.6		04	.7
30	30	23,931	-52.2		07	.6
25	28	25,113	-50.8		08	.8
20	28	26,575	-48.6		09	1.4
15	27	28,486	-45.2		11	1.8
10	25	31,222	-40.3		11	.8
7	6	33,627	-34.0			

WAYCROSS, GA. — 1009 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	44	17.1	16.0	35	.8
1000	31	119	17.5	15.5	04	1.0
950	31	559	17.2	12.6	07	1.8
900	31	1,019	14.7	10.3	15	.2
850	31	1,501	12.1	6.2	24	.9
800	31	2,007	9.3	1.5	27	1.7
750	31	2,540	6.5	-3.7	28	3.1
700	31	3,103	3.3	-8.9	27	4.3
650	31	3,701	-.1	-13.6	27	5.8
600	31	4,337	-3.6	-19.9	27	6.2
550	31	5,020	-7.5	-23.5	27	7.1
500	31	5,755	-12.3	-28.0	27	8.3
450	31	6,552	-17.6	-34.9	27	9.0
400	31	7,424	-23.8	-38.2	26	10.4
350	31	8,388	-31.0	-44.0	27	11.8
300	31	9,459	-39.4	-50.7	27	14.0
250	31	10,683	-48.8		27	19.3
200	31	12,118	-57.7		28	24.1
175	31	12,954	-61.1		28	25.7
150	31	13,909	-61.7		28	23.0
125	31	15,032	-64.0		27	19.5
100	31	16,397	-64.9		27	15.2
80	31	17,758	-64.1		28	8.7
70	31	18,579	-62.9		28	5.3
60	31	19,531	-61.6		29	2.0
50	31	20,667	-58.8		02	.9
40	31	22,082	-54.9		07	1.7
30	30	23,936	-51.7		10	1.8
25	30	25,123	-50.2		06	.5
20	30	26,589	-47.8		02	.7
15	29	28,500	-45.1		28	1.6
10	19	31,240	-40.2		28	4.0
7						

WINNEMUCCA, NEV. — 869 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	1,312	7.9	-4.7	08	.7
1000						
950						
900						
850	31	1,492	11.6	-3.2	04	1.3
800	31	1,998	9.9	-5.6	32	.8
750	31	2,530	5.9	-7.9	27	1.7
700	31	3,090	1.3	-9.9	26	3.3
650	31	3,682	-3.0	-13.2	25	5.1
600	31	4,310	-7.6	-19.8	25	6.5
550	31	4,982	-12.3	-24.7	25	6.4
500	31	5,703	-17.2	-29.8	25	6.6
450	31	6,484	-23.1	-35.0	26	7.2
400	31	7,335	-30.0	-40.1	27	7.4
350	31	8,273	-37.8	-44.3	27	7.6
300	31	9,314	-46.3		28	8.2
250	31	10,504	-54.0		29	9.3
200	30	11,915	-59.7		28	9.9
175	30	12,748	-60.8		27	9.8
150	30	13,709	-60.0		27	8.7
125	30	14,850	-59.0		26	6.5
100	29	16,247	-58.3		26	4.8
80	29	17,652	-57.9		25	3.1
70	28	18,494	-58.1		26	2.1
60	28	19,465	-58.2		29	.7
50	27	20,611	-58.0		10	.6
40	27	22,022	-56.6		08	1.7
30	27	23,857	-54.4		08	3.2
25	27	25,028	-53.4		07	3.0
20	26	26,464	-51.2		07	2.1
15	24	28,353	-47.1		06	1.9
10	12	31,080	-40.4			
7						

WINSLOW, ARIZ. — 850 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	1,487	8.1	-9.0	20	1.2
1000						
950						
900						
850	17	1,505	9.0	-7.3	22	1.1
800	31	1,995	12.8	-5.7	25	3.5
750	31	2,534	9.4	-8.4	24	4.4
700	31	3,101	5.0	-11.6	23	4.8
650	31	3,700	.2	-14.8	21	5.4
600	31	4,335	-5.0	-18.5	21	6.3
550	31	5,012	-10.2	-23.4	22	7.0
500	31	5,739	-15.7	-28.6	23	8.0
450	31	6,525	-21.2	-35.0	24	9.2
400	31	7,383	-27.8	-40.9	25	10.1
350	31	8,332	-35.0	-46.8	25	12.9
300	31	9,386	-43.3		26	15.3
250	31	10,590	-52.2		26	18.6
200	31	12,009	-59.6		26	20.2
175	30	12,840	-61.1		26	19.8
150	30	13,797	-61.2		26	18.5
125	30	14,930	-61.4		26	16.4
100	30	16,312	-61.8		26	12.3
80	29	17,693	-61.3		26	6.3
70	29	18,523	-60.9		26	3.3
60	29	19,483	-60.5		30	.7
50	29	20,621	-59.6		07	.9
40	28	22,021	-57.4		05	.3
30	28	23,855	-53.8		34	.8
25	28	25,032	-51.9		32	.7
20	27	26,483	-49.3		27	2.1
15	25	28,391	-45.9		27	3.1
10	18	31,135	-40.9		31	.8
7						

YAKUTAT, ALASKA — 1016 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	12	2.0	.7	08	1.6
1000	31	137	5.5	1.5	11	2.2
950	31	555	3.6	-1.5	13	3.6
900	31	993	1.3	-4.2	14	3.8
850	31	1,450	-1.4	-6.4	15	3.8
800	31	1,932	-4.0	-9.0	16	2.9
750	31	2,439	-6.6	-12.7	17	3.2
700	31	2,975	-9.4	-18.0	18	4.0
650	31	3,545	-12.8	-22.3	18	4.9
600	31	4,151	-16.7	-27.3	19	5.4
550	31	4,799	-20.8	-31.6	19	5.9
500	31	5,497	-25.5	-35.9	19	6.6
450	31	6,254	-30.6	-39.4	19	6.7
400	31	7,080	-36.6	-42.2	20	6.7
350	31	7,996	-42.9	-43.5	21	7.8
300	31	9,020	-48.6		22	10.0
250	31	10,208	-52.7		22	8.8
200	31	11,648	-52.1		22	5.8
175	31	12,515	-51.1		22	5.2
150	31	13,520	-50.1		22	4.1
125	31	14,709	-50.9		21	3.1
100	30	16,160	-50.7		22	2.5
80	30	17,615	-50.7		15	1.1
70	30	18,485	-50.5		15	1.4
60	30	19,491	-50.4		12	1.7
50	30	20,681	-50.4		10	2.5
40	29	22,133	-49.8		09	3.8
30	29	24,018	-49.2		08	5.5
25	29	25,216	-48.5		08	6.8
20	29	26,689	-47.2		09	7.9
15	29	28,606	-44.3		09	9.1
10	23	31,344	-39.8		09	8.3
7	7	33,688	-37.6			

+ YAP, CAROLINE IS. — 1008 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	14	28.6	23.5	05	2.6
1000	31	85	27.1	21.4	05	3.1
950	31	537	23.4	18.5	05	4.2
900	31	1,008	20.6	13.5	05	4.2
850	31	1,500	17.9	8.9	06	3.0
800	31	2,018	15.9	4.0	05	2.3
750	31	2,564	13.1	.2	04	2.1
700	31	3,141	10.3	-4.4	03	1.6
650	31	3,754	7.2	-9.3	04	1.6
600	31	4,409	3.5	-13.1	05	1.6
550	31	5,109	-.6	-16.6	06	1.9
500	31	5,865	-4.8	-22.0	07	2.3
450	31	6,687	-9.4	-26.3	06	2.0
400	31	7,587	-15.2	-31.5	07	2.0
350	31	8,587	-21.8	-37.9	04	2.3
300	31	9,700	-30.3	-45.6	02	1.5
250	31	10,971	-40.4	-51.0	03	1.0
200	31	12,451	-52.8		10	2.4
175	31	13,300	-59.9		11	3.6
150	31	14,245	-67.7		09	3.0
125	31	15,323	-74.5		06	4.4
100	31	16,606	-78.2		06	5.0
80	31	17,881	-77.1		04	1.9
70	31	18,654	-74.1		27	1.4
60	31	19,566	-68.4		26	3.0
50	31	20,677	-62.7		10	.3
40	31	22,066	-58.8		09	7.5
30	31	23,891	-54.7		09	17.5
25	31	25,062	-52.6		09	22.5
20	31	26,517	-48.7		09	26.5
15	30	28,429	-43.8		09	28.0
10	27	31,194	-37.6		09	30.7
7	6	33,604	-36.5			

YUCCA FLAT, NEV. — 878 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	31	1,198	8.6	-10.0	25	.6
1000						
950						
900						
850	31	1,474	15.7	-2.4	28	.9
800	31	1,986	12.7	-4.9	21	2.0
750	31	2,523	8.8	-8.0	20	2.2
700	31	3,089	4.2	-11.3	19	2.1
650	31	3,687	-.6	-14.4	19	2.5
600	31	4,321	-5.5	-18.6	19	2.8
550	31	4,997	-10.8	-23.8	21	3.2
500	31	5,721	-16.5	-29.7	23	3.7
450	31	6,505	-22.0	-35.3	25	4.6
400	31	7,360	-28.6	-41.1	25	4.8
350	31	8,305	-36.0	-47.5	26	6.1
300	31	9,354	-44.4		26	8.2
250	31	10,553	-52.5		27	10.0
200	30	11,965	-59.6		27	12.0
175	30	12,797	-60.7		27	12.2
150	30	13,758	-59.8		27	11.1
125	30	14,899	-59.6		26	11.2
100	30	16,294	-59.8		26	8.7
80	30	17,690	-59.1		26	4.4
70	30	18,528	-59.0		26	2.2
60	30	19,495	-59.0		21	.3
50	30	20,641	-58.3		07	1.6
40	29	22,049	-56.7		07	2.2
30	29	23,886	-54.2		06	1.6
25	29	25,061	-52.4		04	.6
20	28	26,516	-49.5		33	1.0
15	25	28,415	-45.6		30	2.4
10	13	31,177	-38.7			
7						

[illegible] floor [illegible]

[illegible] speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than [illegible]

The temperature and wind values are based on 15 or more observations at the surface or 5 ob- [illegible] not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

[illegible] height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
May									
1-----	(0.89)	0.99	1.13	(1.26)	----	----	----	----	----
2-----	.88	.96	1.09	1.25	1.40	1.26	1.10	(0.97)	0.89
3-----	.92	.99	1.11	1.25	1.43	(1.19)	----	----	----
4-----	.82	.89	1.00	1.12	----	---	----	----	----
5-----	.60	.70	----	----	1.39	1.10	.89	.81	.69
6-----	.65	.77	.87	1.03	----	----	----	----	----
8-----	.86	.97	1.08	1.22	1.44	(1.19)	----	----	----
10----	----	----	.92	(1.08)	----	----	----	----	---
11----	.78	.88	1.02	1.16	----	----	----	----	----
12----	.88	.98	1.08	1.23	1.38	1.16	.99	.85	.73
13----	.81	.92	1.02	1.18	1.34	----	----	----	----
14----	.69	----	.91	1.17	----	----	.97	.85	.73
15----	.84	.94	1.06	1.18	1.37	1.20	1.04	.93	.83
16----	.88	.99	1.09	1.20	1.41	1.18	1.04	.93	.83
18----	.70	.80	.95	1.13	1.35	(1.07)	(.86)	(.76)	(.64)
20----	----	----	----	1.11	1.21	.86	.78	.64	.57
21----	----	----	----	1.07	1.24	----	(.85)	----	----
22----	.76	.85	.95	1.08	1.24	1.00	.79	.78	.70
23----	.76	.83	.94	1.05	1.25	1.03	.88	.79	.68
24----	.69	.76	.89	1.02	1.22	.96	.84	.68	.59
25----	(.65)	(.68)	----	(.94)	----	(.99)	----	.75	.65
26----	.62	.70	.83	.98	1.24	1.02	.88	.78	.69
27----	----	.79	.93	(1.01)	----	----	----	----	----
28----	.60	.68	.78	(.92)	----	----	----	----	----
29----	----	----	----	----	----	(.86)	(.69)	(.54)	----
31----	.58	.69	.78	.94	1.21	----	----	----	----
Averages	0.75	0.85	0.97	1.12	1.32	1.08	0.93	0.80	0.72
	OMAHA, NEBR.								
	Air mass								
	3.78	3.82	2.87	1.91	*	1.91	2.87	3.82	3.78
May									
2------	----	----	----	1.17	----	----	----	----	----
3------	HMO.52	HMO.61	HMO.72	----	----	----	----	----	----
4------	----	----	----	HS1.02	----	----	----	----	----
18------	HM .48	HM .57	HM .68	HM .92	----	----	----	----	----
19------	----	----	----	----	HM1.05	----	----	----	----
21------	HM .42	HM .51	HM .68	HM .82	HM1.02	----	----	----	---
22------	HM .34	HM .39	----	----	----	----	----	----	----
31------	HS .64	HS .70	----	HS .98	----	----	----	----	----
Averages	0.48	0.56	0.69	0.98	1.04	----	----	----	----

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
May									
2-----	0.82	0.94	1.06	1.22	1.41	1.22	1.04	0.92	0.80
3-----	.84	.94	1.05	1.19	1.45	1.17	1.02	.89	.77
4-----	----	.90	1.03	1.19	----	1.25	1.07	.95	.84
5-----	.87	.95	1.08	1.24	1.44	----	----	.90	----
6-----	---	----	----	----	1.45	1.24	1.06	.95	.84
7-----	.78	.90	1.03	1.20	1.44	1.23	1.09	.97	.87
8-----	.87	.97	1.10	1.24	1.45	1.20	1.03	.87	.75
9-----	.73	----	.97	--	1.39	1.20	1.06	.90	.77
10----	.76	.87	.99	1.17	1.39	1.15	.94	----	----
11----	.69	.81	.95	1.14	1.39	1.15	1.01	.84	.74
12----	.81	.93	1.03	1.20	1.43	1.16	1.07	.95	.84
13----	.84	.95	1.08	1.23	1.39	1.11	[illegible]	----	.63
14----	.69	.81	.96	1.14	1.33	----	----	----	----
15----	.54	.66	.81	.99	1.25	.95	.71	----	----
16----	.65	.76	.89	1.06	1.32	----		----	----
17----	.79	.89	1.03	1.19	1.38	1.19	1.02	[illegible]	.78
18----	.85	.93	1.05	1.22	----	----	----	----	----
19----	.89	1.01	1.10	1.24	1.41	1.21	1.07	.92	.83
20----	.85	.96	1.11	1.25	1.45	1.25	1.12	1.00	.91
21----	.82	.94	1.07	1.22	1.41	1.16	1.01	.88	.76
22----	.77	.87	1.00	1.17	1.41	1.20	1.03	.89	.79
23----	.68	.80	.94	1.14	1.43	1.16	1.00	.84	.74
24----	.66	.78	.95	1.14	1.43	1.17	1.01	.88	.78
25----	.81	.94	1.07	----	1.44	1.23	1.06	.95	.83
26----	.88	1.00	1.12	----	1.47	1.20	1.03	.92	.83
30----	----	----	----	----	----	1.03	----	----	----
31----	----	----	----	----	1.33	----	---	----	----
Averages	0.78	0.89	1.02	1.18	1.40	1.17	1.02	0.91	0.79
	MADISON, WIS.								
	Air mass								
	DATA NOT RECEIVED IN TIME FOR PUBLICATION								

( ) Clouds Present
* Values corresponding to true solar noon.

BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, [illegible] of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	601	748	744	575	685	517	569	760	629	608	701	779	680	649	770	759	543	751	575	765	781	788	784	779	764	775	564	694	694	298	716	679
AMES IOWA		300	643	729	189	80	68	585	621	596	465	467	482	419	715	714	688	688	707	681	659	678	399	504	731	399	509	247	480	584	790	521
ANNETTE ALASKA	139	543	501	645	661	632	672	636	218	97	99	99	658	674	632	221	650	435	446	667	621	477	---	654	246	259	424	544	202	200	503	448
APALACHICOLA FLORIDA	639	622	535	---	634	640	278	278	519	625	211	129	136	601	531	---	360	657	566	647	563	628	622	547	580	644	295	218	632	643	369	495
ARGONNE NAT. LAB.	316	198	250	590	469	461	101	59	663	634	582	625	393	277	237	608	613	546	633	611	604	657	596	654	592	603	618	524	220	168	509	471
ASTORIA OREGON	563	609	---	618	161	123	248	319	358	649	628	638	616	457	---	149	199	---	688	---	178	445	250	305	---	676	---	---	627	669	307	437
ATLANTA GEORGIA	492	475	262	584	638	604	334	316	551	550	550	419	44	349	543	560	281	539	387	391	398	508	419	462	463	609	420	142	373	383	527	438
BARROW ALASKA	435	461	515	562	535	312	350	359	356	466	569	367	369	459	523	616	465	429	537	570	520	410	489	645	697	649	672	348	431	400	457	483
BETHEL ALASKA	378	391	632	648	524	544	525	655	662	694	675	672	657	444	689	637	429	328	475	465	628	---	402	481	653	671	264	222	427	228	430	518
BISMARCK N.DAK.	273	350	598	760	640	782	270	206	599	103	71	469	572	690	744	674	757	681	614	581	665	534	575	361	586	700	421	216	633	813	793	540
BLUE HILL MASS.	423	84	166	178	234	597	368	88	42	391	381	456	641	376	98	324	400	513	178	133	480	567	694	639	718	693	684	673	675	472	320	409
BOISE IDAHO	725	634	715	719	715	666	552	720	750	747	756	726	755	645	375	637	581	718	454	436	383	631	684	767	781	779	767	773	780	732	676	670
BROOKINGS SOUTH DAK.	96	240	319	665	242	311	358	367	573	354	126	104	139	472	602	630	594	634	466	575	560	189	154	254	625	555	386	417	141	538	659	398
BROWNSVILLE TEXAS	354	335	352	665	280	259	308	183	365	454	509	389	663	319	464	444	562	677	593	710	667	483	525	486	536	595	657	631	501	417	541	481
BURLINGTON VERMONT	493	64	126	129	168	478	557	685	401	618	162	539	677	196	32	---	---	---	---	---	---	---	---	---	---	630	714	701	709	378	197	---
CAPE HAT ERAS N.C.	587	486	188	606	636	641	661	362	645	358	648	672	617	90	266	649	675	300	227	550	160	513	331	358	143	114	459	639	559	683	233	453
CARIBOU MAINE	565	492	21	---	166	545	186	599	595	561	460	564	574	367	42	164	173	---	446	518	---	---	393	582	647	614	482	454	---	566	115	419
CHARLESTON S.C.	569	596	242	685	672	563	549	219	594	347	477	579	415	467	379	644	547	431	459	250	284	326	378	---	602	233	95	220	533	593	329	443
CLEVELAND OHIO	382	484	399	158	630	516	301	---	226	693	696	704	322	484	333	164	356	625	646	347	639	640	616	691	598	671	680	604	583	157	66	480
COLUMBIA MISSOURI	620	544	432	591	481	445	358	91	737	652	689	435	651	266	650	721	723	713	699	656	701	699	572	663	739	738*	670*	425	---	488*	795	588
DAVIS CALIFORNIA	709	698	665	646	490	456	469	725	716	712	723	720	717	664	716	610	728	733	265	240	463	725	740	736	729	727	723	727	739	731	708	650
DODGE CITY KANSAS	832	668	795	513	539	151	554	510	165	279	---	657	---	---	---	---	827	742	566	768	811	736	---	---	787	---	347	638	655	716	782	610
EL CENTRO CALIF. NPF	618	647	539	658	669	666	673	668	675	665	668	677	675	686	663	580	696	699	662	702	697	674	684	692	705	658	645	582	603	591	642	657
EL PASO TEXAS	439	722	644	326	628	634	707	722	716*	731	727	741	740	440	708	701	591	590	307	339	707	757	741	737	687	702	635	341	524	273	460	604
ELY NEVADA	698	721	---	479	415	261	608	462	272	556	752	670	745	755	719	530	552	552	482	295	612	523	651	630	718	611	653	741	560	534	391	572
EPPLEY NEWPORT R.I.	519	244	132	173	192	639	525	398	59	362	633	633	657	351	115	402	440	551	249	84	454	616	724	680	694	716	715	699	715	416	364	457
FAIRBANKS ALASKA	532	583	422	441	450	511	404	569	580	591	600	547	463	513	378	436	455	279	371	339	384	515	630	540	489	635	---	568	654	355	581	494
FLAMING GORGE UTAH	731	755	644	560	329	410	380	504	465	---	447	528	606	798	715	732	465	656	533	597	784	590	612	671	---	---	---	---	---	---	654	590
FORT WORTH TEXAS	451	626	637	627	485	346	94	549	648	361	372	525	620	646	660	586	650	630	552	635	594	547	561	545	638	630	565	510	462	646	668	551
FRESNO CALIFORNIA	676	683	588	601	680	654	701	707	691	687	676	690	691	691	686	694	691	724	346	443	694	712	717	721	717	705	693	688	703	690	695	669
GENEVA NEW YORK	246	363	144	128	538	316	148	75	63	721	552	725	643	138	246	309	288	677	667	158	588	760	747	676	743	754	750	758	718	216	225	454
GLASGOW MONTANA	113	675	647	496	301	582	355	711	219	123	299	367	678	561	688	663	638	478	457	156	264	607	690	622	236	121	291	320	733	733	724	469
GLOUCESTER POINT VA	638	617	127	557	713	685	692	300	155	483	714	716	637	112	299	679	541	637	236	310	201	317	121	207	120	566	553	746	560	462	298	452
GRAND JUNCTION COLO.	591	688	686	551	164	288	348	626	559	222	415	634	564	711	716	688	396	522	565	731	637	746	733	676	606	713	689	666	714	713	711	589
GREAT FALLS MONTANA	701	487	644	505	374	150	202	---	---	572	588	541	688	425	596	665	430	509	128	170	613	548	537	521	469	96	578	740	756	752	659	505
GREENSBORO N.C.	549	563	90	605	704	641	593	111	587	726	607	695	386	370	348	595	514	668	272	297	309	351	384	513	541	729	407	646	476	446	436	489
INDIANAPOLIS INDIANA	304	612	430	528	605	591	230	91	450	684	675	663	209	472	383	547	591	603	640	634	597	668	630	670	632	613	574	662	333	357	324	516
ITHACA NEW YORK	194	240	121	127	486	445	184	64	80	658	501	699	646	135	316	369	518	625	401	121	472	692	703	566	616	718	703	712	688	341	250	432
LAKE CHARLES LA.	431	271	665	670	564	295	76	547	668	312	101	56	544	453	539	581	623	629	605	625	603	635	644	616	598	541	417	569	433	606	402	494
LAKELAND FLORIDA	549	437	549	480	614	437	345	519	409	403	498	404	420	547	480	385	435	634	574	401	512	613	536	608	612	495	362	429	541	513	---	491
LANDER WYOMING	701	664	627	550	121	287	89	322	585	142	536	638	660	703	570	652	579	497	289	344	722	451	674	503	644	615	708	571	707	732	728	536
LARAMIE WYOMING	708	702	569	566	387	248	288	606	399	451	235	554	309	732	730	517	494	537	535	689	462	623	671	586	701	490	523	565	600	753	759	548
LAS VEGAS NEVADA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LITTLE ROCK ARKANSAS	149	281	628	579	617	548	294	525	303	614	567	77	635	618	701	646	666	617	640	620	634	604	583	610	687	545	551	513	467	620	625	541
LOS ANGELES CALIF.	643	666	606	476	505	490	607	654	689	615	673	675	650	677	---	---	537	379	528	---	---	---	642	342	430	584	450	681	642	635	---	579
MADISON WISCONSIN	355	182	425	547	461	132	185	277	642	691	614	635	322	254	488	674	675	573	655	646	622	678	634	645	515	641	651	467	419	238	746	506
MANHATTAN KANSAS	713	331	570	275	609	78	125	300	472	151	480	257	511	252	698	708	712	655	660	539	694	543	516	724	606	536	463	256	543	729	750	499
MATANUSKA ALASKA	---	---	448	174	217	---	---	---	642	411	---	560	369	191	495	509	343	---	210	---	391	638	431	---	302	330	669	297	524	438	272	403
MEDFORD OREGON	654	670	667	664	678	637	193	503	688	692	682	682	673	628	643	147	316	506	434	63	147	498	518	716	659	704	686	681	711	708	718	567
MIAMI FLORIDA	538	451	552	452	493	153	499	579	584	526	523	528	467	418	549	583	487	286	209	477	579	392	601	564	563	544	474	411	473	640	263	479
MIDLAND TEXAS	579	615	692	681	461	282	259	715	510	256	119	677	466	307	599	700	---	---	434	579	659	743	750	693	633	654	670	414	387	375	621	536
NASHVILLE TENNESSEE	357	160	517	463	648	662	182	221	100	680	536	578	350	535	565	559	644	662	589	575	648	636	644	559	667	620	604	625	535	405	596	520
NEW YORK CENTRAL PRK	340	312	150	273	260	660	536	503	41	504	679	719	654	183	403	391	416	552	236	53	489	494	733	661	491	723	706	704	695	362	151	454
NORTH OMAHA NEBRASKA	379	350	605	697	391	73	130	628	441	201	360	224	444	232	711	702	706	722	703	692	705	630	293	402	724	400	366	354	431	673	769	488
OAK RIDGE TENNESSEE	561	226	167	436	649	627	450	100	412	662	598	619	104	347	582	527	426	660	457	268	445	426	604	660	679	591	514	599	394	284	622	474

SOLAR RADIATION TOTALS - Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg
OKLAHOMA CITY OKLA.	629	647	625	389	582	379	185	586	520	428	404	501	447	651	660	648	632	597	538	606	587	524	428	661	608	517	497	421	350	568	680	532
PALMER AAFS ALASKA	396	513	378	204	248	224	416	545	537	384	315	460	277	238	469	471	328	243	228	282	324	603	410	305	353	350	647	305	556	409	272	377
PAGE ARIZONA	670	674	650	511	479	582	661	649	466	577	678	686	678	700	696	647	604	648	598	667	702	---	---	695	664	693	683	672	670	667	627	641
PHOENIX ARIZONA	519	672	---	637	656	678	680	674	658	669	685	686	672	691	679	604	686	690	697	686	703	702	690	678	675	720	551	384	643	469	655	650
PORTLAND MAINE	388	53	81	13	322	594	538	335	130	413	455	576	646	470	71	154	456	514	116	176	502	692	668	664	714	692	678	643	659	630	365	433
RAPID CITY S.DAK.	159	422	490	619	498	399	483	149	94	11	356	554	479	613	532	607	527	578	508	612	561	647	610	562	447	501	433	407	554	663	693	476
RENO NEVADA	601	606	581	591	599	604	455	539	556	617	618	615	620	592	516	595	635	591	276	445	407	571	616	606	594	583	604	599	597	585	562	567
RICHLAND 25 NW WASH.	623	664	678	684	671	638	525	166	523	710	676	694	646	662	383	365	241	602	649	470	158	561	689	634	727	752	718	743	733	724	740	595
RIVERSIDE CALIFORNIA	697	696	669	525	441	229	578	696	700	660	739	738	777	778	756	643	691	340	423	566	782	771	754	580	507	646	624	714	733	616	662	637
RUSTON LOUISIANA	405	208	608	698	589	484	---	---	658	631	446	212	658	663	698	647	547	656	661	645	657	641	---	635	663	---	---	---	395	692	---	575
SAINT CLOUD MINN.	131	129	569	461	146	265	305	585	687	637	262	451	67	388	669	662	695	568	674	496	174	520	449	417	523	563	465	187	120	682	748	442
SALT LAKE CITY	728	688	707	599	566	409	409	466	273	672	739	733	732	742	715	686	526	593	510	252	730	648	648	635	737	635	750	744	742	749	740	629
SAN ANTONIO TEXAS	429	624	708	673	97	282	402	604	631	43	155	186	655	533	576	379	560	698	631	633	706	604	---	---	---	---	---	---	---	---	---	491
SANTA MARIA CALIF.	691	678	467	395	376	476	676	693	697	698	694	693	694	700	674	425	567	436	422	538	616	699	624	588	635	650	625	699	670	678	648	607
SAULT STE MARIE MICH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	686	650	730	735	731	676	702	727	736	663	239	115	615	---
SEATTLE TACOMA WASH.	527	599	586	679	592	156	284	342	595	625	607	683	631	655	208	404	254	417	738	588	131	582	472	568	712	741	669	702	611	753	336	531
SPOKANE WASHINGTON	601	549	534	606	588	605	266	86	164	395	563	629	601	582	427	---	279	444	704	323	126	428	634	278	619	708	716	715	724	705	677	509
STERLING VIRGINIA	608	190	210	357	659	697	556	282	117	743	754	752	600	203	370	602	605	411	307	172	245	372	769	742	516	776	765	748	638	433	406	503
SWAN ISLAND W.I.	607	521*	558	626	526	589	681	666	517	598	590	447	559	647	65	547	638	617	611	664	644	618	585	602	566	524	666	662	683	657	644	585
TAMPA FLORIDA	572	496	642	524	662	523	389	627	377	607	459	304	505	630	579	508	424	590	515	671	532	638	539	625	617	296	358	619	487	638	518	531
UPPER MARLBORO MD.	559	---	---	---	643	673	602	298	122	557	728	712	659	---	---	---	545	535	223	129	159	485	742	725	475	768	754	741	624	433	321	529
TUCSON ARIZONA	566	712	696	451	664	707	711	718	711	706	714	727	722	689	698	615	727	657	741	740	732	735	738	745	749	738	594	502	438	417	636	667
WAKE ISLAND PACIFIC	676	679	696	589	644	669	687	616	522	708	685	685	685	703	708	696	710	667	681	702	702	694	671	663	674	669	636	685	678	680	680	672

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

U indicates Urban site.

The solar radiation data in this table form the basis for the analyses in Charts VII. A and B. of this publication. The [illegible] records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	[illegible]	281	189	98	[illegible]	[illegible]	227	271	206	215	210	206	128	110	199	198	151	[illegible]	70	125	137	262	[illegible]	152	137	141	[illegible]	179	[illegible]	21[illegible]	127	182

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The [illegible] with [illegible] not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average ([illegible] 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	16.23	9.50	19.01	21.53	[illegible]	[illegible]	3.29	15.96	18.16	17.79	11.74	15.53	13.28	12.79	19.99	19.26	18.65	[illegible]	19.01	18.16	18.16	18.89	11.82	[illegible]	20.72	11.82	[illegible]	9.11	14.31	16.94	22.06	15.07

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λsΩΩΩ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

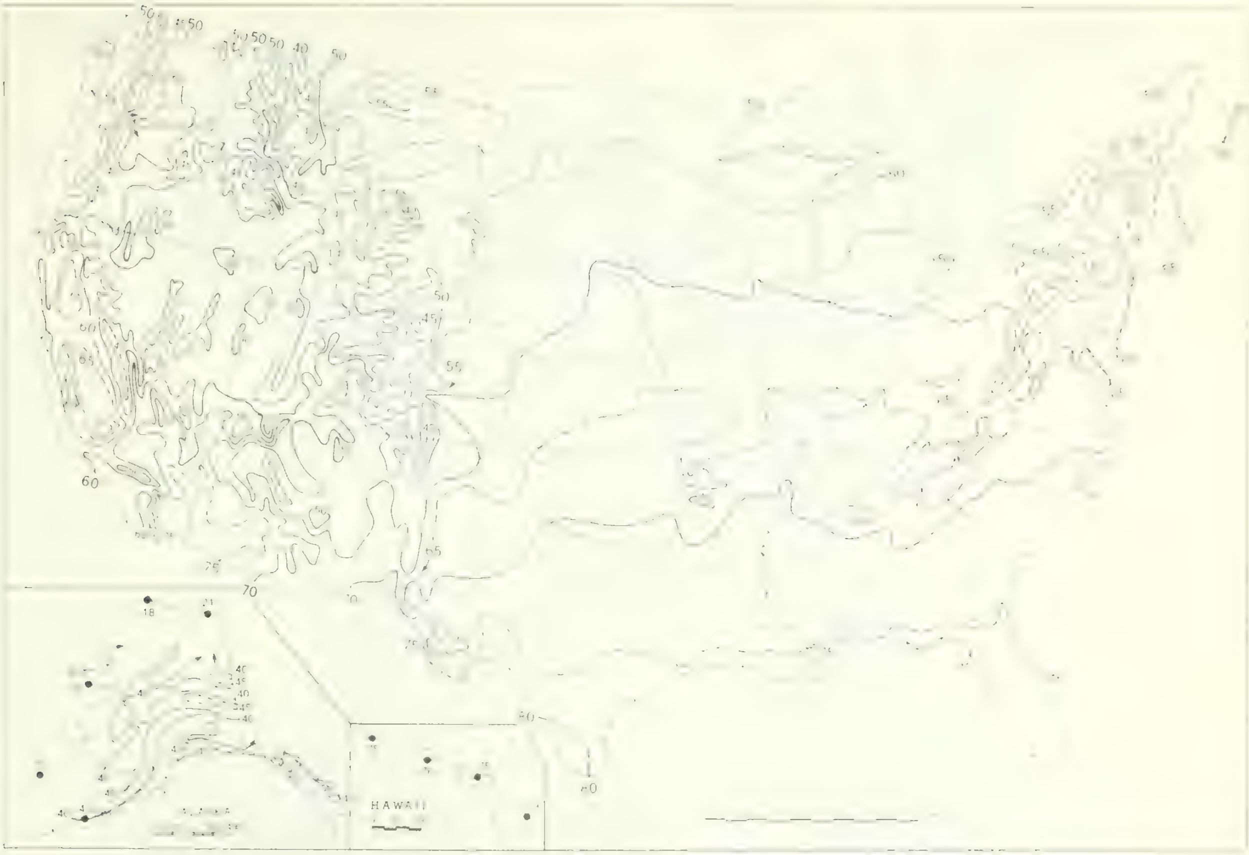
Units Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded ΩΩΩ) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λs designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), May.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), May 1972

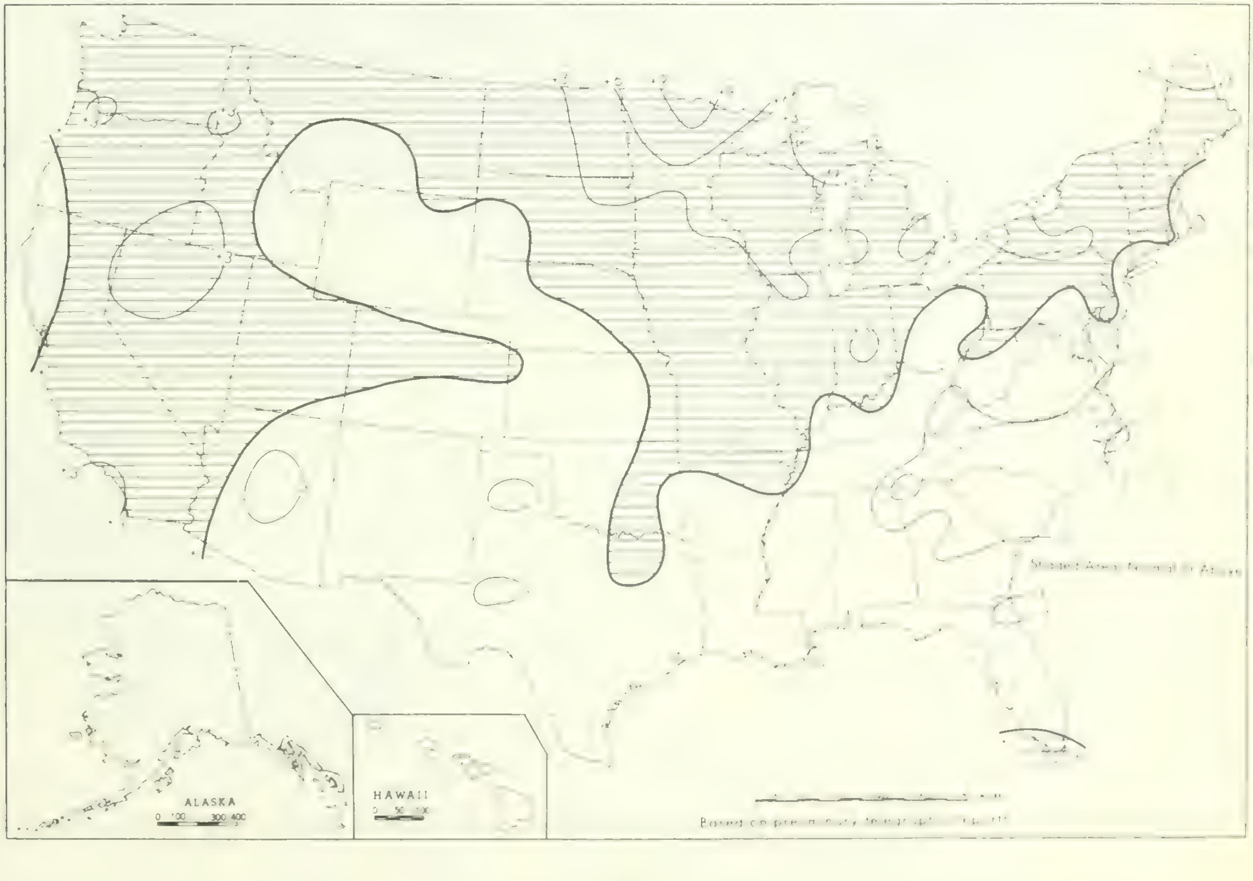
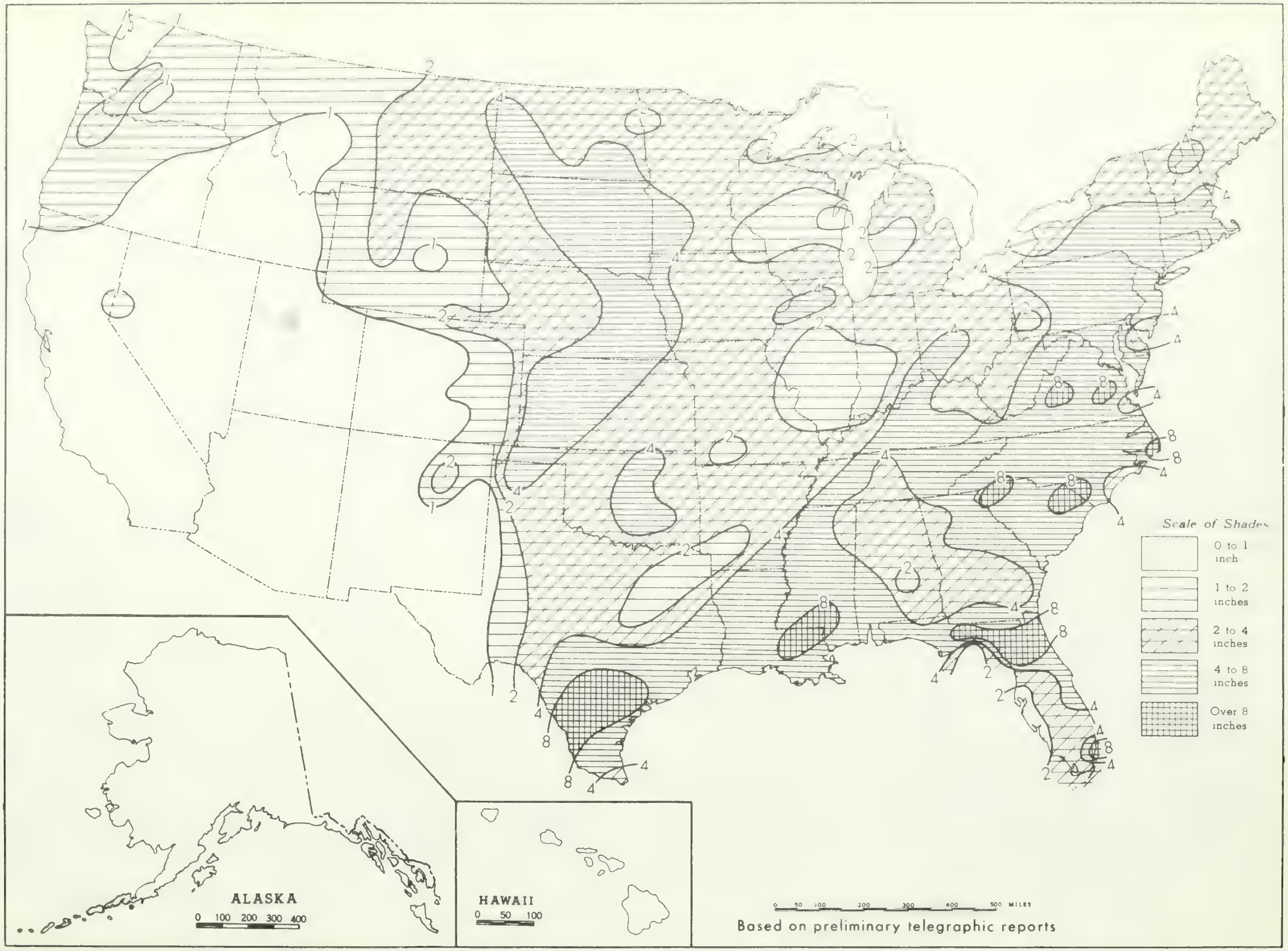
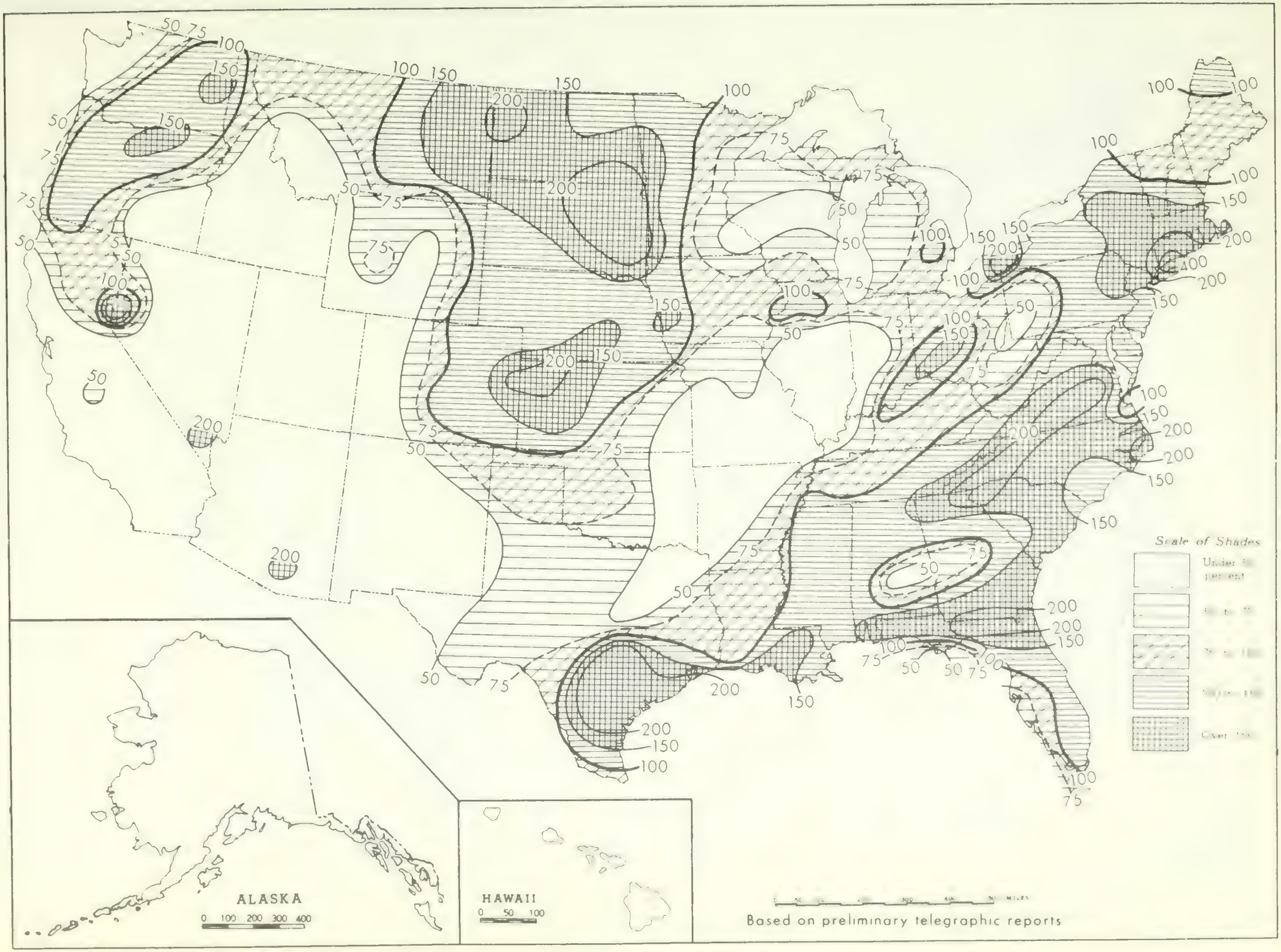


Chart II Total Precipitation (Inches), May 1972



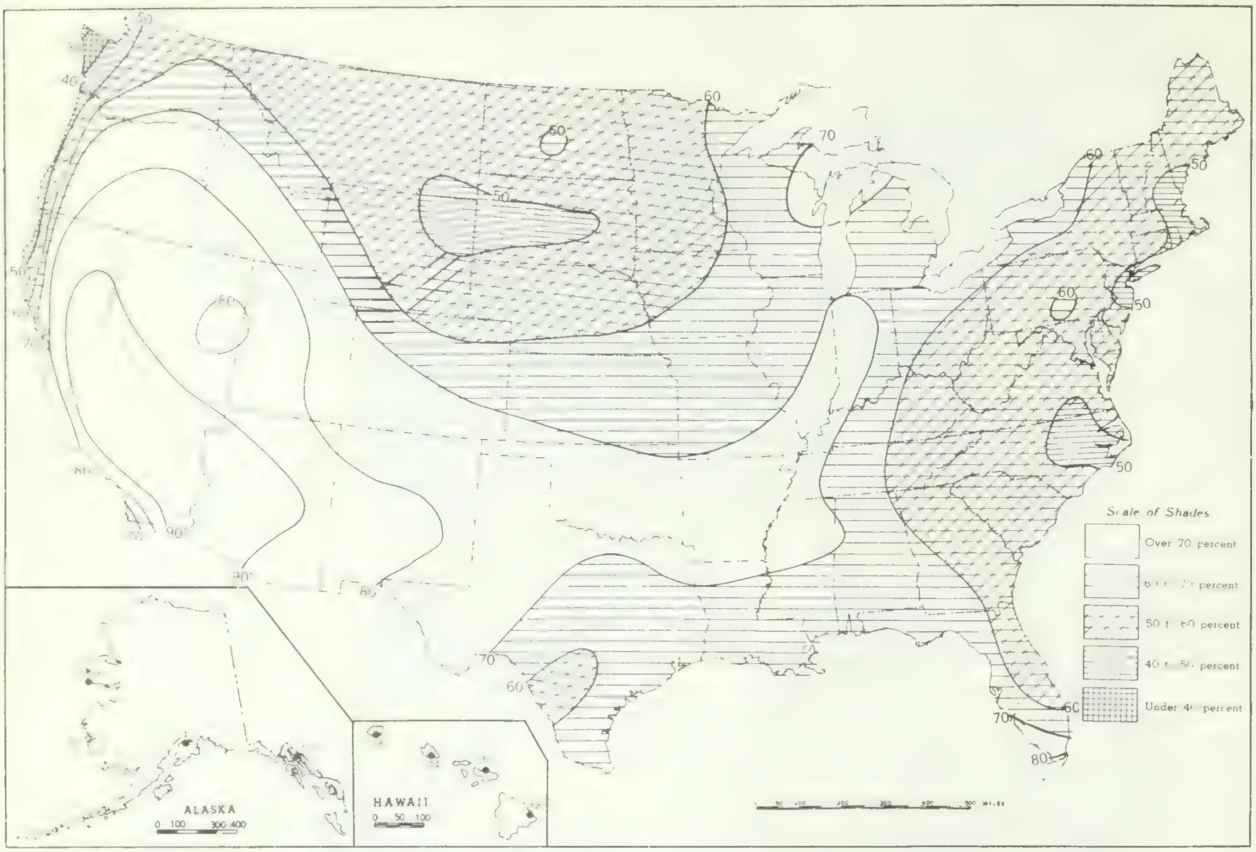
Based on preliminary telegraphic reports

Chart III. Percentage of Normal Precipitation, May 1972

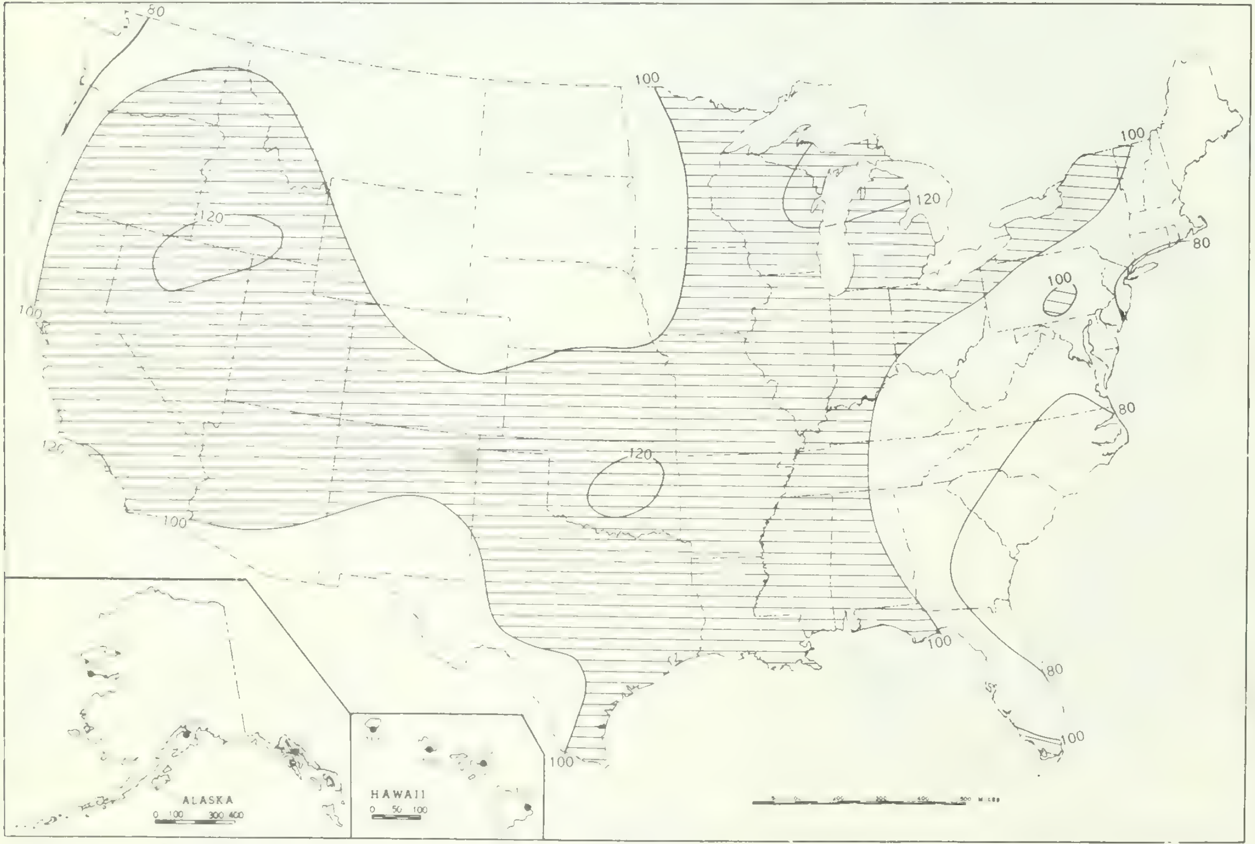


Based on preliminary telegraphic reports

Chart VI. A. Percentage of Possible Sunshine, May 1972

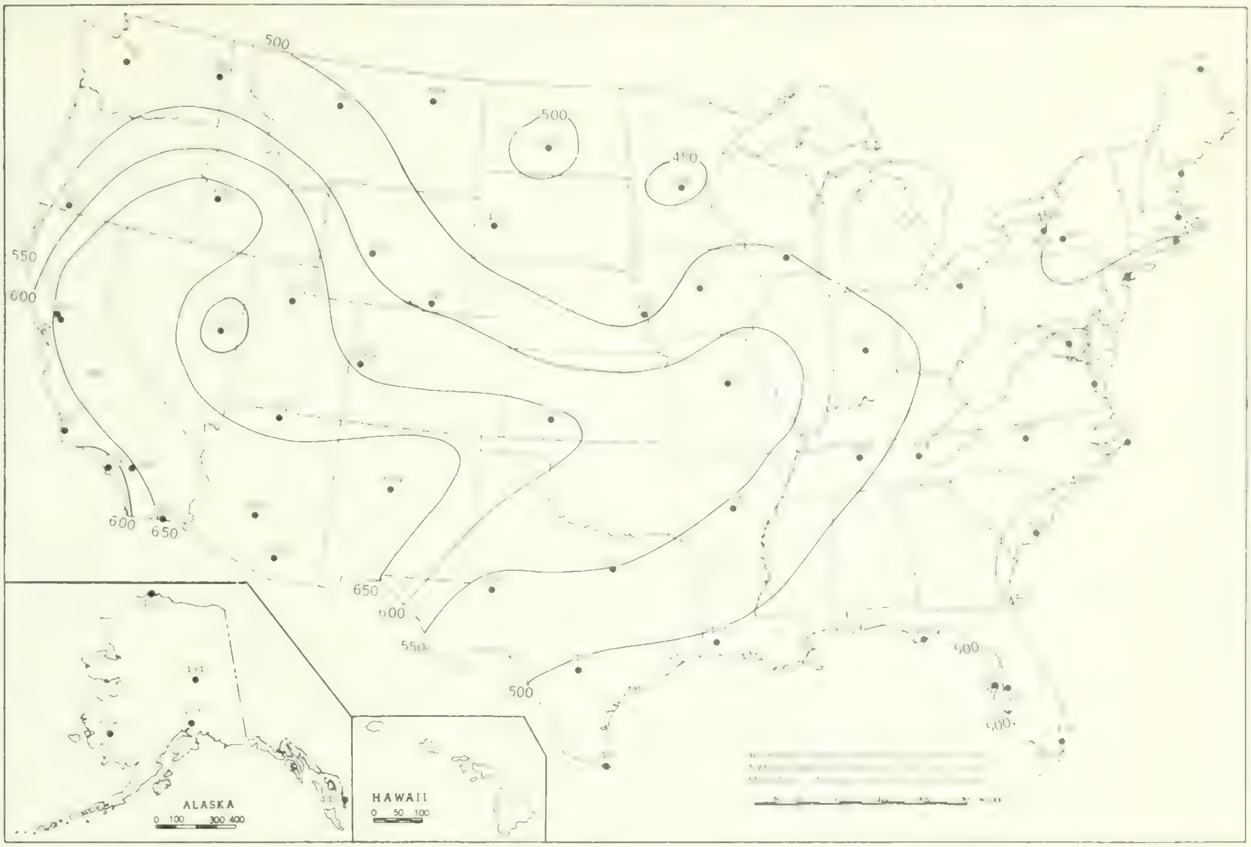


B. Percentage of Mean Monthly Sunshine, May 1972

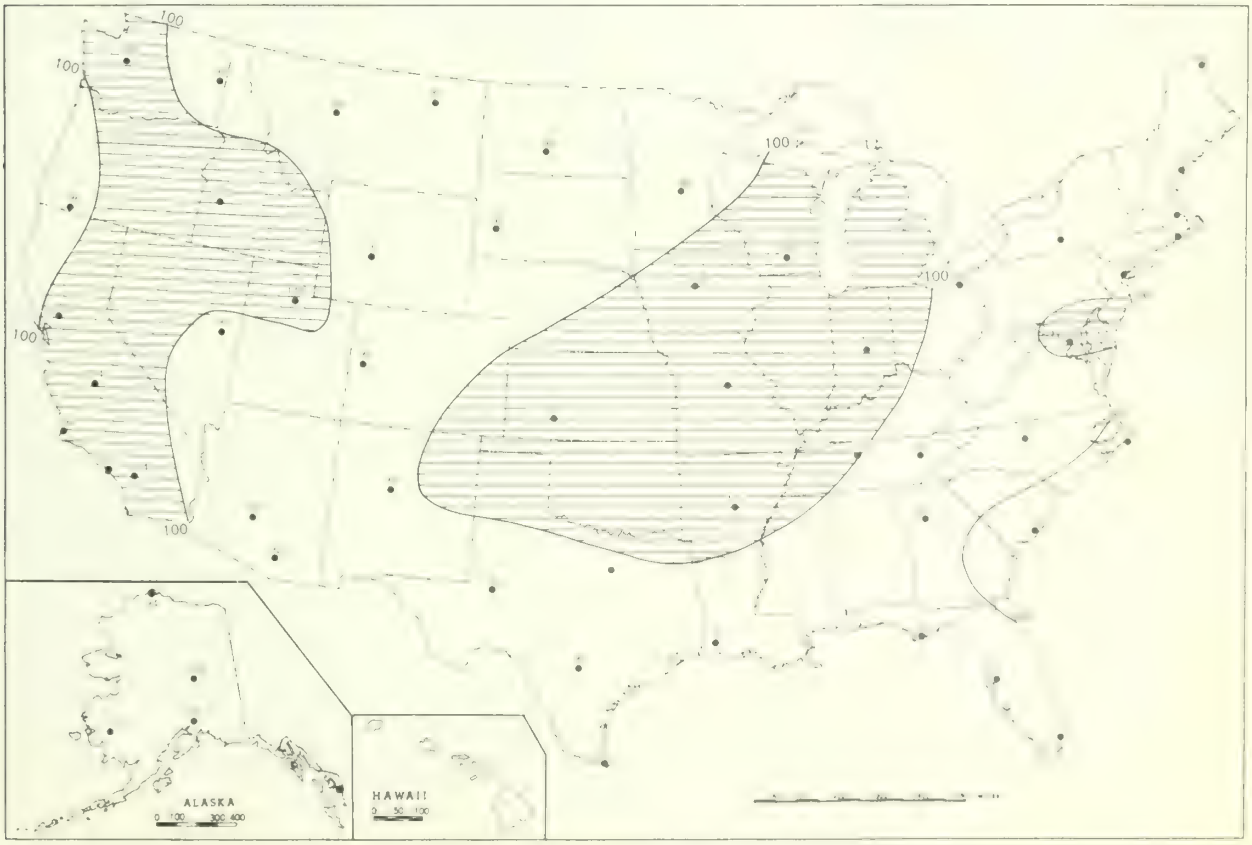


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, May 1972

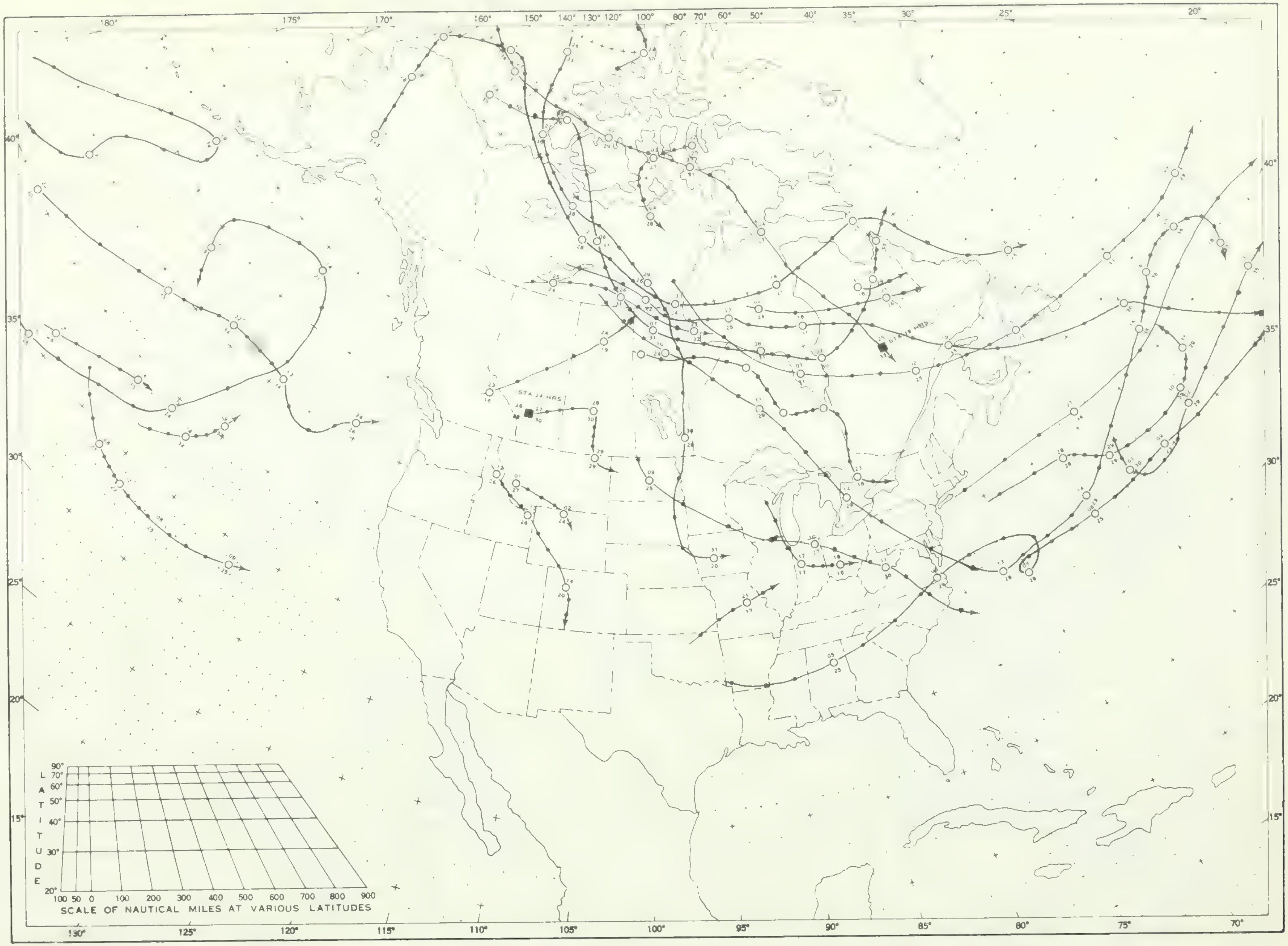


B. Percentage of Mean Daily Solar Radiation, May 1972



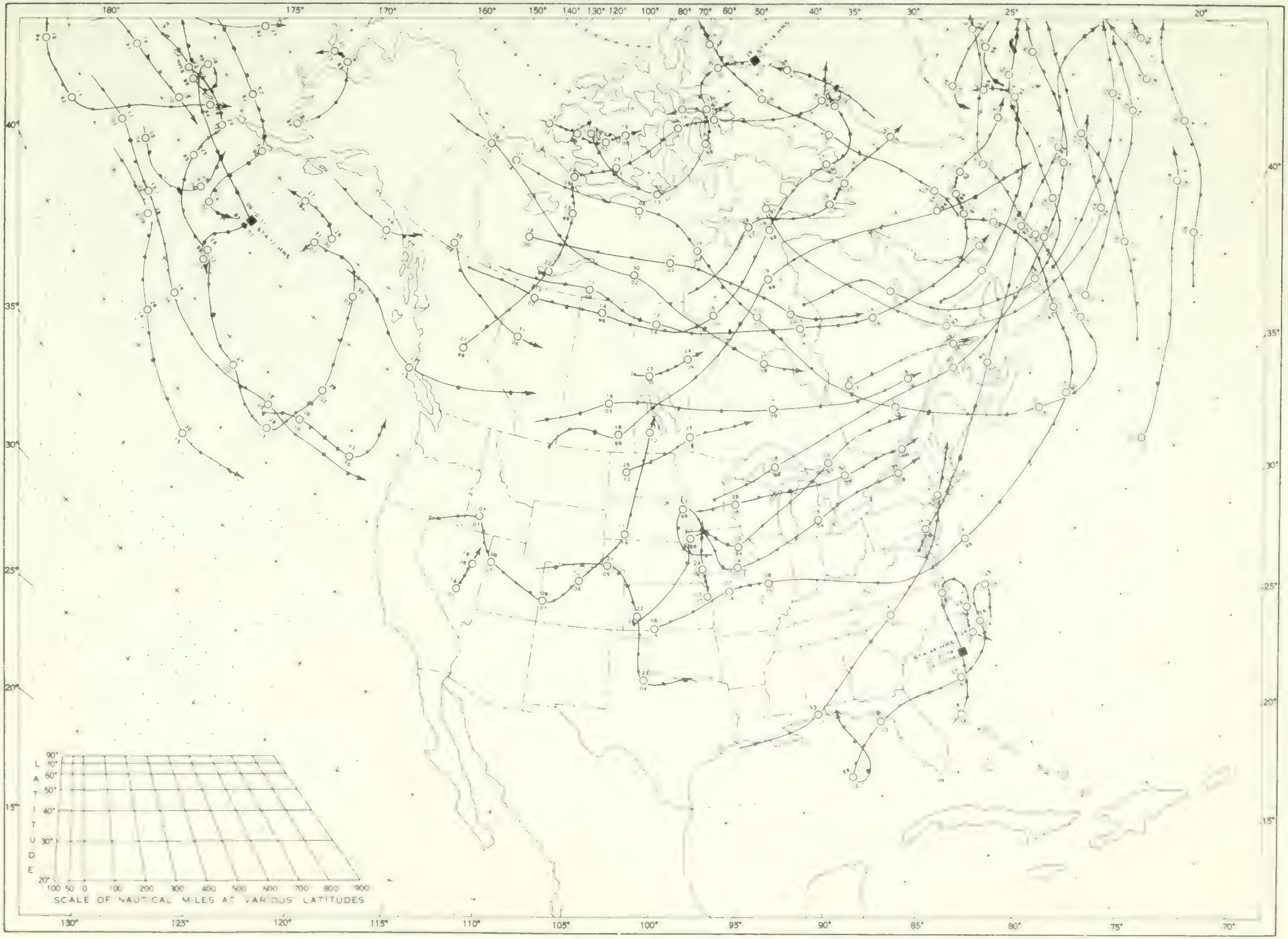
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, May 1972



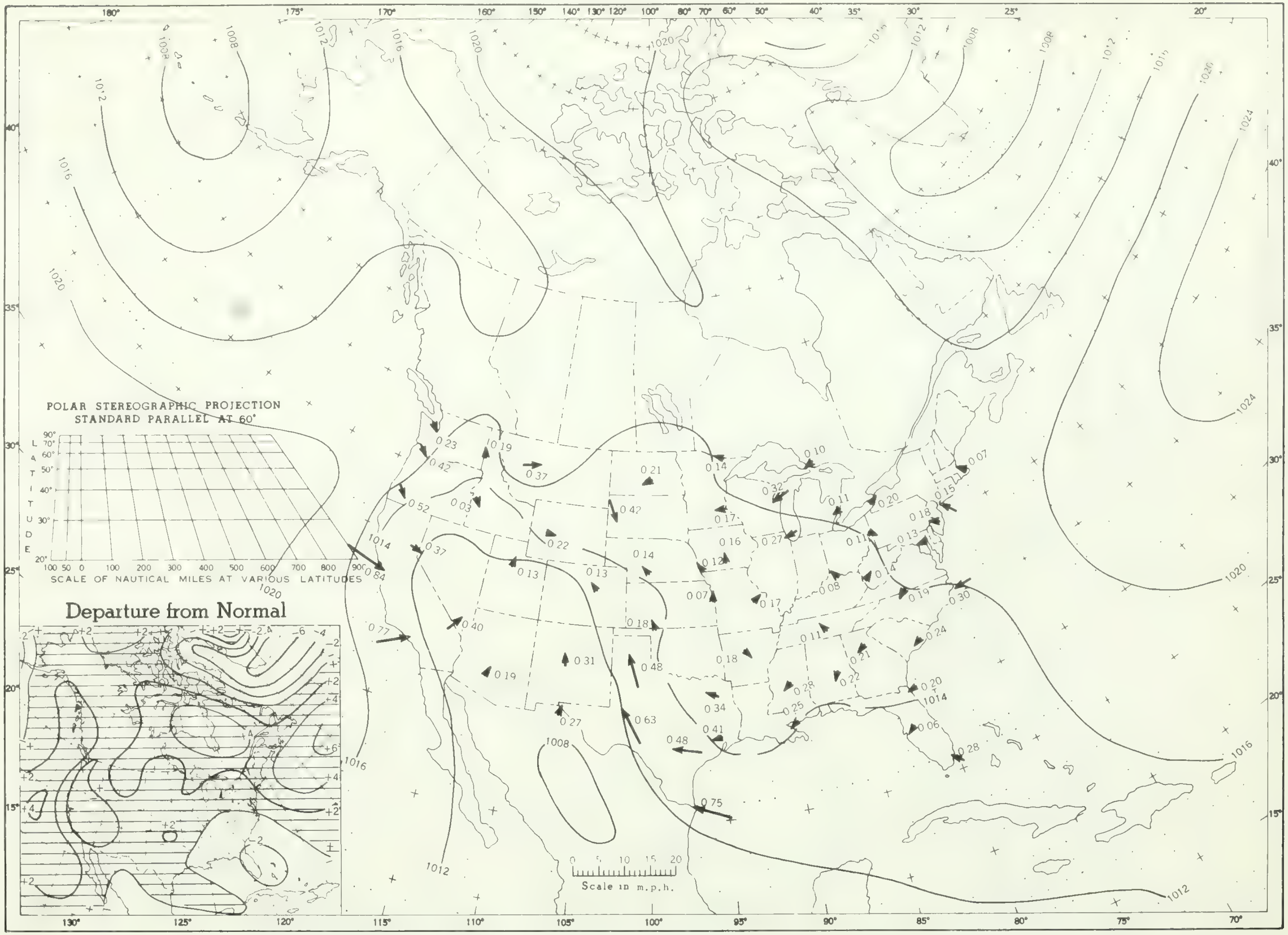
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, May 1972



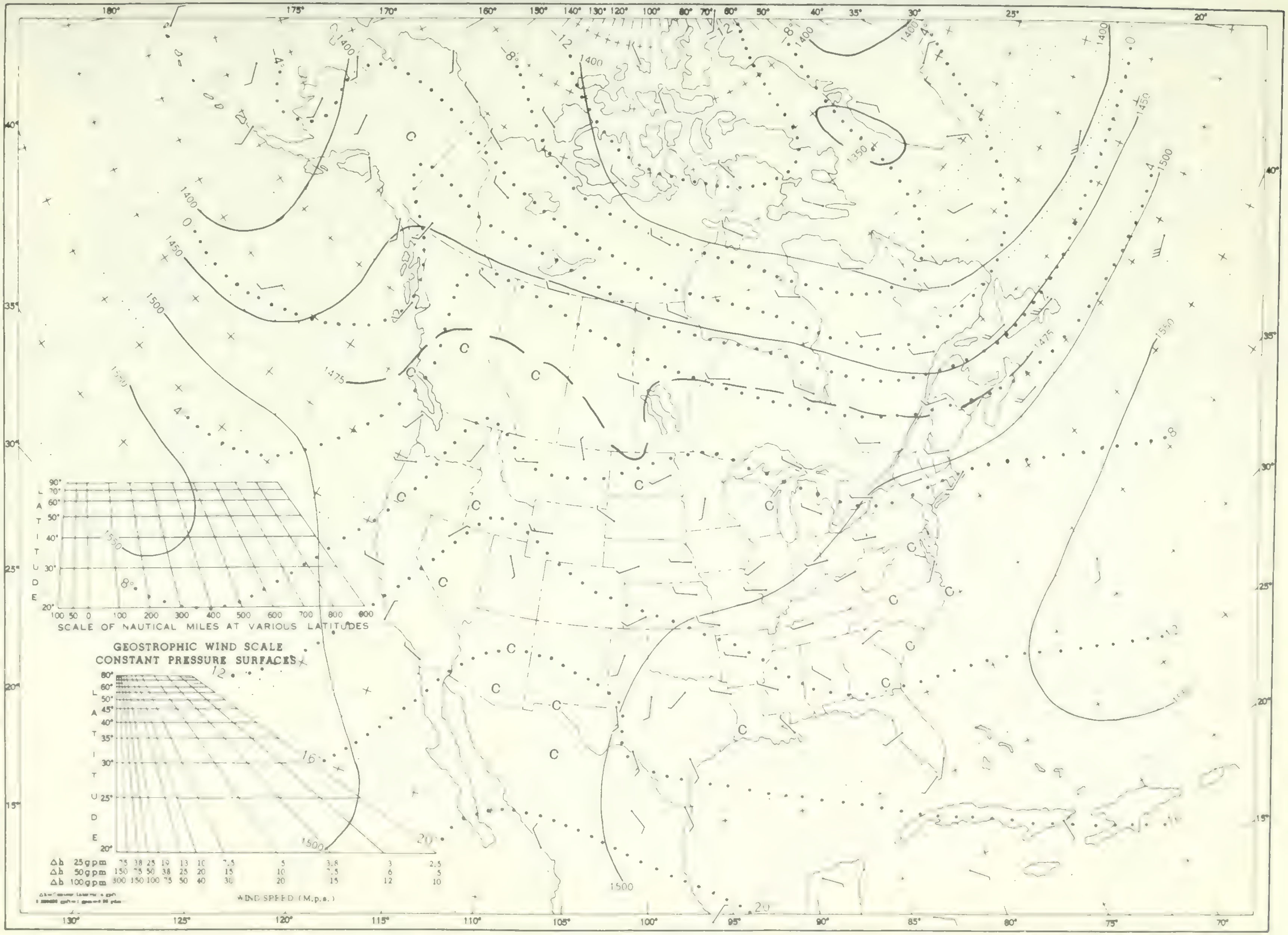
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X   Average Sea Level Pressure (mb) and Resultant Surface Wind, May 1972. Inset Departure of Average Pressure (mb) from Normal, May 1972.



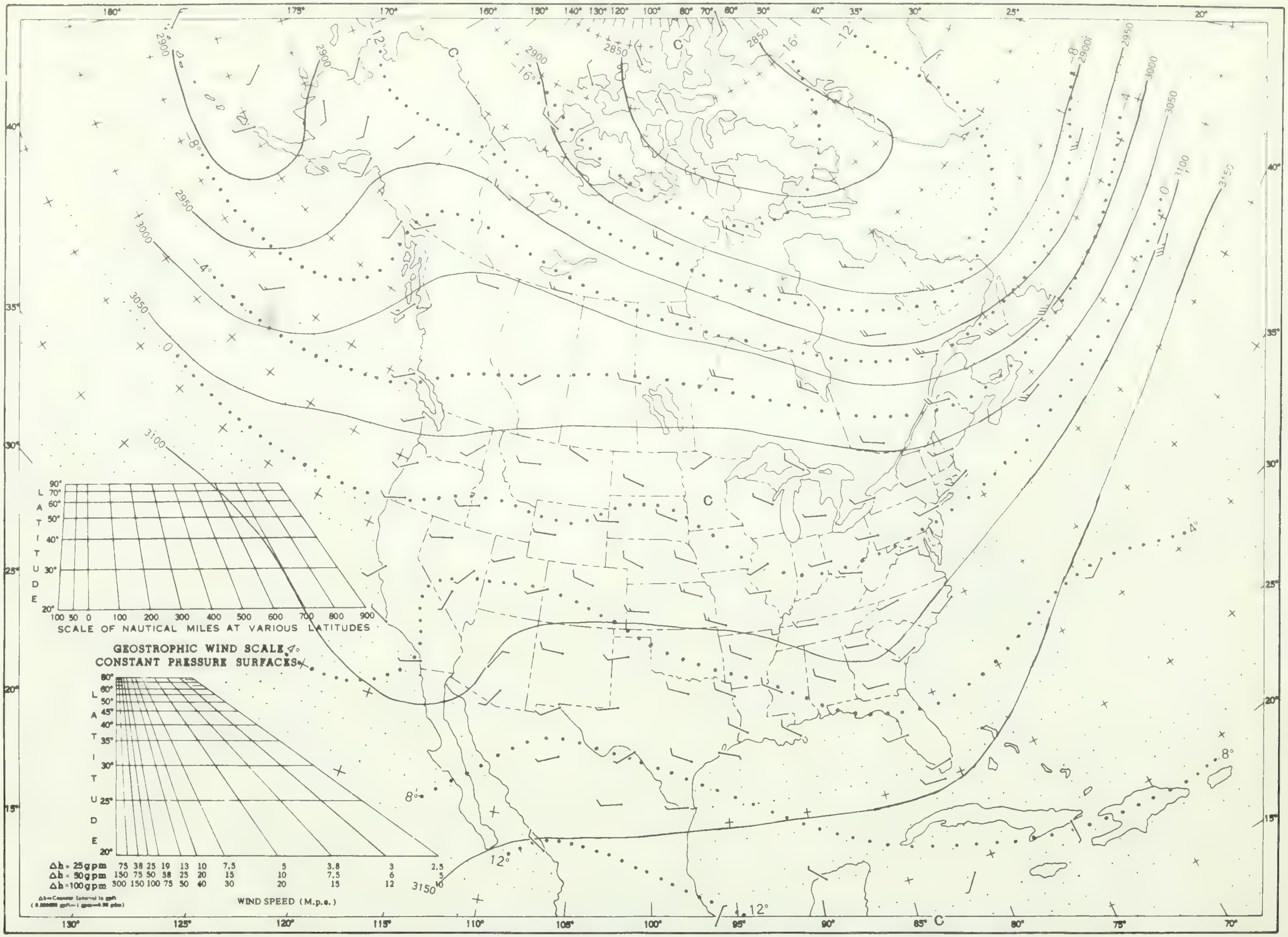
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10 intersections in a diamond grid over the oceans.

Chart XI 850-mb Surface, 1200 G.m.t., May 1972 Average Height and Temperature, and Resultant Winds



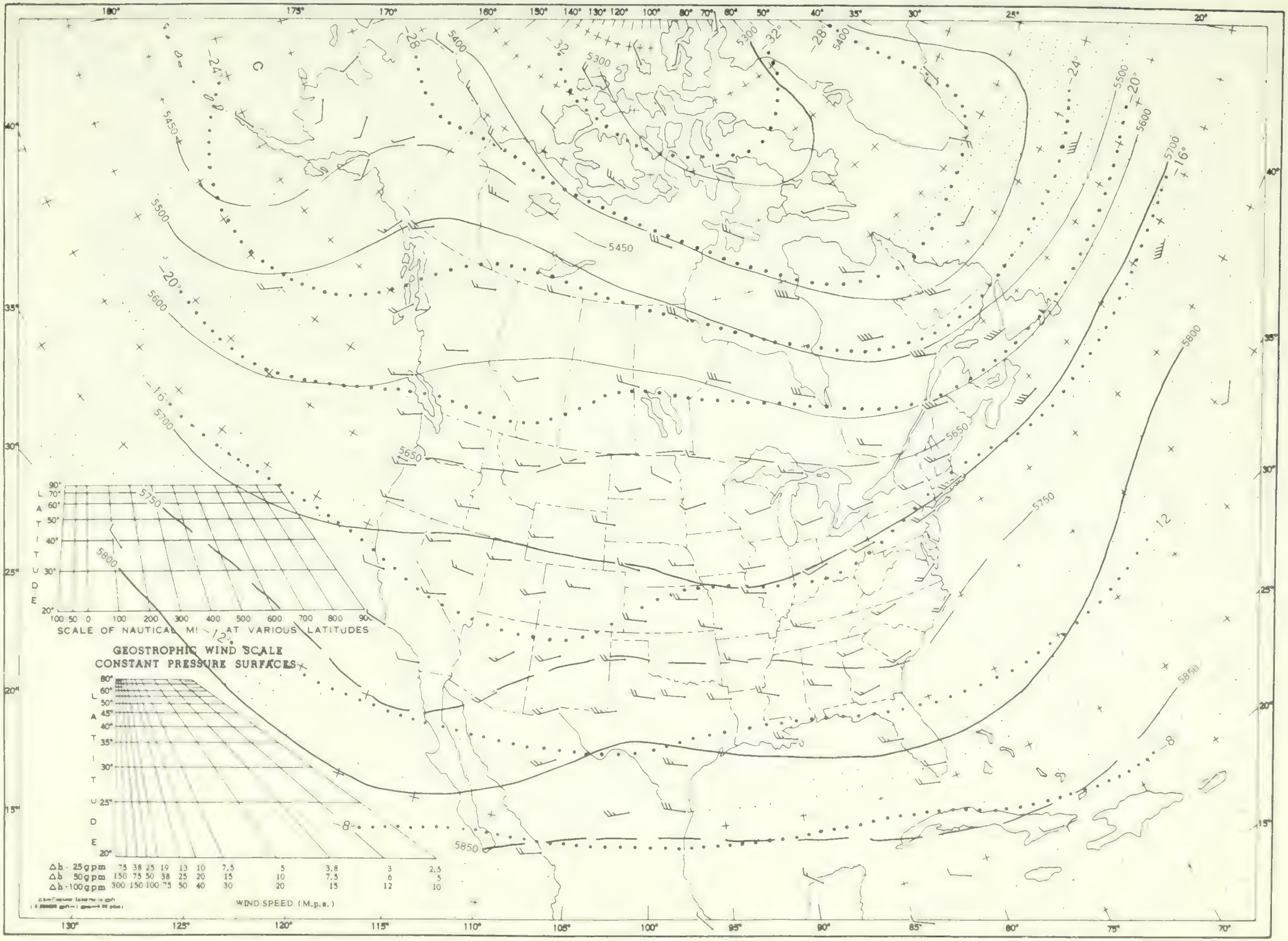
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700-mb Surface, 1200 G.m.t., May 1972 Average Height and Temperature, and Resultant Winds


2850
2900
2950
3000
3050
3100
3150
-16°
-12°
-8°
-4°
0
4°
8°
12°
C
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
LATITUDE
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
Δh = 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh = 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh = 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

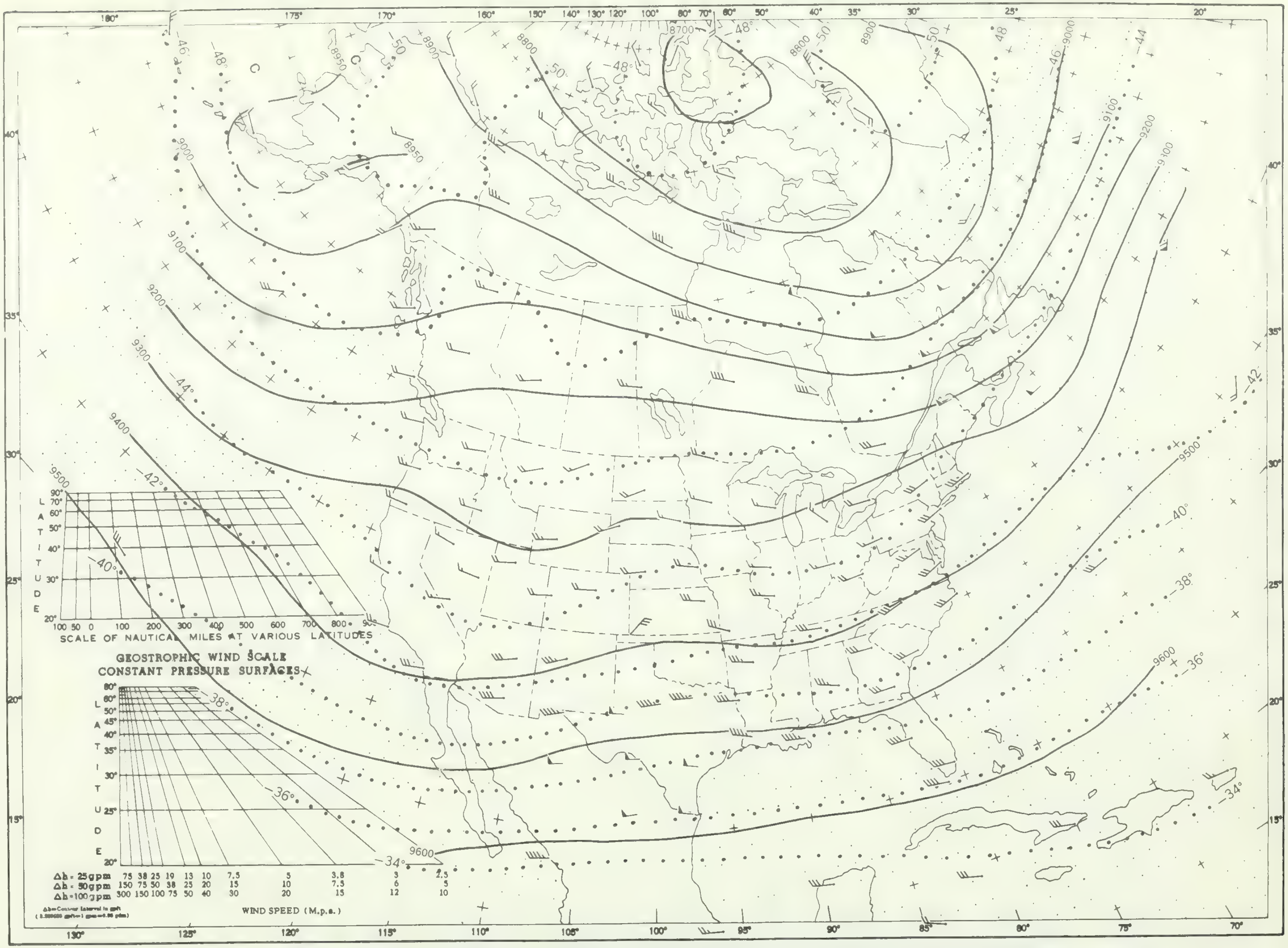
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb Surface, 1200 G.m.t., May 1972 Average Height and Temperature, and Resultant Winds


5300
5400
5450
5500
5600
5650
5700
5750
5800
5850
-32°
-28°
-24°
-20°
-16°
-12°
-8°
C
SCALE OF NAUTICAL MI AT VARIOUS LATITUDES
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
LATITUDE
Δh · 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh · 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh · 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

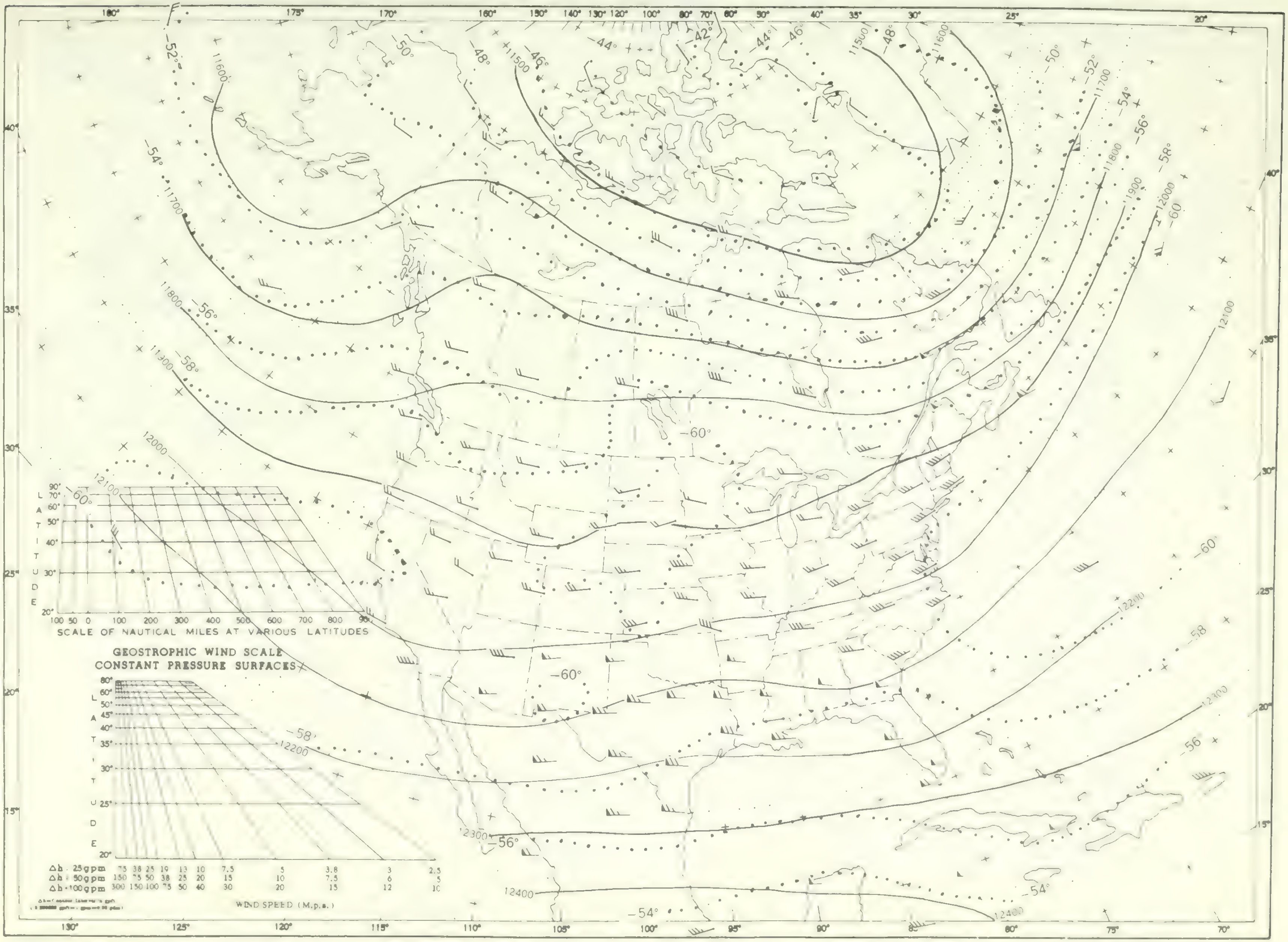
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300-mb Surface, 1200 G.m.t., May 1972 Average Height and Temperature, and Resultant Winds


8700
8800
8900
8950
9000
9100
9200
9300
9400
9500
9600
-34°
-36°
-38°
-40°
-42°
-44°
-46°
-48°
-50°
C
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
LATITUDE
Δh = 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh = 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh = 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)
Δh = Contour interval in gpft
130° 125° 120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70°
15° 20° 25° 30° 35° 40°

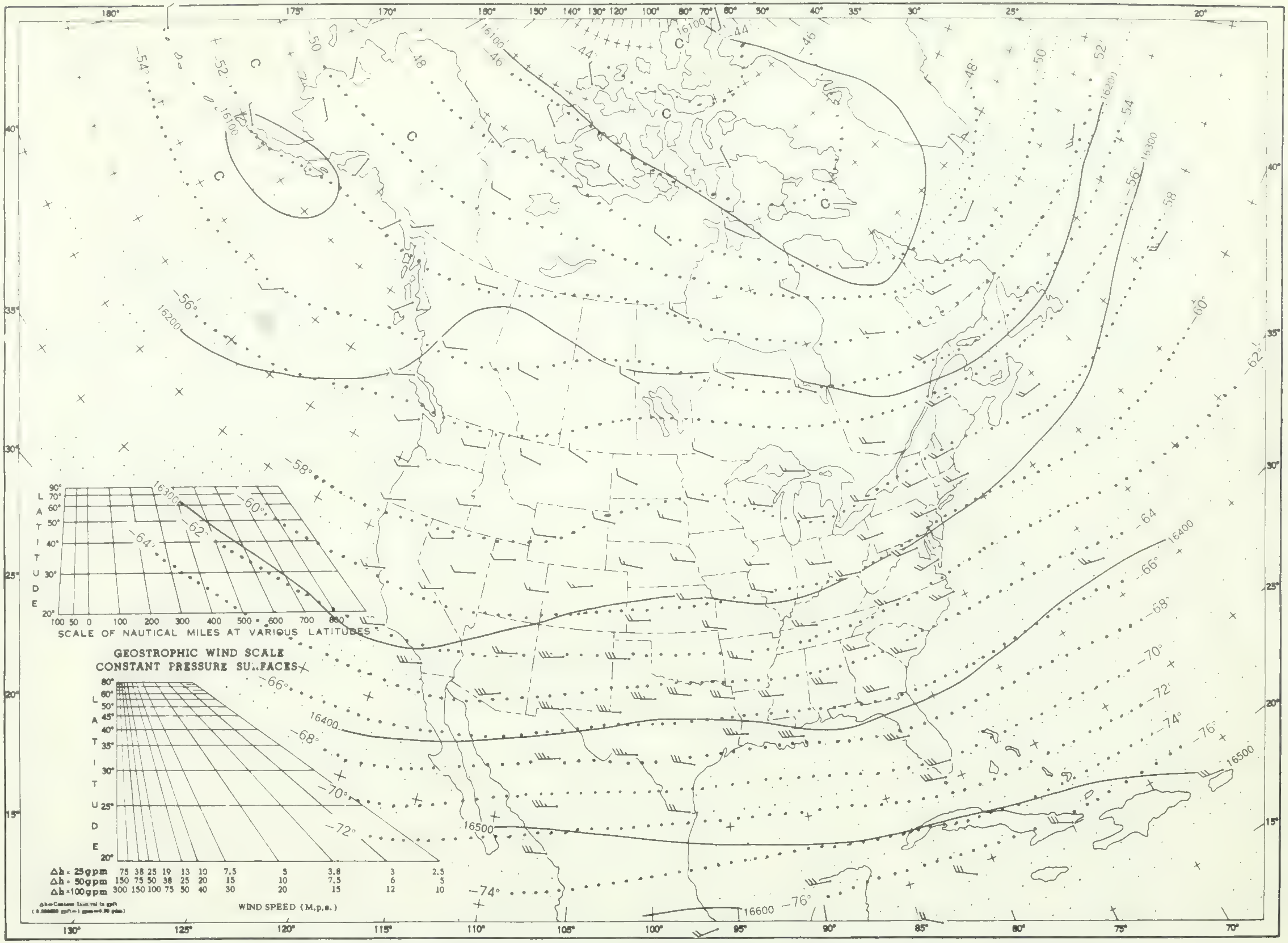
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200 mb Surface, 1200 G.m.t., May 1972 Average Height and Temperature, and Resultant Winds



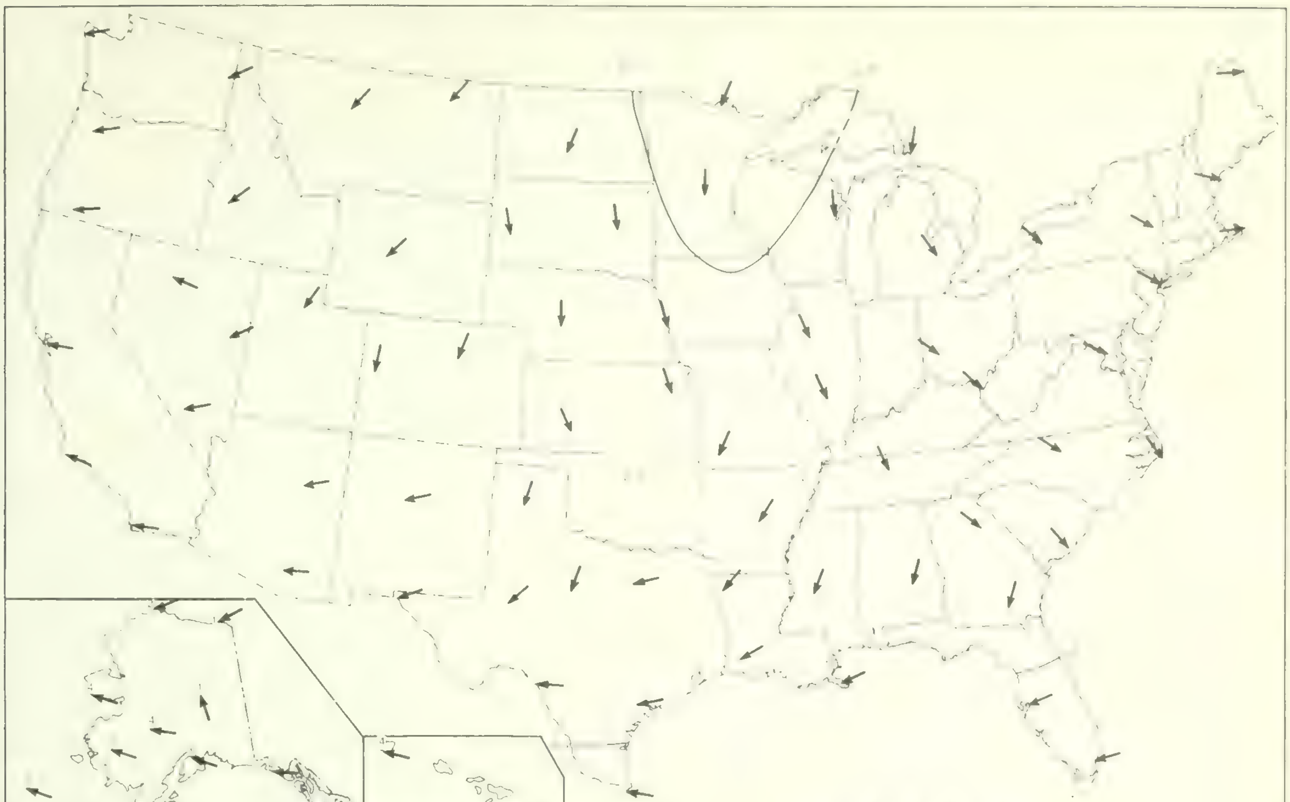
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb. Surface, 1200 G.m.t., May 1972 Average Height and Temperature, and Resultant Winds

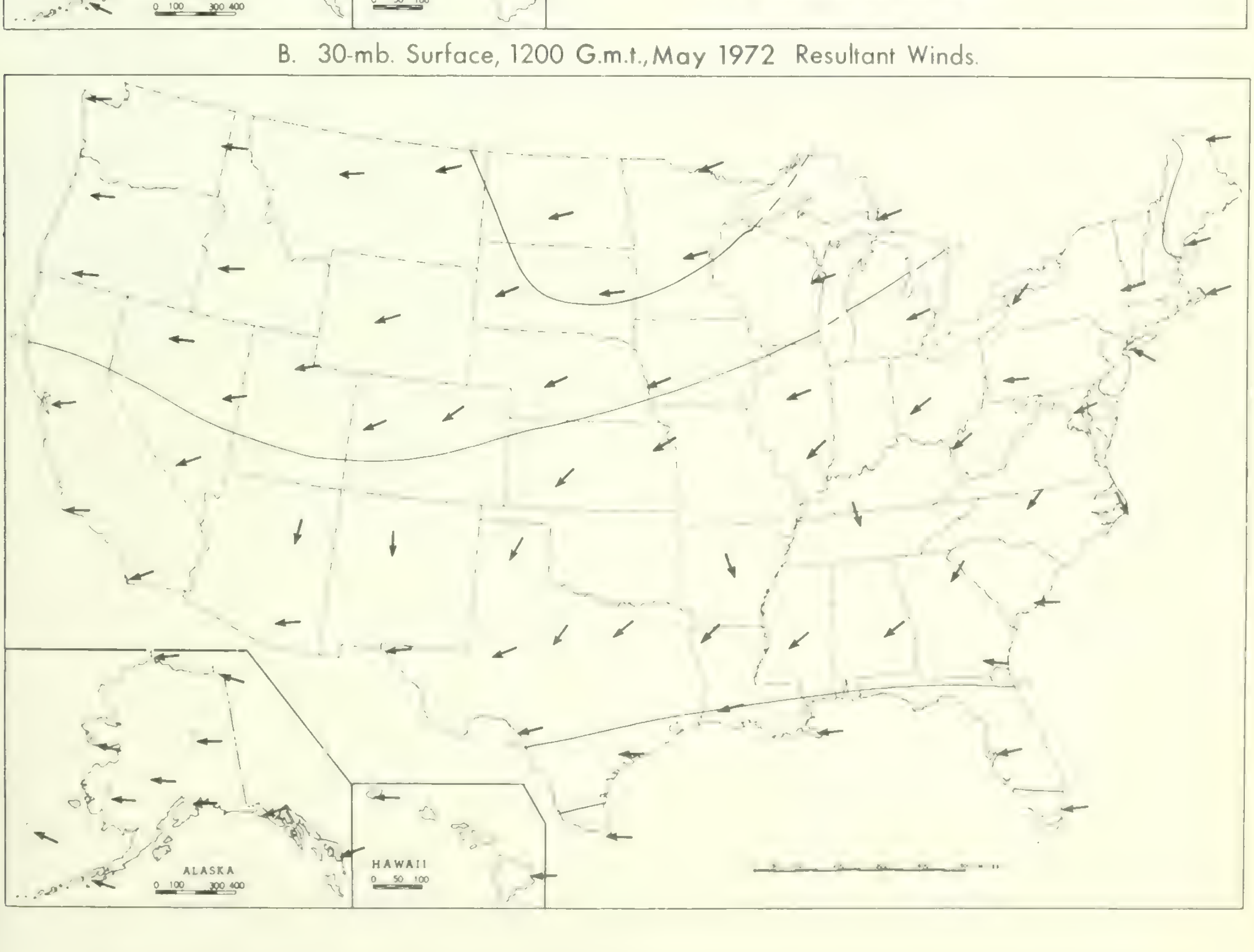

16100
16200
16300
16400
16500
16600
-44
-46
-48
-50
-52
-54
-56°
-58°
-60°
-62°
-64
-66°
-68°
-70°
-72°
-74°
-76°
C
LATITUDE
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
Δh = 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh = 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh = 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., May 1972 Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., May 1972 Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: $5.50 a year including annual summary; $1.00 additional for foreign mailing; 40¢ single copy; $1.00 annual summary. Make checks payable to Department of Commerce, NOAA; send payments and orders to: National Climatic Center, Federal Building, Asheville, N. C. 28801. Attn: Publications.

I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina, 28801.

William H. Haggard
Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 23 No. 6

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

JUNE 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

The Black Hills Disaster and Hurricane Agnes overshadowed other weather events in June 1972.

TEMPERATURE (°F.) -- It was one of the coolest Junes of record in large areas of the East and Southeast, with averages 4° to 6° below normal. Southeastern Arizona, southern New Mexico, and western Texas averaged 1° to 2° cooler than normal. Most of the rest of the Nation averaged 1° or 2° warmer than normal.

A warming trend occurred over the Great Plains early in June. Temperatures climbed into the nineties over the central and southern Great Plains and summer weather continued over much of that area until after midmonth. The long sunny afternoons produced temperatures approaching or exceeding 90° in the northern Great Plains. Devils Lake, N. Dak., registered 92° on the afternoon of the 7th. Warmer temperatures covered the South. Monroe, La., recorded 100° on the 7th. A large high drifted eastward across the middle Atlantic Coast on the 12th, bringing recordbreaking cold to many eastern States. Concord, N. H., registered 30° and Columbia, S. C., 46° on the 12th.

Cool air moved into the northern Great Plains shortly after midmonth, dropping temperatures about 20°. Minneapolis, Minn., registered 92° on the 12th, but by the 15th temperatures in Minnesota remained mostly in the fifties and sixties. Bemidji registered 53° "in the heat of the day" on the 15th.

On the 19th a large high was centered over southwestern Saskatachewan. By the 21st, it had moved to eastern South Dakota. It brought chilly weather to Montana, the Dakotas, Minnesota, Wyoming, Colorado, and Nebraska. Dickinson, N. Dak., and Big Piney, Wyo., recorded 33° on the 20th and Leadville, Colo., 30° on the 21st. The mercury at Grand Island, Nebr., dropped to 43° on the 21st. The cold air spread southward and eastward. On the morning of the 23d, Evansville, Ind., and Louisville, Ky., registered 45° and 47°, respectively. A warming trend brought the return of 90° heat to the northern Great Plains near the end of June. On the 29th, Jamestown, N. Dak., Pierre, S. Dak., and Chadron, Nebr., registered 94°. A weak, nearly stationary, high over the Northeast caused a stagnation problem. The winds were light; the air was stable. Pollutants became trapped in the lower layers of the atmosphere. This was the situation on the 27th over a wide area from Illinois and Indiana to Pennsylvania, West Virginia, and Kentucky. The condition improved after a few days.

The Southwestern Deserts continued hot through most of the month, typical for June. Maximums exceeded 100° on most afternoons in the warmest locations. Furnace Creek, in Death Valley, Calif., registered 124° on the 29th. This is 10° cooler than the all-time record for California (and the United States), 134° recorded at Greenland Ranch, Calif., July 10, 1913.

PRECIPITATION -- Almost the entire area from Oregon to the Continental Divide and southward to the Mexican Border received less than 1 inch of rain in June. Most stations in that large dry area received less than 0.50 inch. Elsewhere over the Nation, the rainfall was very unevenly distributed and ranged widely. A large area from central New York to central Virginia received 8 to more than 12 inches, most of which fell from Tropical Storm Agnes in the week ending on the 25th.

Afternoon thundershowers in the first week of June dotted the dry Southwest -- the Mountains and the Deserts. The 0.06-inch rain at Phoenix on the 7th was important because it ended a 160-day period of no rain or only very light sprinkles. Heavy thundershowers at the end of the first week of June in west-central Iowa, 3 to 5 inches in spots, flooded roads and stalled traffic.

Torrential rains, up to about 7 inches in some localities, in the northern and eastern Black Hills during the night of the 9th, caused heavy flooding in the Keystone, Sturgis, and Rapid City areas. Rapid City was the hardest hit. More than 200 persons were drowned. Hundreds were left homeless and property damage was estimated at over $100 million. Many miles of roads, railroad track, and bridges were destroyed. Some livestock were drowned and lowland hayfields in the path of the flood were destroyed. A week later, on the 17th, many citizens in parts of Rapid City left their homes when 2- to 3-inch rains fell in the area, accompanied by winds gusting to 50 m.p.h.

Hurricane Agnes played the star roll in the weather news in the fourth week of June. Details of Agnes are on page 312. Phoenix, Ariz., received a heavy shower, 1.64 inches, on the 21st-22d. This is more rain than ever fell in the month of June at Phoenix. A locality a few miles south of Phoenix Airport received 4.20 inches of rain in 2-1/2 hours. This is one of the vagaries of desert climate -- the wettest June of record can follow the driest 5-month period in weather history. The month ended as heavy thunderstorms rumbled across the South, large hail fell in Oklahoma and Missouri, and tornadoes occurred in scattered parts of the Great Plains.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

JUNE 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Headland	100	8	Valley Head	37	1	Headland	10.97	Tuscaloosa Oliver Dam	1.81
Alaska	West Fork	92	13	Willow Lake	13	19	Mac Leod Harbor	13.27	2 Stations	.00
Arizona	Willow Beach	122	30+	Sunrise Mountain	23	27	Mc Nary	5.26	2 Stations	.00
Arkansas	Sheridan Tower	104	20	Evening Shade 1 NE	40	1	Morobay Lock No. 8	7.59	Beach Grove	.50
California	Death Valley	124	30+	Bodie	22	11	Alpine	2.20	47 Stations	.00
Colorado	2 Stations	99	29+	Twin Lakes Reservoir	18	5	Idalia 2 NNW	6.68	Manassa	.08
Connecticut	New Haven	86	9	Burlington	27	11	Bridgeport WSO AP	17.70	West Thompson Dam	7.64
Delaware	Wilmington NCas WSO AP	90	4	Newark University Farm	38	11	Middletown 1 WSW	10.70	Lewes 1 SW	5.82
Florida	Fort Drum 5 NW	100	30	2 Stations	45	2	Kendall 2 E	17.40	Cedar Key 1 WSW	3.79
Georgia	Morgan 1 W	102	6	Blairsville Exp Sta	37	2	Colquitt 2 E	11.06	Jasper 1 NNW	2.37
Hawaii	Keawakapu Beach 260.2,Maui	92	13	Mauna Loa Slope Obs,Hawaii	32	20	Mount Waialeale 1047,Kauai	18.07	2 Stations	.00
Idaho	Glenns Ferry	101	30+	Dixie	25	12	Cabinet Gorge	3.81	Atlanta	.07
Illinois	4 Stations	98	10+	Marengo	29	11	Peotone	11.46	Prairie Du Rocher 1 WSW	.42
Indiana	6 Stations	96	20+	2 Stations	31	11	Lowell	8.33	Jasper	.52
Iowa	Sioux City WSO AP	100	8	3 Stations	35	11	Marshalltown	11.30	Logan	.71
Kansas	Anthony	102	30	Webster Dam	42	1	Oberlin	9.64	Mound City	.55
Kentucky	3 Stations	96	20+	2 Stations	34	11	Tomahawk 1 WSW	5.69	Fords Ferry Dam 50	.53
Louisiana	Logansport 4 ENE	101	8	Ashland 2 S	45	1	Hineston 4 NNE	8.24	Donaldsonville 3 E	.31
Maine	Corinna	89	29	3 Stations	31	12+	Springfield	9.12	Fort Kent	3.03
Maryland	Westernport UPRC	92	15	Bittinger 2 NW	30	11	Woodstock	18.15	3 Stations	5.54
Massachusetts	Chester 2	90	4	Chester 2	26	12	Chester 2	14.31	Nantucket FAA AP	2.79
Michigan	Jackson FAA AP	93	14	2 Stations	22	11+	Holland WJBL	8.40	Fayette	.82
Minnesota	Stillwater 1 SE	99	13	Tower 3 S	25	10	Blue Earth	7.57	Halstad	.62
Mississippi	Merrill	100	28+	2 Stations	43	1	Ashland	6.88	Standard	.48
Missouri	4 Stations	100	30+	Berryman 6 NW	31	1	New Madrid Pwr Plant	6.95	Bowling Green 2 NE	T
Montana	5 Stations	96	30+	2 Stations	26	30+	Glasgow 15 NW	7.22	Power 6 SE	.27
Nebraska	5 Stations	100	30+	4 Stations	34	20	Palisade	7.89	Columbus 3 NE	.62
Nevada	Sunrise Manr Las Vegas	118	30+	Reese River R S	25	16	Reese River R S	3.60	Orovada 9 SSW	.00
New Hampshire	2 Stations	87	15	Mount Washington	19	11	Mount Washington	10.40	Wolfeboro	2.53
New Jersey	4 Stations	89	17+	Chatsworth	34	12	Pottersville 2 NNW	15.53	Atlantic City WSO AP	4.82
New Mexico	Jal	108	28	Luna Ranger Station	24	27	Farnsworth Ranch	10.30	Marquez	T
New York	2 Stations	93	16+	4 Stations	26	11	Wellsville	16.96	Watertown FAA AP	3.16
North Carolina	Louisburg	95	17	Banner Elk	27	11	Celo 2 S	12.06	Elizabeth City FAA AP	1.59
North Dakota	4 Stations	95	30+	3 Stations	29	20	Richardton Abbey	7.13	Litchville	.52
Ohio	2 Stations	93	15	Danville 2 W	27	11	Cleveland WSO AP	9.06	Marysville	1.22
Oklahoma	Chattanooga 3 NE	113	26+	2 Stations	40	1	Lyons 2 N	10.08	Waurika	.62
Oregon	2 Stations	101	29+	Crater Lake NP HQ	20	10	Rock Creek	3.83	Malin 5 E	.04
Pennsylvania	6 Stations	90	20+	Clermont 4 NW	21	11	York 3 SSW Pump Sta	20.45	Glenwillard Dash Dam	3.52
Puerto Rico	2 Stations, P.R.	96	24+	Cerro Maravilla, P.R.	55	17	San Sebastian, P.R.	10.90	Water Isle, V.I.	.43
Rhode Island	2 Stations	85	9+	Kingston	35	12	Kingston	9.97	Newport	5.15
South Carolina	7 Stations	95	7+	2 Stations	39	1	Hogback Mountain	11.29	Andrews	1.54
South Dakota	2 Stations	98	8	2 Stations	30	21+	Pactola Dam	13.51	Britton	.58
Tennessee	5 Stations	97	28+	Mountain City No 2	30	11	Knoxville Exp Sta	7.73	Newbern	1.05
Texas	Albany	115	27	Menard	44	1	Weslaco 2 E	10.75	Toyah	.10
Utah	Saint George	107	30+	Soldier Creek	29	29	Zion National Park	4.00	2 Stations	T
Vermont	5 Stations	88	16+	Mount Mansfield	25	11	Vernon	9.19	Saint Johnsbury	2.93
Virginia	Chase City	95	17	2 Stations	30	11	Wash. Dulles WSO AP	18.19	Tangier Island	2.70
Washington	Walla Walla FAA AP	99	6	Mount Spokane Summit	25	10	Palmer 3 ESE	7.74	Dallesport FAA AP	.20
West Virginia	Williamson	95	16+	Seneca State Forest	24	11	Harpers Ferry Nat Park	11.72	London Locks	2.85
Wisconsin	Brodhead	94	4	Jump River 5 E	23	10	Racine	8.88	Readstown	.94
Wyoming	Spencer 10 NE	100	29	Crandall Creek	16	2	Upton	5.68	Diversion Dam	T

+ And also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
II	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M p h.							%
ALABAMA																																
BIRMINGHAM	620	991.9	1013.8	86	63	74.2	-5.2	92	15+	44	1	9	0	62	69	2.70	-1.31	1.23	8	8	0.0	0	1.0	36	24	NW	28+	11	10	9	5.0	70
HUNTSVILLE	624	991.2	1013.8	85	62	73.4	-5.2	93	9+	45	1	3	0	61	63	1.90	-1.47	1.23	9	5	0.0	0	1.0	32	28	26	28	13	7	10	4.8	
MOBILE	211	1005.4	1013.3	91	71	80.7	-.8	97	21+	57	2	20	0	70	75	3.65	-2.58	2.05	8	7	0.0	0	0.4	32	40	33	25	7	11	12	6.4	
MONTGOMERY	183	1006.1	1013.3	90	66	78.4	-1.0	99	6	50	2+	20	0	64	66	5.49	1.32	2.94	6	4	0.0	0	0.6	29	25	N	20	12	9	9	5.2	51
ALASKA																																
ANCHORAGE	114	1006.8	1011.7	58	46	51.9	-3.8	69	14	40	5	0	0	40	68	0.61	-0.37	0.21	5	0	0.0	0	4.8	17	28	16	2	1	5	24	8.8	44
ANNETTE	110	1012.2	1016.2	59	46	52.7	-1.6	77	23	41	1	2	0	45	80	4.95	-0.72	1.60	17	0	0.0	0	2.8	16	20	13	2	0	7	23	8.7	
BARROW	31			36	29	32.5	-.6	47	30	24	6	0	29			0.05	-0.31	0.02	3	0	0.7	T			29	9	16	4	7	19	7.6	
BARTER ISLAND	39	1009.8	1011.7	37	32	34.1	-.1	45	17	29	5+	0	25	33	95	0.60	0.09	0.30	2	0	1.1	9	7.0	7	32	9	16	4	6	20	7.7	
BETHEL	125	1002.4	1008.1	56	41	48.6	-3.0	71	29+	30	7	3	5	40	74	1.11	-0.07	0.22	16	0	1.1	T	2.3	17	30	19	19	2	6	22	8.6	
BETTLES	644			68	47	57.7		88	14	36	8	13	0			1.78		0.83	9	0	0.0	0			21	28	28+	7	12	11	5.9	
BIG DELTA	1268			66	47	56.6		87	14	37	5	8	0			2.59		0.70	13	3	0.0	0			38	19	2					
COLD BAY	96	1003.7	1007.3	46	37	41.6	-3.7	51	1	30	14	0	3	39	91	2.91	0.96	0.93	21	0	T	T	7.1	20	53	15	8	0	1	29	9.6	
FAIRBANKS	436	991.2	1007.9	69	49	59.4	1.0	88	14	39	8+	14	0	41	52	0.55	-0.84	0.25	10	2	0.0	0	1.5	25	23	1	28	2	13	15	6.9	
GULKANA	1572			62	41	51.1		78	13+	30	19+	4	3			1.57		0.52	8	1	0.0	0			25	17	23+	0	11	19	7.8	
HOMER	67			53	40	46.6		59	11+	33	1	0	0			0.57	-0.48	0.21	7	0	0.0	0			31	13	2	1	5	24	8.5	
JUNEAU	12	1013.9	1014.8	58	43	50.4	-1.9	68	10	34	10	0	0	42	76	3.98	0.59	1.10	17	0	0.0	0	3.9	10	26	14	5	1	5	24	8.8	21
KING SALMON	49	1006.4	1008.4	54	40	46.6	-4.8	63	27+	31	1	0	2	39	78	1.62	0.22	0.41	16	0	1.3	T	6.2	14	37	9	10	1	2	27	9.2	
KOTZEBUE	10	1007.8	1008.2	49	37	43.2	-.6	66	17	27	7	0	5	38	83	0.59	0.10	0.34	7	0	0.2	T	6.0	27	32	28	5	4	11	15	7.0	
MC GRATH	344	995.6	1008.2	65	45	55.2	-1.3	77	30+	35	5+	12	0	42	63	1.80	0.14	0.50	17	3	T	T	1.5	19	21	18	2	1	9	20	8.0	
NOME	13	1007.1	1007.9	53	39	46.3	.4	69	27+	29	1	0	7	38	74	1.42	0.49	0.65	11	0	0.8	1	0.6	26	28	12	17	4	7	19	7.2	34
ST. PAUL ISLAND	22	1005.8	1006.7	42	34	37.7	-3.1	46	20+	28	6	0	8	36	94	1.80	0.65	1.10	16	0	T	0	3.7	1	39	29	1	0	4	26	9.3	
SHEMYA	122	1007.5	1011.3	46	41	43.4	1.6	50	29	35	22	0	0	39	86	2.39	1.07	0.97	13	0	0.0	0	6.6	29	41	26	3	2	2	26	8.9	
SUMMIT	2401	924.8	1010.1	55	39	46.8		73	13	29	5	2	6	37	72	1.18		0.34	11	5	0.8	T	8.3	23	26	22	2	0	8	22	8.3	
TALKEETNA	345			61	43	52.3	-2.8	79	11	33	5	4	0			2.21	0.44	0.83	9	0	0.0	0			18	17	9					
UNALAKLEET	15			54	44	48.7		73	11	30	4	1	5			2.33		0.79	14	0	T	T			28	9	8	4	6	20	7.6	
YAKUTAT	28	1013.5	1014.6	53	43	48.0	-2.5	64	10	32	9	0	1	43	83	4.34	-0.72	0.89	23	0	0.0	T	1.5	10	21	16	7+	0	4	26	9.1	
ARIZONA																																
FLAGSTAFF	7006	789.0	1014.2	74	41	57.6	-1.9	88	30	35	18	0	0	37	52	1.93	1.24	0.46	8	10	0.0	0	3.7	21	30	W	17	11	10	9	4.5	
PHOENIX	1117	969.5	1007.4	101	74	87.8	4.2	112	30	68	25	30	0	47	28	1.70	1.61	1.64	3	6	0.0	0	0.5	20	59V	S	7	21	4	5	2.6	92
TUCSON	2584	922.8	1008.2	96	67	81.6	-1.1	105	30	61	26	27	0	47	34	0.68	0.39	0.30	9	11	0.0	0	2.8	20	45	W	21	19	7	4	3.3	82
WINSLOW	4895	851.0	1011.3	87	57	71.8	-2.5	100	30	49	18	12	0	41	41	3.22	2.96	1.23	8	11	0.0	0	4.1	20	30	17	1	13	9	8	4.7	
YUMA	194	1000.0	1007.2	102	73	87.5	1.5	113	30	67	23	30	0	53	34	0.27	0.26	0.26	3	3	0.0	0	4.9	18	40	SE	5	24	4	2	1.9	94
ARKANSAS																																
FORT SMITH	447	997.0	1013.2	91	64	77.0	-1.6	98	27	47	1	18	0	62	64	1.51	-2.84	0.67	9	8	0.0	0	2.6	8	34	SW	25	13	8	9	4.6	85
LITTLE ROCK	257	1003.7	1013.0	92	67	79.4	.5	101	20	50	1	21	0	63	60	2.62	-0.99	0.94	8	7	0.0	0	1.1	21	40	NW	25	14	10	6	4.6	87
CALIFORNIA																																
BAKERSFIELD	475	993.2	1010.3	93	67	80.3	3.2	107	30	53	11	22	0	51	38	1.11	1.02	1.10	2	4	0.0	0	5.1	33	41	15	7	19	9	2	2.5	
BISHOP	4108	871.0		92	53	72.6	2.8	108	30	48	24	20	0			0.25	0.16	0.24	2		0.0	0						16	6	8	4.0	
BLUE CANYON	5280			72	53	62.7	3.5	88	30	32	10+	0	2			0.62	-0.31	0.56	5		1.3	T			17	20	23+	18	5	7	3.2	
EUREKA U	43			59	51	54.6	-.9	62	30	49	18+	0	0			0.88	0.14	0.71	2		0.0	0			25	N	25	5	8	17	7.1	55
FRESNO	328	999.0	1010.5	94	61	77.5	2.8	109	30	52	11	23	0	49	41	0.60	0.53	0.60	1	1	0.0	0	4.9	29	32	NW	9	20	6	4	2.9	91
LONG BEACH	25	1011.5	1012.7	78	63	70.7	3.2	85	28	52	11	0	0	57	68	0.09	0.06	0.05	3	0	0.0	0			17	15	5	10	13	7	5.2	
LOS ANGELES	97	1008.5	1012.2	73	62	67.1	2.3	77	30+	58	11	0	0	59	78	0.06	0.01	0.06	1	1	0.0	0	7.1	25	28V	SW	27	8	11	11	5.9	
LOS ANGELES J	270			81	63	72.2	4.2	96	5	58	27	1	0			0.07	0.01	0.04	3		0.0	0			15	NW	20+	12	11	7	4.6	80
MT SHASTA R	3544	891.0	1013.2	78	48	63.2	2.9	93	29	30	11	4	2	43	50	0.89	-0.36	0.76	3		0.0	0	0.8	34								
OAKLAND	6	1013.5	1013.6	69	55	61.9	-.9	88	5	50	11	0	0	53	79	0.25	0.13	0.25	1	0	0.0	0	8.0	28	24	23	22	15	13	2	4.0	
RED BLUFF	342	997.6	1010.0	95	62	78.2	2.0	113	30	49	11	23	0	48	39	0.26	-0.19	0.26	1	0	0.0	0	1.8	16	28	S	9	20	6	4	1.6	94
SACRAMENTO	17	1010.2	1011.0	90	55	72.5	2.0	108	30	45	10	18	0	50	53	0.19	0.09	0.19	1	0	0.0	0	6.5	21	30	SW	22	21	7	2	2.4	91
SANDBERG R	4517	861.8		78	56	66.9	2.1	99	29	39	11	3	0			0.06	0.03	0.05	3		0.0	0	2.4	24	30	32	10	17	7	6	3.4	
SAN DIEGO	13	1011.5	1012.6	71	63	67.0	.8	77	11	59	30	0	0	57	73	0.38	0.33	0.28	6	1	0.0	0	4.7	27	24	NE	20	9	9	12	6.3	54
SAN FRANCISCO	8	1013.2	1013.9	70	52	60.9	-.4	89	5	47	10	0	0	50	75	0.06	-0.05	0.06	1	0	0.0	0	9.5	29	29	30	13	18	8	4	3.5	
SAN FRANCISCO J	52			63	52	57.5	-1.6	82	30	48	3	0	0			0.11	-0.03	0.11	1		0.0	0			28	W	18					74
SANTA MARIA	236			71	51	61.1	1.5	87	12	45	12	0	0			0.01	-0.13	0.01	1		0.0	0						10	17	3	4.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
II	Ft	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In.	In.	M.p.h.		M.p h.							%
CALIFORNIA																																
STOCKTON	22	1010.8	1012.■	91	57	74.3	1.5	110	30	48	11+	20	0	49	48	0.15	0.08	0.15	1	0	0.0	0	8.0	31	23	27	14	20	8	2	2.5	
COLORADO																																
ALAMOSA	7536	773.8		79	43	61.0	1.0	85	28	35	26	0	0			0.60	0.11	0.20	8		0.0	0						7	18	5	4.7	
COLORADO SPRINGS	6145	812.1	1011.5	82	54	67.8	3.1	87	25	50	20+	0	0	45	51	2.07	0.48	0.85	15	22	0.0	0	2.6	8	39	26	23	8	15	7	5.5	
DENVER	5283	835.8	1009.9	83	54	68.3	1.8	89	29	48	26+	0	0	50	58	2.94	1.50	1.03	13	18	0.0	0	1.8	17	34	S	23+	6	17	7	5.7	65
GRAND JUNCTION	4843	850.7	1009.1	90	59	74.3	3.0	98	30	55	24+	19	0	39	32	0.64	0.22	0.29	5	7	0.0	0	1.8	14	41	NW	19	11	11	8	4.9	71
PUEBLO	4684	854.4	1009.6	90	56	73.2	2.1	94	25+	47	14	20	0	49	49	0.98	-0.24	0.41	7	7	0.0	0	1.9	8	40	NE	29	9	13	8	5.1	80
CONNECTICUT																																
BRIDGEPORT	7	1011.9	1012.4	72	59	65.3	-2.7	84	28	46	12	0	0	56	74	17.70	14.30	6.89	21	8	0.0	0	2.5	16	37	22	22	3	8	19	7.6	
HARTFORD	169	1005.4	1012.0	75	57	65.9	-2.8	85	4	40	12	0	0	58	79	9.66	5.96	3.12	19	6	0.0	0	3.0	18	29	S	22	1	5	24	8.3	40
DELAWARE																																
WILMINGTON	74	1009.5	1012.7	77	60	68.6	-2.8	90	4	41	11	1	0	59	73	7.49	3.42	4.35	16	4	0.0	0	2.5	22	35	30	22	5	8	17	7.2	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1000.7	1012.2	78	57	67.4		87	4	40	11	0	0	58	76	18.19		11.88	15	4	0.0	0	1.9	23	26	35	4	5	11	14	7.0	
WASHINGTON NATIONAL	10	1009.8	1012.3	79	62	70.2	-4.0	87	19+	47	11	0	0	59	71	11.53	8.32	7.19	14	6	0.0	0	2.6	23	43	NW	21	5	10	15	6.9	43
FLORIDA																																
APALACHICOLA U	13			86	73	79.4	-.8	92	22+	60	2	5	0			5.19	-0.11	2.99	9	4	0.0	0			55	E	19	4	22	4	5.9	88
DAYTONA BEACH	31	1012.9	1014.3	87	72	79.6	1.2	96	21	62	6	10	0	68	71	7.06	1.25	4.02	9	5	0.0	0	2.4	12	29	10	18	1	16	13	7.0	
FORT MYERS	15	1013.5	1013.9	89	74	81.6	.8	94	30	63	7	16	0	72	79	7.86	-1.10	4.96	11	6	0.0	0	1.3	19	25	15	18+	4	14	12	6.4	
JACKSONVILLE	26	1012.9	1014.0	86	66	76.2	-4.6	95	21	57	14+	8	0	68	78	6.75	0.42	5.14	9	6	0.0	0	1.1	15	39	E	19	6	15	9	5.8	63
KEY WEST	4	1012.9	1013.6	85	77	81.3	-.5	89	30+	73	15	0	0	73	76	14.43	10.46	3.66	18	8	0.0	0	5.3	13	43	SE	18	9	7	14	6.6	61
LAKELAND U	214			87	72	79.5	-1.1	91	30+	65	6	7	0			6.28	-0.92	4.53	9		0.0	0						3	19	8	6.5	69
MIAMI	7	1013.5	1013.9	86	74	79.9	-.9	91	8	67	11	3	0	72	80	10.90	3.53	5.66	17	9	0.0	0	4.2	15	25	12	18	4	9	17	7.3	
ORLANDO	108	1009.8	1014.0	90	74	82.2	.9	95	30+	68	6	17	0	69	69	6.33	-0.63	4.64	7	3	0.0	0	1.1	16	30	12	18	3	11	16	7.0	
PENSCOLA	112	1009.1	1013.4	88	72	79.8	-1.3	98	7	58	1	10	0	68	70	8.54	3.11	2.18	10	6	0.0	0	1.2	24	32	33	25	5	15	10	6.3	
TALLAHASSEE	55	1010.8	1013.2	90	66	78.0	-2.2	98	21	49	2	17	0	66	72	11.13	4.59	6.44	11	8	0.0	0	1.6	9	31	17	19	5	13	12	6.1	
TAMPA	19	1013.5	1013.8	89	73	81.0	.4	93	11+	61	2	14	0	70	73	5.24	-2.04	3.38	11	5	0.0	0	1.3	20	27	13	18	3	6	21	7.4	66
WEST PALM BEACH	15	1012.9	1013.6	89	75	81.8	.8	96	29	68	7	11	0	71	73	12.34	4.81	3.07	17	11	0.0	0	3.9	14	32	10	18+	1	8	21	8.1	
GEORGIA																																
ATHENS	802	985.1	1013.5	84	61	72.6	-5.0	93	6	45	1	2	0	61	71	5.72	1.84	2.81	6	3	0.0	0	1.2	28	28	34	9	14	8	8	4.5	
ATLANTA	1010	977.3	1013.4	83	62	72.2	-4.4	90	6+	48	1	2	0	59	67	4.04	0.21	2.51	5	3	0.0	0	2.0	32	38	NE	19	11	7	12	5.2	72
AUGUSTA	136	1007.8	1013.2	87	61	74.2	-4.7	95	6	47	12	12	0	61	68	6.25	3.21	2.57	5	4	0.0	0	1.3	23	25	22	22	15	9	6	4.0	
COLUMBUS	385	999.7		88	66	76.7	-2.7	96	6	48	1	12	0			7.74	4.06	3.80	8	3	0.0	0	1.8	1	25	6	19	13	5	12	5.2	
MACON	354	1000.7	1013.4	88	63	75.5	-5.2	98	6	46	2	10	0	62	67	6.21	2.87	2.28	6	5	0.0	0	0.7	6	40	NW	27	12	6	12	5.2	74
ROME	637			85	60	72.1	-4.3	94	6	43	2	3	0			6.14	2.38	3.29	10		0.0	0										
SAVANNAH	46	1012.2	1013.9	87	65	75.7	-4.0	93	21	54	3+	8	0	63	69	6.54	1.45	3.14	8	4	0.0	0	1.5	18	41	NW	10	12	9	9	4.9	75
HAWAII																																
HILO	27	1014.9	1016.2	83	68	75.3	1.0	87	3	63	2	0	0	68	81	4.58	-2.21	0.83	23	0	0.0	0	0.3	9	17	E	3	1	6	23	8.4	39
HONOLULU	7	1015.2	1015.6	86	72	78.9	1.0	88	22+	66	5	0	0	65	66	0.79	0.46	0.41	8	0	0.0	0	10.9	6	29	NE	27	2	13	15	7.3	66
KAHULUI	48	1012.9	1015.2	86	66	76.0	-1.2	88	24+	60	2	0	0	65	70	0.29	0.11	0.20	3	0	0.0	0	10.7	5	31	E	25	5	7	18	7.2	72
LIHUE	103	1011.9	1017.1	83	72	77.6	1.0	85	15+	67	5	0	0	69	76	1.74	0.28	0.51	16	0	0.0	0	8.1	5	26	NE	27	2	13	15	7.4	59
IDAHO																																
BOISE	2838	913.3	1011.8	81	54	67.6	1.8	95	29	41	12	4	0	43	44	0.90	0.01	0.30	6	4	0.0	0	2.9	32	33	SW	23	13	12	5	4.4	78
LEWISTON	1413			80	54	67.0	2.2	96	28+	46	12	5	0			0.93	-0.80	0.35	9		0.0	0			35Y		12	4	11	15	6.6	
POCATELLO	4454	861.5	1011.8	77	48	62.3	-.5	91	29	38	20+	1	0	43	53	1.29	0.33	0.40	10	9	0.0	0	5.9	23	36	W	18	9	9	12	5.6	69
ILLINOIS																																
CAIRO U	314			87	66	76.4	-1.5	96	9	52	1	8	0			2.05	-2.08	1.32	8		0.0	0			37	W	28+	15	12	3	3.9	76
CHICAGO O HARE	658	989.2	1013.5	77	55	65.7	-2.3	92	3	36	11	1	0	53	64	3.55	-0.41	2.01	10	6	0.0	0	2.5	34	35	23	13+	7	12	11	6.0	
CHICAGO MIDWAY	607	991.5	1013.8	76	56	66.1	-4.4	94	3	41	11	3	0	51	60	2.77	-1.30	1.13	11	7	0.0	0	2.5	35	31	NW	14	9	11	10	5.5	80

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
II	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
MOLINE	582	992.6	1013.7	82	57	69.4	-2.0	98	3	39	11	5	0	56	64	8.66	4.29	3.54	9	7	0.0	0	0.7	24	33	NE	9	8	13	9	5.1	72
PEORIA	652	990.2	1013.7	80	56	68.0	-3.7	93	3	41	11	2	0	54	63	5.97	1.89	1.84	8	8	0.0	0	0.2	2	30	S	14	8	14	8	5.4	76
ROCKFORD	724	986.8	1013.4	78	54	65.8	-3.9	94	3	38	11	1	0	54	66	8.27	3.97	4.03	7	6	0.0	0	1.0	35	27	28	19+	11	9	10	5.1	
SPRINGFIELD	588	991.5	1013.3	84	57	70.5	-3.5	93	4	42	11	7	0	56	62	2.72	-1.73	0.99	8	7	0.0	0	0.6	27	29	NW	28+	10	14	6	4.7	76
INDIANA																																
EVANSVILLE	381	999.7	1013.6	84	59	71.4	-4.4	95	4	42	1	8	0	55	58	1.92	-1.82	0.81	5	3	0.0	0	1.0	27	33	NE	4	11	14	5	4.8	87
FORT WAYNE	791	984.4	1014.1	77	55	66.1	-4.5	89	19	39	11	0	0	55	69	3.83	-0.34	2.06	10	4	0.0	0	3.7	29	39	NW	3	2	13	15	7.0	68
INDIANAPOLIS	792	985.1	1013.7	80	58	68.8	-2.3	92	4	44	11	1	0	55	65	6.04	1.42	2.20	8	7	0.0	0	2.4	29	32	SW	14	3	13	14	6.8	63
SOUTH BEND	773	985.4	1013.0	75	52	63.6	-5.4	92	3	35	11	1	0	53	72	2.72	-0.86	1.28	11	6	0.0	0	3.9	28	25	29	20	3	15	12	6.7	
IOWA																																
BURLINGTON	692			80	57	68.7	-3.4	91	9	41	10	2	0	59	67	5.58	0.57	1.63	10	9	0.0	0	0.6	30	28	23	13	6	14	10	5.9	
DES MOINES	938	979.7	1013.8	81	59	70.2	-.8	94	12+	47	11	6	0	57	65	2.58	-2.13	1.80	8	8	0.0	0	1.6	15	34	W	13	6	14	10	5.8	71
DUBUQUE	1056	975.3		78	55	66.4	-1.5	90	3	36	11	1	0			2.49	-1.72	0.60	7		0.0	0						7	15	8	5.8	
SIOUX CITY	1095	973.9	1012.9	84	61	72.3	.9	100	8	45	21	8	0	57	62	3.79	-0.54	1.08	11	8	0.0	0	2.6	13	52	SW	27	9	8	13	6.2	67
WATERLOO	868	982.4	1013.8	79	55	67.2	-2.9	92	3	42	10	3	0	54	66	4.33	-0.50	1.22	10	10	0.0	0	0.5	14	40	28	12	7	6	17	6.3	
KANSAS																																
CONCORDIA	1470	960.0	1011.8	86	61	73.4	-.8	96	30	47	21	10	0	58	63	1.70	-2.50	1.29	7	9	0.0	0	5.0	16	32	NW	19	8	12	10	5.6	92
DODGE CITY	2582	922.5	1011.0	86	62	73.8	-.6	93	3	52	21	10	0	56	58	5.94	2.91	3.01	8	10	0.0	0	6.5	17	49	NW	18	9	12	9	5.4	85
GOODLAND	3654	886.9	1011.0	84	57	70.5	.8	92	4	48	20	5	0	54	63	4.76	2.10	2.58	13	16	0.0	0	5.3	15	29	4	26+	8	15	7	5.3	
TOPEKA	877	981.7	1012.7	88	61	74.3	-.4	97	8+	48	21	13	0	59	62	1.14	-3.37	1.10	4	4	0.0	0	2.8	16	29	SW	13	9	15	6	5.3	71
WICHITA	1321	964.8	1011.4	90	63	76.7	.2	98	30+	50	1	18	0	58	55	2.02	-2.19	1.04	5	7	0.0	0	5.1	16	47	NW	19	9	13	8	5.4	80
KENTUCKY																																
COVINGTON	869	982.4	1013.6	76	55	65.3	-6.5	86	27+	39	11	0	0	54	68	2.41	-1.48	1.40	7	4	0.0	0	2.4	25	21	36	23	4	11	15	7.1	
LEXINGTON	966	979.3	1014.3	78	57	67.6	-6.0	88	19	42	11+	0	0	56	69	3.61	-1.11	0.97	9	7	0.0	0	1.8	23	21	21	15	7	11	12	6.1	
LOUISVILLE	477	995.9	1013.3	82	60	70.6	-2.8	91	14	45	1	2	0	56	62	1.08	-2.91	0.37	8	8	0.0	0	1.4	26	26	S	28	4	16	10	5.9	67
LOUISIANA																																
ALEXANDRIA	92	1009.1	1013.5	90	68	79.0	-.7	96	27+	50	1	18	0	68	75	1.86	-2.43	0.60	7	8	0.0	0	1.3	21	35	12	8	10	11	9	5.0	
BATON ROUGE	64	1010.8	1013.4	93	71	82.0	1.1	99	7+	55	1	28	0	71	74	2.43	-1.66	1.07	6	3	0.0	0	0.7	16	25	6	9	7	16	7	5.5	
LAKE CHARLES	9	1012.2	1013.1	91	72	81.3	.1	95	30+	61	1	20	0	71	76	0.93	-3.79	0.55	6	5	0.0	0	2.3	18	26	35	16	9	15	6	5.3	
NEW ORLEANS	4	1012.2	1013.2	91	71	80.8	.7	95	30+	55	3+	19	0	70	72	3.10	-1.33	2.76	5	4	0.0	0	0.4	20	29	5	9	9	15	6	5.3	
SHREVEPORT	254	1003.7	1012.8	92	70	80.8	.2	98	26+	55	1	19	0	69	72	2.76	-0.58	0.82	9	6	0.0	0	2.1	17	35	27	30	11	7	12	5.5	62
MAINE																																
CARIBOU	624	988.8		71	52	61.5	2.5	83	15	37	12	0	0			4.97	0.90	1.53	12		0.0	0						3	7	20	7.5	
PORTLAND	43	1010.2	1012.4	68	52	59.6	-2.5	75	17+	37	12	0	0	55	87	4.24	1.06	1.84	16	2	0.0	0	2.9	16	29	NW	9	3	8	19	7.7	32
MARYLAND																																
BALTIMORE	148	1007.1	1012.5	77	59	68.1	-4.4	[illegible]9	4	40	11	0	0	58	74	9.95	6.66	5.23	16	5	0.0	0	2.7	25	37	NW	22	5	9	16	7.0	43
MASSACHUSETTS																																
BLUE HILL OBS R	629			71	54	62.9	-2.2	82	4	40	11	0	0			7.15	3.40	1.72	16		0.0	0			44	SSE	22					42
BOSTON	15	1011.2	1012.1	73	58	65.4	-2.4	86	4	48	11	0	0	56	76	6.76	3.28	1.59	16	5	0.0	0	2.2	21	30	E	22	4	5	21	7.5	41
WORCESTER	986	976.6	1013.2	70	54	62.2	-2.4	81	28+	38	11	0	0	52	71	9.25	5.41	2.63	18	4	0.0	0	3.0	24	25	33	10	2	7	21	7.9	
MICHIGAN																																
ALPENA	689	987.8	1013.0	70	45	57.4	-3.2	87	14	31	11	0	2	47	70	1.44	-1.23	0.55	11	3	0.0	0	1.2	34	27	NW	22	9	7	14	6.3	54
DETROIT	619			74	55	64.6	-5.1	90	14	41	11+	1	0	51	62	2.17	-0.66	0.66	12	3	0.0		2.3	31	26	34	22					
DETROIT METRO	633	988.5	1012.4	75	54	64.2	-3.7	88	14	36	11	0	0	54	71	3.30	-0.01	1.96	13	3	0.0	0	2.4	31	29	N	23	7	6	17	6.8	59
FLINT	771	984.8	1012.4	72	53	62.5	-4.1	86	14	38	11	0	0	52	70	3.10	-0.02	1.48	13	4	0.0	0	1.7	33	28	27	14	5	11	14	6.8	
GRAND RAPIDS	784	984.4	1013.1	75	52	63.5	-4.0	89	14	33	11	0	0	52	68	4.64	1.33	3.28	12	4	0.0	0	2.7	29	24	SW	14+	6	9	15	6.7	59
HOUGHTON LAKE	1149	971.6	1013.5	71	47	59.1	-3.5	84	3	29	11	0	1	50	72	2.00	-1.12	0.47	13	5	0.0	0	2.7	33	20	24	14	6	11	13	6.5	
LANSING	841	981.7	1013.0	73	50	61.6	-5.8	88	14	32	11	0	1	53	73	3.28	-0.06	1.84	14	4	0.0	0	2.3	30	27	SW	14	6	8	16	6.9	45
MARQUETTE U	677			66	48	57.0	-3.1	86	19	33	10	0	0			1.70	-1.76	1.29	7		0.0	0			25	[illegible]	19	9	9	12	5.9	60

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
II	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	990.9	1013.7	74	50	61.7	-5.0	87	19	31	11	0	1	50	68	3.29	0.59	1.81	11	4	0.0	0	2.9	30	23	34	22	11	5	14	5.9	
SAULT STE MARIE	721	986.5	1012.7	70	45	57.3	-1.7	82	29	31	10	0	2	48	73	1.29	-2.01	0.66	6	2	0.0	0	2.1	33	25	W	15	7	10	13	6.4	59
MINNESOTA																																
DULUTH	1428	963.1	1014.2	71	46	58.4	-.4	88	8	27	10	0	2	46	66	3.70	-0.57	1.29	10	4	0.0	0	0.8	11	33	NW	14	9	10	11	5.9	68
INTERNATIONAL FALLS	1179	970.5	1013.3	76	49	62.8	2.9	89	7	32	16	0	1	47	58	1.52	-2.35	0.54	8	3	0.0	0	0.8	25	25	29	14	12	10	8	5.0	
MINNEAPOLIS	834	983.7	1013.7	78	54	66.0	-.8	92	13+	41	10	2	0	52	61	3.31	-0.69	1.06	9	5	0.0	0	0.8	8	36	SW	13	7	8	15	6.2	75
ROCHESTER	1297	966.8	1014.0	79	52	65.6	-1.4	92	12	36	10	2	0	53	65	1.11	-3.35	0.72	9	3	0.0	0	1.0	21	39	20	13	6	10	14	6.2	
ST CLOUD	1028	977.3	1014.1	77	51	63.9	-1.3	91	13	35	10	1	0			1.91	-2.58	0.66	6		0.0	0						7	11	12	5.8	
MISSISSIPPI																																
JACKSON	310	1002.0	1013.7	91	68	79.6	-.2	98	7	49	1	22	0	68	74	2.01	-1.78	1.15	7	8	0.0	0	0.6	16	34	N	25	7	11	12	5.7	72
MERIDIAN	290	1002.7	1013.8	90	66	77.9	-1.6	99	7	49	2+	16	0	65	70	4.17	0.10	1.59	6	6	0.0	0	0.2	26	25	35	29	7	13	10	5.7	
MISSOURI																																
COLUMBIA REGIONAL	887	982.4	1014.0	85	60	72.9	-.1	94	30	45	11+	9	0	58	61	0.66	-3.68	0.48	5	4	0.0	0	1.2	20	26	NE	9	12	12	6	4.9	86
KANSAS CITY	742	986.1	1012.5	88	66	76.9	1.0	98	8	56	23+	13	0	58	59	2.71	-1.86	2.00	6	5	0.0	0	1.4	15	37	NW	28	11	15	4	4.5	72
ST JOSEPH	811			89	62	75.6	1.6	100	9+	48	22+	14	0	56	56	2.64	-3.29		5				2.3	15	23	32	20+	10	12	8	5.2	
ST LOUIS	535	993.6	1013.6	87	60	73.4	-.7	96	9	45	11+	9	0	58	60	1.19	-3.10	0.61	7	6	0.0	0	0.8	28	28	S	14	7	13	10	5.6	80
SPRINGFIELD	1268	969.2	1013.7	89	59	74.2	.0	97	8	43	1	16	0	57	58	1.62	-3.40	1.05	6	7	0.0	0	2.8	16	34	W	26	12	13	5	4.4	81
MONTANA																																
BILLINGS	3567	889.3	1011.0	80	54	67.0	1.9	94	29	44	20	2	0	43	46	0.91	-1.64	0.40	10	10	0.0	0	2.8	27	40	NW	2	5	17	8	5.9	68
GLASGOW	2284	930.6	1011.2	78	53	65.6	3.3	88	30+	41	20+	0	0	49	59	3.77	0.79	2.47	9	8	0.0	0	2.4	11	39	24	25	8	17	5	5.0	
GREAT FALLS	3662	885.9	1010.8	79	52	65.2	5.3	91	6	42	19	3	0	42	47	0.94	-1.96	0.81	7	4	0.0	0	7.5	24	43	SW	16	6	15	9	5.7	74
HAVRE	2584	919.7	1009.8	82	52	67.3	6.3	95	6	36	19	6	0	42	45	0.54	-2.19	0.28	5	3	0.0	0	3.2	25	38	SW	11	7	20	3	5.0	82
HELENA	3828	879.1	1012.4	75	48	61.8	2.3	87	6	36	19	0	0	39	48	1.12	-1.11	0.56	7	10	0.0	0	5.1	27	42	S	8	3	15	12	6.3	69
KALISPELL	2965	909.9	1013.7	73	46	59.6	1.0	88	6	35	24	0	0	43	60	1.69	-0.52	0.57	12	6	0.0	0	2.3	21	25	23	12+	7	7	16	6.6	
MILES CITY	2629	919.4	1010.4	81	57	68.6	3.0	94	7	45	20	3	0	51	57	3.62	0.91		9	8	0.0		1.1	2								
MISSOULA	3190	903.2	1013.7	77	47	62.0	3.5	92	6	35	12	1	0	45	59	1.37	-0.54	0.68	11	5	0.0	0	2.3	30	33	SW	12	6	11	13	6.2	61
NEBRASKA																																
GRAND ISLAND	1841	947.5	1012.2	85	60	72.5	1.5	98	8	43	21	8	0	53	55	1.86	-1.93	0.65	8	5	0.0	0	3.3	16	30	34	19	6	13	11	6.1	
LINCOLN U	1150			85	64	74.5	1.4	98	30	49	21	10	0			2.23	-2.27	0.86	6		0.0	0			34	NE	9	7	10	13	6.1	74
NORFOLK	1544			84	59	71.4	.5	99	8	42	21	8	0			3.70	-0.56	2.31	8		0.0	0						6	11	13	6.2	
NORTH PLATTE	2775	916.0	1012.1	82	55	68.4	-.7	92	9+	41	21	5	0	55	66	2.96	-0.29	1.11	12	15	0.0	0	4.7	13	36	NW	14	5	14	11	6.3	64
OMAHA	977	978.0	1012.5	85	60	72.6	-.5	98	30	45	21	10	0	58	64	1.03	-3.50	0.90	5	6	0.0	0	3.0	15	30	NW	19	8	11	11	5.9	68
SCOTTSBLUFF	3957	878.1	1011.1	82	54	68.2	1.3	92	30+	41	20	3	0	50	59	4.43	1.33	1.43	14	12	0.0	0	3.5	12	32	2	3	8	14	8	5.8	
VALENTINE	2587			81	54	67.7	.2	94	30+	35	20	7	0			2.55	-0.56	1.01	11		0.0	0			40	SW	26	4	14	12	6.5	61
NEVADA																																
ELKO	5050	843.6	1011.5	80	48	64.1	4.1	93	30	38	25	2	0	37	41	1.46	0.75	0.84	6	11	0.0	0	2.2	25	24	18	15	11	8	11	5.2	
ELY	6253	808.7	1010.0	79	45	61.9	3.3	94	30	36	26	2	0	37	45	0.83	0.33	0.34	7	7	0.0	0	5.2	20	40	W	18	7	16	7	5.4	73
LAS VEGAS	2162	934.0	1008.4	98	71	84.7	1.8	114	30	65	27+	29	0	38	22	0.32	0.28	0.22	3	6	0.0	0	6.7	21	32	SW	6	17	5	8	3.8	86
RENO	4404	864.5	1011.5	85	46	65.1	5.0	100	30+	33	11	8	0	37	38	0.18	-0.19	0.14	4	3	0.0	0	3.3	27	31	W	23	19	3	8	3.6	92
WINNEMUCCA	4301	866.9	1011.2	87	50	68.1	6.6	103	29	29	11	13	1	38	37	0.55	-0.21	0.41	5	7	0.0	0	2.7	30	34	SE	22	15	7	8	4.5	83
NEW HAMPSHIRE																																
CONCORD	342	999.7	1012.2	73	53	62.8	-1.7	87	15	30	12	0	2	57	83	3.54	-0.06	1.95	16	1	0.0	0	1.7	17	29	W	10	3	6	21	7.9	33
MT WASHINGTON OBS	6262			48	38	43.2	-1.7	60	15	19	11	0	5			10.40	3.90	1.82	16	0	2.0	T			93Y	E	22	0	3	27	9.3	14
NEW JERSEY																																
ATLANTIC CITY	64	1009.8	1012.3	75	58	66.1	-3.9	85	9	38	11	0	0	57	75	4.82	1.99	1.91	11	2	0.0	0	4.4	21	31	29	22	4	10	16	7.0	47
ATLANTIC CITY U	11			69	60	64.5	-4.5	80	8	45	11	0	0			5.21	2.17	1.53	10						49	NW	22					
NEWARK	7	1010.8	1012.0	76	62	68.8	-2.5	88	15+	46	11	0	0	59	73	6.02	2.58	1.71	17	4	0.0	0	2.9	20	29	22	22	3	7	20	7.7	
TRENTON U	56			75	60	67.6	-3.4	84	15+	43	11	0	0			6.09	2.49	1.97	20		0.0	0			29	SW	22	4	9	17	7.5	40
NEW MEXICO																																
ALBUQUERQUE	5311	837.8	1009.9	90	57	73.7	-1.2	102	29	50	9	18	0	39	36	0.55	-0.02	0.32	4	5	0.0	0	1.9	19	47	E	29+	15	12	3	3.6	78

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
II	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW MEXICO																																
CLAYTON	4969			86	56	70.1	-.1	94	25	53	25+	2	0			3.08	1.60	1.72	6		0.0	0						13	11	6	4.2	
ROSWELL	3612			94	61	77.5	.4	103	28+	47	1	21	0			2.06	1.01	1.14	7		0.0	0			38	SW	29					80
NEW YORK																																
ALBANY	275	1001.4	1011.9	73	54	63.6	-3.7	83	29+	37	11	0	0	52	69	6.84	3.59	1.65	15	6	0.0	0	3.0	18	29	NW	10	2	6	22	8.3	35
BINGHAMTON	1590	953.9	1011.8	70	54	62.2	-1.3	84	15	35	11	0	0	54	76	9.18	5.33	3.19	19	8	0.0	0	2.4	23	28	SE	23	2	5	23	8.3	33
BUFFALO	705	986.1	1011.5	71	54	62.6	-2.2	85	19	36	11	0	0	53	73	6.06	3.52	2.34	15	4	0.0	0	2.3	26	31	SW	8	3	6	21	7.8	47
NEW YORK U	132	1008.8	1012.1	75	61	67.9	-3.5	86	4	46	11	0	0	58	75	9.30	5.99	2.19	18	3	0.0	0	1.6	22	36	NE	22					29
NEW YORK KENNEDY	13	1011.5	1012.4	74	62	68.0	-2.1	87	9	50	11	0	0	58	73	6.70	3.35	1.60	18	4	0.0	0	4.6	18	32	24	22	4	10	16	7.4	
NEW YORK LA GUARDIA	11	1011.2	1012.1	73	59	65.8	-5.7	83	9	46	11	0	0	56	74	8.15	4.77	2.17	17	4	0.0	0	2.4	19	41	NE	22	4	7	19	7.7	
ROCHESTER	547	991.5	1011.5	75	55	65.2	-1.7	93	15	36	11	2	0	57	77	6.56	4.00	2.19	12	2	0.0	0	2.9	27	36	W	15	4	8	18	7.3	54
SYRACUSE	410	996.3	1011.1	74	55	64.5	-2.8	92	15	38	11	1	0	56	75	12.30	9.34	3.88	15	4	0.0	0	1.3	26	33	NW	15	6	4	20	7.4	29
NORTH CAROLINA																																
ASHEVILLE	2140	939.4	1014.4	79	54	66.5	-3.6	86	5	40	12+	0	0	57	75	6.54	3.02	3.54	8	5	0.0	0	2.9	34	29	33	21	11	12	7	5.1	79
CAPE HATTERAS R	7	1013.5	1013.9	79	64	71.5	-3.7	84	28+	45	12	0	0	63	73	1.83	-2.31	3.00	9	5	0.0	0	4.3	20	37	29	21	10	13	7	5.3	63
CHARLOTTE	736	986.1	1013.2	83	60	71.3	-5.8	90	6	45	12	1	0	57	64	3.01	-0.60	2.06	7	2	0.0	0	1.8	24	23	W	23+	12	8	10	5.2	77
GREENSBORO	897	982.4	1013.5	80	58	68.7	-6.1	85	18+	42	12+	0	0	57	69	6.37	2.90	4.91	8	2	0.0	0	2.2	23	31	NW	22	9	9	12	5.8	66
RALEIGH	434	997.6	1013.1	82	58	69.9	-5.2	88	6	43	12	0	0	58	67	4.16	0.46	2.47	6	3	0.0	0	2.2	22	28	26	28	10	8	12	5.7	52
WILMINGTON	28	1012.2	1013.6	84	62	72.7	-5.0	90	29+	49	12	3	0	62	73	3.50	-0.76	1.90	10	4	0.0	0	2.5	19	27	NE	10	9	10	11	5.7	75
NORTH DAKOTA																																
BISMARCK	1647	953.3	1012.4	77	53	65.2	.7	90	29	36	20	1	0	53	66	1.81	-1.59	0.66	7	9	0.0	0	2.3	14	45	SW	12	5	12	13	6.4	66
FARGO	896	980.7	1013.0	81	53	66.9	2.1	92	29+	38	16+	2	0	51	57	0.58	-2.46	0.27	8	6	0.0	0	1.9	16	36	W	2	7	15	8	5.7	73
WILLISTON	1899	944.1	1011.5	78	54	65.8	2.7	88	29+	38	20	0	0	51	63	1.18	-2.13	0.45	10	7	0.0	0	1.8	16	38	SE	23	5	17	8	5.8	72
OHIO																																
AKRON	1208	968.8	1012.8	74	53	63.2	-6.2	86	19+	32	11	0	1	53	73	3.20	-1.06	0.63	13	4	0.0	0	3.4	27	28	32	22	6	5	19	7.3	
CINCINNATI ABBE OB	761			77	57	66.9	-6.5	90	4	40	11	1	0			2.50	-1.68	1.13	7		0.0	0			29	NW	29					53
CLEVELAND	777	984.1	1013.1	72	53	62.7	-5.1	87	19+	31	11	0	1	54	75	9.06	5.63	4.00	15	4	0.0	0	2.5	27	33	NW	22	6	6	18	7.1	50
COLUMBUS	812	983.7	1013.5	74	54	63.6	-7.2	86	19	35	11	0	0	52	68	3.98	-0.18	1.98	9	5	0.0	0	2.4	25	35	SW	29	5	8	17	7.0	52
DAYTON	1002	977.7	1013.4	77	56	66.8	-4.7	89	4	40	11	0	0	55	68	3.04	-1.06	1.67	7	4	0.0	0	3.0	26	25	NW	23	4	11	15	6.9	50
MANSFIELD	1295			76	56	66.0	-4.4	90	19	38	11	1	0	56	70	3.75	-0.48	1.55	12	3	0.0	0	4.2	26	23	31	23+	6	7	17	7.3	
TOLEDO	669	987.8	1012.6	75	53	63.9	-4.4	88	14	32	11	0	1	53	70	4.09	0.30	1.83	14	7	0.0	0	2.5	29	25	N	23+	3	9	18	7.3	44
YOUNGSTOWN	1178	970.5	1012.7	71	50	60.8	-6.3	85	19	30	11	0	1	54	81	4.43	0.85	1.18	15	5	0.0	0	3.2	27	28	28	15	2	10	18	7.6	
OKLAHOMA																																
OKLAHOMA CITY	1285	966.8	1011.9	92	66	79.0	1.0	102	27+	52	1	21	0	62	62	1.36	-3.11	0.66	8	10	0.0	0	6.1	14	35	NW	27	15	7	8	4.4	82
TULSA	650	988.5	1012.3	91	68	79.5	2.2	97	30+	52	1	23	0	62	58	2.69	-2.00	1.06	5	5	0.0	0	5.0	17	34	E	14	13	12	5	4.3	81
OREGON																																
ASTORIA	8	1016.9	1017.6	65	51	58.3	1.0	73	13	41	2	0	0	53	84	0.92	-2.10	0.38	12	1	0.0	0	5.1	29	25	21	8	4	8	18	7.5	
BURNS J	4151	872.0	1013.0	78	47	62.2	2.4	92	28	31	11	2	1	40	46	0.40	-0.48	0.29	3		0.0	0	3.3	30				14	11	5	4.2	
EUGENE	359	1002.7	1016.1	75	47	60.9	.0	89	28	39	10	0	0	50	70	1.91	0.49	1.13	6	4	0.0	0	4.0	33	23	26	10	7	9	14	6.2	
MEACHAM	4050	876.7	1014.4	67	46	56.1	2.4	84	6	36	26	0	0			1.34	-1.11	0.59	9		0.0	0			16	31	23	5	14	11	6.1	
MEDFORD	1298	967.2	1014.1	82	49	65.4	1.2	98	28	38	11	5	0	48	59	1.59	0.57	0.97	5	4	0.0	0	3.4	32	20	21	10	11	11	8	4.4	
PENDLETON	1482	960.7	1013.6	82	55	68.3	2.5	96	28	47	22	4	0	44	45	0.80	-0.37	0.26	7	5	0.0	0	4.6	25	32	26	20	6	17	7	5.8	
PORTLAND	21	1015.2	1016.4	75	53	64.0	2.0	88	28	47	10	0	0	50	64	0.68	-0.99	0.37	5	2	0.0	0	3.8	32	23	NW	30+	6	9	15	6.8	66
SALEM	196	1008.8	1016.2	73	47	60.0	-.6	87	28	40	10+	0	0	47	63	0.69	-0.76	0.44	6	2	0.0	0	2.5	33	21	36	30	10	6	14	6.0	
SEXTON SUMMIT R	3836	883.8	1014.4	69	46	57.5	1.8	83	28	34	10+	0	0			0.93	-0.60	0.55	2		0.0	0			38	23	10					
PACIFIC AREA																																
GUAM TAGUAC R	361	996.6	1009.3	86	73	79.4	-.8	89	9	63	9	0	0	74	85	7.95	2.08	3.43	23	0	0.0	0	8.0	8	26	E	19	3	12	15	7.0	63
JOHNSTON	7	1012.9	1013.4	83	77	79.6	-.7	84	25+	73	12	0	0	72	77	1.03	0.19	0.21	13	0	0.0	0	16.3	8	27	E	26	4	9	17	7.1	70
KOROR R	94	1005.1	1008.9	85	76	81.7	.6	91	17	73	27+	8	0	76	86	20.68	7.70	5.82	20	2	0.0	0	2.7	27	23	SW	7	0	4	26	9.4	48
KWAJALEIN	8	1008.1	1009.1	87	77	81.9	.5	89	2	74	2	0	0	76	82	11.84	3.16	1.99	24	1	0.0	0	8.3	8	35	7	30	1	3	26	9.0	
MAJURO	10	1009.5	1009.7	86	77	81.5	1.2	88	20+	72	26+	0	0	75	81	14.88	2.04	6.73	21	1	0.0	0	6.2	8	31	E	25	0	10	20	8.4	58
PAGO PAGO	12	1011.5	1011.6	86	75	80.1		88	13+	68	28	0	0	73	81	3.67		1.09	12	1	0.0	0	5.6	11	24	SE	22	0	13	17	7.1	42

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ◊	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
II	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
PONAPE R	123	1002.7	1007.8	88	74	81.0	.9	90	22+	71	12+	2	0	75	85	9.73	-6.97	2.28	25	3	0.0	0	2.3	16	26	SW	1	0	7	23	8.7	70
TRUK MOEN ISLAND	5	1008.1	1008.5	86	76	81.4	.7	89	25+	71	4	0	0	76	85	14.73	2.86	7.61	23	3	0.0	0	0.5	20	40	SW	4	0	3	27	9.4	70
WAKE	11	1012.2	1012.6	87	77	81.9	.5	90	18	73	2	1	0	72	75	1.30	-0.60	0.41	13	1	0.0	0	13.1	9	32	S	4	7	11	12	6.1	65
YAP R	44			87	75	81.4	-.5	90	25	73	5	1	0			10.18	-0.54	3.36	24	4	0.0	0			17	SW	8+	1	13	16	7.6	71
PENNSYLVANIA																																
ALLENTOWN	387	998.3	1012.2	75	58	66.6	-2.8	87	15	39	11	0	0	58	75	8.58	4.51	3.52	17	6	0.0	0	1.8	22	29	32	10	5	5	20	7.7	
ERIE	731	985.8	1012.4	67	52	59.8	-4.5	82	15+	32	11	0	1	53	80	7.50	4.45	2.09	15	5	0.0	0	2.2	24	37	32	15	2	9	19	7.7	
HARRISBURG	338	999.7	1012.2	75	60	67.7	-3.6	87	15	44	11	0	0	57	70	18.55	15.13	12.55	16	5	0.0	0	1.5	26	30	W	22	6	5	19	7.3	44
PHILADELPHIA	5	1011.2	1012.1	77	60	68.7	-2.3	86	15+	44	11	0	0	60	76	5.79	1.74	3.22	18	4	0.0	0	2.8	22	34	W	22	4	7	19	7.3	44
PITTSBURGH	1137	969.2	1012.8	73	54	63.8	-4.6	85	19+	34	11	0	0	53	70	5.08	1.30	1.64	16	6	0.0	0	5.2	27	29	30	23	2	8	20	7.9	43
SCRANTON	930	977.7	1011.6	71	55	62.9	-5.3	82	15	34	11	0	0	56	79	7.04	3.13	3.10	17	5	0.0	0	2.5	21	25	NW	10	3	4	23	8.3	34
WILLIAMSPORT	524	993.2	1011.9	72	56	64.0	-5.2	84	15	41	11	0	0	57	79	16.80	13.57	8.66	18	8	0.0	0	1.1	28	23	27	22+	2	6	22	8.2	
RHODE ISLAND																																
BLOCK ISLAND	110			67	56	61.6	-1.3	75	30+	44	12	0	0			6.20	3.64	2.39	12		0.0	0										
PROVIDENCE	51	1010.5	1012.7	73	57	64.9	-1.3	85	9	44	12	0	0	57	78	6.83	4.07	2.09	16	6	0.0	0	3.5	1[illegible]	26	18	22	2	8	20	7.8	38
SOUTH CAROLINA																																
CHARLESTON	40	1011.9	1013.6	85	63	74.0	-5.2	91	21+	50	12+	4	0	63	71	5.29	0.31	2.29	9	6	0.0	0	2.4	20	44Y	W	10	14	10	6	4.6	72
CHARLESTON U	9			83	69	75.9	-3.7	92	21	61	2	2	0			4.81	0.56	1.71	9		0.0	0			47	E	19					
COLUMBIA	213	1005.4	1013.5	86	62	73.9	-5.8	93	6	46	12	10	0	62	71	6.10	2.25	3.08	9	5	0.0	0	0.8	23	24	8	19	9	15	6	4.7	67
GRNVLLE-SPRTNBRG	957	979.3	1013.3	83	59	70.9	-6.1	92	6+	40	1	2	0	56	63	8.16	5.27	4.66	9	6	0.0	0	1.2	25	27	N	9	11	12	7	5.0	67
SOUTH DAKOTA																																
ABERDEEN	1296	966.5	1012.6	80	55	67.2	.6	90	29+	43	21	2	0	56	68	1.80	-1.96	0.82	6	8	0.0	0	1.9	12	25	32	27	10	9	11	5.7	
HURON	1281	966.1	1012.1	78	54	66.1	-1.5	90	12	40	21	1	0	57	72	1.25	-1.89	0.66	9	5	0.0	0	3.2	13	26	S	11	7	12	11	6.1	68
RAPID CITY	3162	902.8	1011.8	77	53	64.7	-.2	87	29+	36	20	0	0	55	75	4.11	1.03	2.32	12	14	0.0	0	1.1	3	42	NW	13	4	13	13	6.6	43
SIOUX FALLS	1418	962.4	1013.1	79	54	66.7	-1.4	90	12	39	22	1	0	54	66	2.09	-2.26	0.74	10	4	0.0	0	2.9	12	26	7	9	9	10	11	5.9	
TENNESSEE																																
BRISTOL	1507	960.7	1014.0	78	57	67.4	-5.8	88	15	42	11	0	0	57	72	2.97	-0.41	1.04	11	5	0.0	0	1.6	29	21	31	21	8	10	12	6.3	
CHATTANOOGA	665	989.2	1013.6	83	58	70.2	-7.9	92	6+	41	1	2	0	56	64	3.95	0.25	2.40	13	5	0.0	0	0.9	31	29	N	6	13	11	6	4.5	66
KNOXVILLE	980	979.7	1014.3	81	60	70.8	-4.9	91	15	44	1	1	0	57	65	5.02	1.69	3.57	7	4	0.0	0	2.8	30	31	NW	6	9	14	7	5.6	64
MEMPHIS	258	1003.4	1013.4	88	67	77.5	-1.0	95	20+	52	1	14	0	61	57	5.50	1.82	2.10	7	6	0.0	0	1.7	17	35	23	14	12	13	5	4.4	83
NASHVILLE	590	992.2	1013.4	85	61	73.0	-4.4	93	27+	43	1	6	0	60	66	2.54	-0.71	0.93	7	7	0.0	0	2.0	27	34	SW	28	9	13	8	5.3	60
OAK RIDGE R	905			81	58	69.8	-4.7	91	6	40	1	1	0			5.56	2.32	2.87	11		0.0	0			46Y		29	9	12	9	5.2	
TEXAS																																
ABILENE	1784	950.6	1011.9	92	69	80.6	.3	106	27+	57	1	17	0	63	60	3.67	1.00	2.10	4	6	0.0	0	7.9	17	51	NE	28	13	9	8	4.7	90
AMARILLO	3604	889.6	1009.9	87	61	73.6	-3.4	96	25	52	1	8	0	52	52	3.87	0.98	1.28	9	10	0.0	0	7.8	17	64	NE	21	15	12	3	3.6	83
AUSTIN	597	990.5	1011.8	91	72	81.7	-.2	98	26+	65	4+	20	0	68	69	2.20	-1.02	1.80	8	4	0.0	0	5.7	17	21	N	29	10	12	8	4.9	75
BROWNSVILLE	19	1010.8	1011.5	87	74	80.6	-2.1	91	30+	68	5+	11	0	73	79	8.52	5.56	4.32	12	1	0.0	0	6.6	13	26	SE	10	13	8	9	5.1	76
CORPUS CHRISTI	41	1010.5	1012.0	90	74	82.0	-.3	97	30	68	6+	13	0	74	81	3.65	1.26	1.75	9	3	0.0	0	8.1	13	26	SE	28	11	11	8	4.8	85
DALLAS	481	994.6	1011.6	92	72	82.1	.8	104	25	61	1	20	0	67	63	2.80	-0.44	1.50	6	7	0.0	0	7.5	15	47	NW	21	12	11	7	4.6	69
DEL RIO	1026	975.3	1010.6	94	71	82.2	-2.2	103	21	58	1	23	0	67	63	1.82	-0.47	0.84	7	2	0.0	0	9.9	13	23	6	15	9	13	8	5.1	
EL PASO	3918	880.5	1009.2	91	65	78.3	-2.7	101	29	52	1	22	0	47	39	1.62	0.93	0.53	8	8	0.0	0	0.9	24	44	W	8	16	10	4	3.8	88
FORT WORTH	537	991.9	1011.8	93	70	81.4	-.1	105	25	55	1	22	0	66	64	1.50	-1.48	0.80	4	9	0.0	0	6.3	16	28	2	21	13	10	7	4.5	
GALVESTON	7			86	78	81.8	.1	93	19	70	2	3	0			0.50	-2.15	0.24	7		0.0	0			28	S	25					75
HOUSTON INTERCON	96	1009.1	1012.8	91	70	80.8	-.2	98	29	61	4+	20	0	71	77	3.02	-0.52	1.20	6	6	0.0	0	2.7	16	29	2	21	11	8	11	5.4	65
LUBBOCK	3254	901.8	1010.0	89	65	76.9	-.6	102	27	56	5+	12	0	58	58	5.37	2.84	1.84	9	10	0.0	0	5.2	17	40	14	28	13	13	4	3.9	
MIDLAND	2851	914.0	1009.8	92	66	78.9	-2.3	104	28	53	1	16	0	58	57	1.70	0.07	0.78	5	7	0.0	0	5.8	15	35	36	15+	14	11	5	4.3	
PORT ARTHUR	16	1012.5		89	71	80.2	-.4	93	30+	63	3	19	0	71	78	3.43	-0.86	2.92	7	6	0.0	0	3.5	17	31	N	21	14	8	8	4.7	68
SAN ANGELO	1903	945.8	1010.2	93	70	81.1	-1.4	104	28	51	1	16	0	62	57	4.21	2.39	2.31	5	5	0.0	0	6.1	18	29	32	15	16	7	7	4.1	
SAN ANTONIO	788	984.8	1012.2	89	71	80.3	-1.6	96	26+	59	1	15	0	70	75	2.86	-0.09	1.08	7	1	0.0	0	5.3	14	28	NW	16	10	13	7	5.3	63
VICTORIA	104	1008.5	1012.5	91	74	82.1	.8	95	30+	65	6	17	0	71	76	3.17	0.13	1.13	9	4	0.0	0	4.9	15	30Y	SW	26	11	10	9	5.3	
WACO	501	994.2	1011.8	93	72	82.7	.7	103	26	57	1	23	0	68	65	3.05	0.38	1.22	6	7	0.0	0	8.6	17	25	36	29+	15	5	10	4.9	
WICHITA FALLS	994	974.9	1010.5	97	67	82.0	.2	111	25	56	1	29	0	64	59	1.75	-1.45	0.97	5	6	0.0	0	7.6	16	31	28	22	11	8	11	5.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
II	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
MILFORD	5028	844.9		86	52	69.1	3.7	99	30	44	12	7	0			0.66	0.23	0.27	6		0.0	0			37	SW	23+	11	11	8	4.7	70
SALT LAKE CITY	4220	870.0	1010.5	85	58	71.9	4.5	97	30	48	19	8	0	44	39	0.15	-0.83	0.08	7	10	0.0	0	3.1	17	37	N	17+	10	11	9	5.5	77
WENDOVER	4237	868.9	1011.1	84	61	72.6	2.8	96	30	53	19	4	0	37	30	0.31	-0.15	0.12	6		0.0	0						9	10	11	5.3	
VERMONT																																
BURLINGTON	332	999.0	1011.3	72	54	63.1	-1.1	88	15	35	11	0	0	55	77	6.52	3.03	2.83	16	3	0.0	0	3.0	19	31	S	15	2	8	20	7.7	39
VIRGINIA																																
LYNCHBURG	916			78	57	67.7	-5.3	87	15	41	11	0	0			8.58	4.52	6.27	12		0.0	0			24	W	22	8	8	14	6.3	54
NORFOLK	24	1011.9	1012.9	79	62	70.5	-5.1	87	16	49	12	0	0	60	72	4.93	1.32	1.68	13	5	0.0	0	4.0	19	42	NW	22	10	11	9	5.4	75
RICHMOND	164	1006.1	1012.6	80	60	70.1	-5.0	89	16	46	12	0	0	61	75	8.82	5.07	3.91	14	5	0.0	0	1.9	22	31	NW	21	7	9	14	6.0	66
ROANOKE	1149	971.6	1013.1	79	57	67.7	-5.7	88	5	42	12+	0	0	55	68	7.55	3.75	3.98	10	4	0.0	0	3.1	30	32	32	22	5	11	14	6.6	
WALLOPS ISLAND	9			73	61	67.2		84	29	48	11	0	0			7.60		3.30	12		0.0	0			68Y	NW	22					
WASHINGTON																																
OLYMPIA	195	1009.5	1016.6	70	46	58.0	-1.1	82	8	36	2	0	0	49	75	1.07	-0.72	0.52	6	1	0.0	0	3.1	19	20	21	23	4	6	20	7.5	
QUILLAYUTE	179	1009.8	1017.4	64	47	55.8	.0	75	8	37	1	0	0	49	79	1.49	-1.89	0.50	14	0	0.0	0	2.7	26	17	NW	2	2	7	21	8.1	29
SEATTLE-TACOMA	400	1000.0	1016.2	68	52	60.1	.3	78	8	49	22+	0	0	49	72	1.81	0.23	0.75	12	2	0.0	0	1.4	24	22	SW	10+	4	6	20	7.6	46
SPOKANE	2356	929.9	1012.8	73	51	62.0	.1	90	6	41	13	1	0	44	56	1.56	0.07	0.62	8	4	0.0	0	4.2	21	25	SW	11	7	5	18	6.8	51
STAMPEDE PASS R	3958	879.4		56	43	49.5	.6	75	6	36	11+	0	0			5.54	1.45	1.98	15		0.0	61						4	3	23	8.1	
WALLA WALLA U	949			80	57	68.3	1.1	96	6	50	24+	4	0			1.12	-0.10	0.50	8		0.0	0			27	SW	6	4	16	10	6.0	65
YAKIMA	1052	975.3	1013.1	81	50	65.6	1.2	94	6	40	12	5	0	45	50	1.50	0.69	0.65	6	4	0.0	0	4.2	31	38	20	9	6	15	9	6.0	
WEST INDIES																																
SAN JUAN P.R.	13	1013.9	1016.6	90	78	83.8	3.8	96	21	75	15+	13	0	7[illegible]	66	1.58	-4.08	0.64	7	5	0.0	0	8.2	11	32	E	29	4	14	12	6.6	48
WEST VIRGINIA																																
BECKLEY	2504	926.9	1013.8	71	52	61.3	-6.5	84	15	32	11	0	1	53	77	5.46	1.00	1.39	15	5	0.0	0	3.7	26	25	27	23	2	9	19	7.7	
CHARLESTON	939	979.7	1013.5	76	54	64.9	-7.1	89	15	33	11	0	0	56	77	4.33	0.64	1.66	14	6	0.0	0	2.2	25	23	4	4	3	8	19	7.4	
ELKINS	1948	943.8		72	50	60.8	-6.3	84	15	29	11	0	1			7.03	1.84	2.34	19		0.0	0						3	5	22	8.1	
HUNTINGTON	827	984.1	1013.8	76	56	66.3	-5.7	88	19	40	1	0	0	57	75	4.39	0.29	1.14	13	5	0.0	0	2.2	23	18	28	23	1	13	16	7.3	
PARKERSBURG U	615			76	57	66.1	-6.5	88	19+	36	11	0	0			5.43	1.16	1.91	14		0.0	0			32	N	4					49
WISCONSIN																																
GREEN BAY	682	988.5	1013.8	77	51	64.2	-1.3	91	30	36	10	1	0	51	65	2.25	-1.11	1.14	10	6	0.0	0	1.5	34	25	SW	11	9	8	13	6.0	70
LA CROSSE	651	990.2	1014.4	79	54	66.5	-2.3	92	3	40	10	1	0	55	71	2.81	-1.39		10	8	0.0		1.1	8								
MADISON	858	982.4	1013.6	78	48	62.8	-3.3	91	30+	31	10	2	1	52	67	1.65	-2.30	0.75	7	5	0.0	0	1.1	32	32	NW	2	9	12	9	5.4	64
MILWAUKEE	672	988.5	1013.6	72	51	61.6	-1.7	90	3	43	17+	1	0	51	72	3.33	-0.31	1.21	10	4	0.0	0	3.4	35	34	N	9	10	9	11	5.6	64
WYOMING																																
CASPER	5338	836.8	1011.1	81	49	65.0	1.9	92	30	39	26	1	0	45	57	0.83	-0.42	0.35	11	13	0.0	0	3.6	24	35	27	25	3	20	7	5.7	
CHEYENNE	6126	812.7	1012.2	76	50	63.2	.2	82	30+	44	20	0	0	44	55	1.71	-0.40	0.52	12	17	0.0	0	3.1	25	38	SW	23	5	14	11	6.1	63
LANDER	5563	828.7	1011.0	79	50	64.1	2.1	89	30	39	26	0	0	41	46	0.70	-0.66	0.50	8	15	0.0	0	3.2	25	42	SW	22	6	12	12	6.0	68
SHERIDAN	3964	877.1	1011.5	79	50	64.8	2.9	91	29	40	20	1	0	49	61	1.96	-0.61	1.05	13	10	0.0	0	1.8	30	34	W	29	5	20	5	5.7	67

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70° F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ALABAMA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	991.9	1013.8	30.0	17.2	23.4	- 2.9	33.3	15+	6.7	1	9	0	16.7	69	69	- 33	31	8	8	0	0	0.4	36	10.7	NW	28+	11	10	9	5.0	70
HUNTSVILLE	190	991.2	1013.8	29.4	16.7	23.0	- 2.9	33.9	9+	7.2	1	3	0	16.1	68	48	- 37	31	9	5	0	0	0.4	32	12.5	26	28	13	7	10	4.8	
MOBILE	64	1005.4	1013.3	32.8	21.7	27.1	- 0.4	36.1	21+	13.9	2	20	0	21.1	75	93	- 66	52	8	7	0	0	0.2	32	17.9	33	25	7	11	12	6.4	
MONTGOMERY	56	1006.1	1013.3	32.2	18.9	25.8	- 0.6	37.2	6	10.0	2+	20	0	17.8	66	139	34	75	6	4	0	0	0.3	29	11.2	N	20	12	9	9	5.2	51
ALASKA												B																				
ANCHORAGE	35	1006.8	1011.7	14.4	7.8	11.1	- 2.1	20.6	14	4.4	5	0	0	4.4	68	15	- 9	5	5	0	0	0	2.1	17	12.5	16	2	1	5	24	8.8	44
ANNETTE	34	1012.2	1016.2	15.0	7.8	11.5	- 0.9	25.0	23	5.0	1	2	0	7.2	80	126	- 18	41	17	0	0	0	1.3	16	8.9	13	2	0	7	23	8.7	
BARROW	9			2.2	- 1.7	0.3	- 0.3	8.3	30	- 4.4	6	0	29			1	- 8	1	3	0	18	T			13.0	9	16	4	7	19	7.6	
BARTER ISLAND	12	1009.8	1011.7	2.8	0.0	1.2	- 0.1	7.2	17	- 1.7	5+	0	25	0.6	95	15	2	8	2	0	28	229	3.1	7	14.3	9	16	4	6	20	7.7	
BETHEL	38	1002.4	1008.1	13.3	5.0	9.2	- 1.7	21.7	29+	- 1.1	7	3	5	4.4	74	28	- 2	6	16	0	28	T	1.0	17	13.4	19	19	2	6	22	8.6	
BETTLES	196			20.0	8.3	14.3		31.1	14	2.2	8	13	0			45		21	9	0	0	0			9.4	28	28+	7	12	11	5.9	
BIG DELTA	386			18.9	8.3	13.7		30.6	14	2.8	5	8	0			66		18	13	3	0	0			17.0	19	2					
COLD BAY	29	1003.7	1007.3	7.8	2.8	5.3	- 2.1	10.6	1	- 1.1	14	0	3	3.9	91	74	24	24	21	0	T	T	3.2	20	23.7	15	8	0	1	29	9.6	
FAIRBANKS	133	991.2	1007.9	20.6	9.4	15.2	0.6	31.1	14	3.9	8+	14	0	5.0	52	14	- 21	6	10	2	0	0	0.7	25	10.3	1	28	2	13	15	6.9	
GULKANA	479			16.7	5.0	10.6		25.6	13+	- 1.1	19+	4	3			40		13	8	1	0	0			11.2	17	23+	0	11	19	7.8	
HOMER	20			11.7	4.4	8.1		15.0	11+	0.6	1	0	0			14	- 12	5	7	0	0	0			13.9	13	2	1	5	24	8.5	
JUNEAU	4	1013.9	1014.8	14.4	6.1	10.2	- 1.1	20.0	10	1.1	10	0	0	5.6	76	101	15	28	17	0	0	0	1.7	10	11.6	14	5	1	5	24	8.8	21
KING SALMON	15	1006.4	1008.4	12.2	4.4	8.1	- 2.7	17.2	27+	- 0.6	1	0	2	3.9	78	41	6	10	16	0	33	T	2.8	14	16.5	9	10	1	2	27	9.2	
KOTZEBUE	3	1007.8	1008.2	9.4	2.8	6.2	- 0.3	18.9	17	- 2.8	7	0	5	3.3	83	15	3	9	7	0	5	T	2.7	27	14.3	28	5	4	11	15	7.0	
MC GRATH	105	995.6	1008.2	18.3	7.2	12.9	- 0.7	25.0	30+	1.7	5+	12	0	5.6	63	46	4	13	17	3	T	T	0.7	19	9.4	18	2	1	9	20	8.0	
NOME	4	1007.1	1007.9	11.7	3.9	7.9	0.2	20.6	27+	- 1.7	1	0	7	3.3	74	36	12	17	11	0	20	25	0.3	26	12.5	12	17	4	7	19	7.2	34
ST. PAUL ISLAND	7	1005.8	1006.7	5.6	1.1	3.2	- 1.7	7.8	20+	- 2.2	6	0	8	2.2	94	46	17	28	16	0	T	0	1.7	1	17.4	29	1	0	4	26	9.3	
SHEMYA	37	1007.5	1011.3	7.8	5.0	6.3	0.9	10.0	29	1.7	22	0	0	3.9	86	61	27	25	13	0	0	0	3.0	29	18.3	26	3	2	2	26	8.9	
SUMMIT	732	924.8	1010.1	12.8	3.9	8.2		22.8	13	- 1.7	5	2	6	2.8	72	30		9	11	5	20	T	3.7	23	11.6	22	2	0	8	22	8.3	
TALKEETNA	105			16.1	6.1	11.3	- 1.6	26.1	11	0.6	5	4	0			56	11	21	9	0	0	0			8.0	17	9					
UNALAKLEET	5			12.2	6.7	9.3		22.8	11	- 1.1	4	1	5			59		20	14	0	T	T			12.5	9	8	4	6	20	7.6	
YAKUTAT	9	1013.5	1014.6	11.7	6.1	8.9	- 1.4	17.8	10	0.0	9	0	1	6.1	83	110	- 18	23	23	0	0	T	0.7	10	9.4	16	7+	0	4	26	9.1	
ARIZONA																																
FLAGSTAFF	2135	789.0	1014.2	23.3	5.0	14.2	- 1.1	31.1	30	1.7	18	0	0	2.8	52	49	31	12	8	10	0	0	1.7	21	13.4	W	17	11	10	9	4.5	
PHOENIX	340	969.5	1007.4	38.3	23.3	31.0	2.3	44.4	30	20.0	25	30	0	8.3	28	43	41	42	3	6	0	0	0.2	20	26.4Y	S	7	21	4	5	2.6	92
TUCSON	788	922.8	1008.2	35.6	19.4	27.6	- 0.6	40.6	30	16.1	26	27	0	8.3	34	17	10	8	9	11	0	0	1.3	20	20.1	W	21	19	7	4	3.3	82
WINSLOW	1492	851.0	1011.3	30.6	13.9	22.1	- 1.4	37.8	30	9.4	18	12	0	5.0	41	82	75	31	8	11	0	0	1.8	20	13.4	17	1	13	9	8	4.7	
YUMA	59	1000.0	1007.2	38.9	22.8	30.8	0.8	45.0	30	19.4	23	30	0	11.7	34	7	7	7	3	3	0	0	2.2	18	17.9	SE	5	24	4	2	1.9	94
ARKANSAS																																
FORT SMITH	136	997.0	1013.2	32.8	17.8	25.0	- 0.9	36.7	27	8.3	1	18	0	16.7	64	38	- 72	17	9	8	0	0	1.2	8	15.2	SW	25	13	8	9	4.6	85
LITTLE ROCK	78	1003.7	1013.0	33.3	19.4	26.3	0.3	38.3	20	10.0	1	21	0	17.2	60	67	- 25	24	8	7	0	0	0.5	21	17.9	NW	25	14	10	6	4.6	87
CALIFORNIA																																
BAKERSFIELD	145	993.2	1010.3	33.9	19.4	26.8	1.8	41.7	30	11.7	11	22	0	10.6	38	28	26	28	2	4	0	0	2.3	33	18.3	15	7	19	9	2	2.5	
BISHOP	1252	871.0		33.3	11.7	22.6	1.6	42.2	30	8.9	24	20	0			6	4	6	2		0	0						16	6	8	4.0	
BLUE CANYON	1609			22.2	11.7	17.1	1.9	31.1	30	0.0	10+	0	2			16	- 8	14	5		33	T			7.6	20	23+	18	5	7	3.2	
EUREKA U	13			15.0	10.6	12.6	- 0.5	16.7	30	9.4	18+	0	0			22	4	18	2		0	0			11.2	N	25	5	8	17	7.1	55
FRESNO	100	999.0	1010.5	34.4	16.1	25.3	1.6	42.8	30	11.1	11	23	0	9.4	41	15	13	15	1	1	0	0	2.2	29	14.3	NW	9	20	6	4	2.9	91
LONG BEACH	8	1011.5	1012.7	25.6	17.2	21.5	1.8	29.4	28	11.1	11	0	0	13.9	68	2	2	1	3	0	0	0			7.6	15	5	10	13	7	5.2	
LOS ANGELES U	30	1008.5	1012.2	22.8	16.7	19.5	1.3	25.0	30+	14.4	11	0	0	15.0	78	2	T	2	1	1	0	0	3.2	25	12.5Y	SW	27	8	11	11	5.9	
	82			27.2	17.2	22.3	2.3	35.6	5	14.4	27	1	0			2	T	1	3		0	0			6.7	NW	20+	12	11	7	4.6	80
MT SHASTA R	1080	891.0	1013.2	25.6	8.9	17.3	1.6	33.9	29	- 1.1	11	4	2	6.1	50	23	- 9	19	3		0	0	0.4	34								
OAKLAND	2	1013.5	1013.6	20.6	12.8	16.6	- 0.5	31.1	5	10.0	11	0	0	11.7	79	6	3	6	1	0	0	0	3.6	28	10.7	23	22	15	13	2	4.0	
RED BLUFF	104	997.6	1010.0	35.0	16.7	25.7	1.1	45.0	30	9.4	11	23	0	8.9	39	7	- 5	7	1	0	0	0	0.8	16	12.5	S	9	20	6	4	2.6	94
SACRAMENTO	5	1010.2	1011.0	32.2	12.8	22.5	1.1	42.2	30	7.2	10	18	0	10.0	53	5	2	5	1	0	0	0	2.9	21	13.4	SW	22	21	7	2	2.4	91
SANDBERG R	1377	861.8		25.6	13.3	19.4	1.2	37.2	29	3.9	11	3	0			2	1	1	3		0	0	1.1	24	13.4	32	10	17	7	6	3.4	
SAN DIEGO	4	1011.5	1012.6	21.7	17.2	19.4	0.4	25.0	11	15.0	30	0	0	13.9	73	10	8	7	6	1	0	0	2.1	27	10.7	NE	20	9	9	12	6.3	54
SAN FRANCISCO	2	1013.2	1013.9	21.1	11.1	16.1	- 0.2	31.7	5	8.3	10	0	0	10.0	75	2	- 1	2	1	0	0	0	4.2	29	13.0	30	13	18	8	4	3.5	
SAN FRANCISCO U	16			17.2	11.1	14.2	- 0.9	27.8	30	8.9	3	0	0			3	- 1	3	1		0	0			12.5	W	18					74
SANTA MARIA	72			21.7	10.6	16.2	0.8	30.6	12	7.2	12	0	0			T	- 3	T	1		0	0						10	17	3	4.6	
STOCKTON	7	1010.8	1012.0	32.8	13.9	23.5	0.8	43.3	30	8.9	11+	20	0	9.4	48	4	2	4	1	0	0	0	3.6	31	10.3	27	14	20	8	2	2.5	
COLORADO																																
ALAMOSA	2297	773.8		26.1	6.1	16.1	0.6	29.4	28	1.7	26	0	0			15	3	5	8		0	0						7	18	5	4.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
COLORADO	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
COLORADO SPRINGS	1873	812.1	1011.5	27.8	12.2	19.9	1.7	30.6	25	10.0	20+	0	0	7.2	51	53	12	22	15	22	0	0	1.2	8	17.4	26	23	8	15	7	5.5	
DENVER	1610	835.8	1009.9	28.3	12.2	20.2	1.0	31.7	29	8.9	26+	0	0	10.0	58	75	38	26	13	18	0	0	0.8	17	15.2	S	23+	6	17	7	5.7	65
GRAND JUNCTION	1476	850.7	1009.1	32.2	15.0	23.5	1.7	36.7	30	12.8	24+	19	0	3.9	32	16	6	7	5	7	0	0	0.8	14	18.3	NW	19	11	11	8	4.9	71
PUEBLO	1428	854.4	1009.6	32.2	13.3	22.9	1.2	34.4	25+	8.3	14	20	0	9.4	49	25	-6	10	7	7	0	0	0.8	8	17.9	NE	29	9	13	8	5.1	80
CONNECTICUT																																
BRIDGEPORT	2	1011.9	1012.4	22.2	15.0	18.5	-1.5	28.9	28	7.8	12	0	0	13.3	74	450	363	175	21	8	0	0	1.1	16	16.5	22	22	3	8	19	7.6	
HARTFORD	52	1005.4	1012.0	23.9	13.9	18.8	-1.6	29.4	4	4.4	12	0	0	14.4	79	245	151	79	19	6	0	0	1.3	18	13.0	S	22	1	5	24	8.3	40
DELAWARE																																
WILMINGTON	23	1009.5	1012.7	25.0	15.6	20.3	-1.6	32.2	4	5.0	11	1	0	15.0	73	190	87	110	16	4	0	0	1.1	22	15.6	30	22	5	8	17	7.2	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1000.7	1012.2	25.6	13.9	19.7		30.6	4	4.4	11	0	0	14.4	76	462		302	15	4	0	0	0.8	23	11.6	35	4	5	11	14	7.0	
WASHINGTON NATIONAL	3	1009.8	1012.3	26.1	16.7	21.2	-2.2	30.6	19+	8.3	11	0	0	15.0	71	293	211	183	14	6	0	0	1.2	23	19.2	NW	21	5	10	15	6.9	43
FLORIDA																																
APALACHICOLA U	4			30.0	22.8	26.3	-0.4	33.3	22+	15.6	2	5	0			132	-3	76	9	4	0	0			24.6	E	19	4	22	4	5.9	88
DAYTONA BEACH	9	1012.9	1014.3	30.6	22.2	26.4	0.7	35.6	21	16.7	6	10	0	20.0	71	179	32	102	9	5	0	0	1.1	12	13.0	10	18	1	16	13	7.0	
FORT MYERS	5	1013.5	1013.9	31.7	23.3	27.6	0.4	34.4	30	17.2	7	16	0	22.2	79	200	-28	126	11	6	0	0	0.6	19	11.2	15	18+	4	14	12	6.4	
JACKSONVILLE	8	1012.9	1014.0	30.0	18.9	24.6	-2.6	35.0	21	13.9	14+	8	0	20.0	78	171	11	131	9	6	0	0	0.5	15	17.4	E	19	6	15	9	5.8	63
KEY WEST	1	1012.9	1013.6	29.4	25.0	27.4	-0.3	31.7	30+	22.8	15	0	0	22.8	76	367	266	93	18	8	0	0	2.4	13	19.2	SE	18	9	7	14	6.6	61
LAKELAND U	65			30.6	22.2	26.4	-0.6	32.8	30+	18.3	6	7	0			160	-23	115	9		0	0						3	19	8	6.5	69
MIAMI	2	1013.5	1013.9	30.0	23.3	26.6	-0.5	32.8	8	19.4	11	3	0	22.2	80	277	90	144	17	9	0	0	1.9	15	11.2	12	18	4	9	17	7.3	
ORLANDO	33	1009.8	1014.0	32.2	23.3	27.9	0.5	35.0	30+	20.0	6	17	0	20.6	69	161	-16	118	7	3	0	0	0.5	16	13.4	12	18	3	11	16	7.0	
PENSACOLA	34	1009.1	1013.4	31.1	22.2	26.6	-0.7	36.7	7	14.4	1	10	0	20.0	70	217	79	55	10	6	0	0	0.5	24	14.3	33	25	5	15	10	6.3	
TALLAHASSEE	17	1010.8	1013.2	32.2	18.9	25.6	-1.2	36.7	21	9.4	2	17	0	18.9	72	283	117	164	11	8	0	0	0.7	9	13.9	17	19	5	13	12	6.1	
TAMPA	6	1013.5	1013.8	31.7	22.8	27.2	0.2	33.9	11+	16.1	2	14	0	21.1	73	133	-52	86	11	5	0	0	0.6	20	12.1	13	18	3	6	21	7.4	66
WEST PALM BEACH	5	1012.9	1013.6	31.7	23.9	27.7	0.4	35.6	29	20.0	7	11	0	21.7	73	313	122	78	17	11	0	0	1.7	14	14.3	10	18+	1	8	21	8.1	
GEORGIA																																
ATHENS	244	985.1	1013.5	28.9	16.1	22.6	-2.8	33.9	6	7.2	1	2	0	16.1	71	145	47	71	6	3	0	0	0.5	28	12.5	34	9	14	8	8	4.5	
ATLANTA	308	977.3	1013.4	28.3	16.7	22.3	-2.4	32.2	6+	8.9	1	2	0	15.0	67	103	5	64	5	3	0	0	0.9	32	17.0	NE	19	11	7	12	5.2	72
AUGUSTA	41	1007.8	1013.2	30.6	16.1	23.4	-2.6	35.0	6	8.3	12	12	0	16.1	68	159	82	65	5	4	0	0	0.6	23	11.2	22	22	15	9	6	4.0	
COLUMBUS	117	999.7		31.1	18.9	24.8	-1.5	35.6	6	8.9	1	12	0			197	103	97	8	3	0	0	0.8	1	11.2	6	19	13	5	12	5.2	
MACON	108	1000.7	1013.4	31.1	17.2	24.2	-2.9	36.7	6	7.8	2	10	0	16.7	67	158	73	58	6	5	0	0	0.3	6	17.9	NW	27	12	6	12	5.2	74
ROME	194			29.4	15.6	22.3	-2.4	34.4	6	6.1	2	3	0			156	60	84	10		0	0										
SAVANNAH	14	1012.2	1013.9	30.6	18.3	24.3	-2.2	33.9	21	12.2	3+	8	0	17.2	69	166	37	80	8	4	0	0	0.7	18	18.3	NW	10	12	9	9	4.9	75
HAWAII																																
HILO	8	1014.9	1016.2	28.3	20.0	24.1	0.6	30.6	3	17.2	2	0	0	20.0	81	116	-56	21	23	0	0	0	0.1	9	7.6	E	3	1	6	23	8.4	39
HONOLULU	2	1015.2	1015.6	30.0	22.2	26.1	0.6	31.1	22+	18.9	5	0	0	18.3	66	20	12	10	8	0	0	0	4.9	6	13.0	NE	27	2	13	15	7.3	66
KAHULUI	15	1012.9	1015.2	30.0	18.9	24.4	-0.7	31.1	24+	15.6	2	0	0	18.3	70	7	3	5	3	0	0	0	4.8	5	13.9	E	25	5	7	18	7.2	72
LIHUE	31	1011.9	1017.1	28.3	22.2	25.3	0.6	29.4	15+	19.4	5	0	0	20.6	76	44	7	13	16	0	0	0	3.6	5	11.6	NE	27	2	13	15	7.4	59
IDAHO																																
BOISE	865	913.3	1011.8	27.2	12.2	19.8	1.0	35.0	29	5.0	12	4	0	6.1	44	23	T	8	6	4	0	0	1.3	32	14.8	SW	23	13	12	5	4.4	78
LEWISTON	431			26.7	12.2	19.4	1.2	35.6	28+	7.8	12	5	0			24	-20	9	9		0	0			15.6Y		12	4	11	15	6.6	
POCATELLO	1358	861.5	1011.8	25.0	8.9	16.8	-0.3	32.8	29	3.3	20+	1	0	6.1	53	33	8	10	10	9	0	0	2.6	23	16.1	W	18	9	9	12	5.6	69
ILLINOIS																																
CAIRO U	96			30.6	18.9	24.7	-0.8	35.6	9	11.1	1	8	0			52	-53	34	8		0	0			16.5	W	28+	15	12	3	3.9	76
CHICAGO O HARE	201	989.2	1013.5	25.0	12.8	18.7	-1.3	33.3	3	2.2	11	1	0	11.7	64	90	-10	51	10	6	0	0	1.1	34	15.6	23	13+	7	12	11	6.0	
CHICAGO MIDWAY	185	991.5	1013.8	24.4	13.3	18.9	-2.4	34.4	3	5.0	11	3	0	10.6	60	70	-33	29	11	7	0	0	1.1	35	13.9	NW	14	9	11	10	5.5	80
MOLINE	177	992.6	1013.7	27.8	13.9	20.8	-1.1	36.7	3	3.9	11	5	0	13.3	64	220	109	90	9	7	0	0	0.3	24	14.8	NE	9	8	13	9	5.1	72
PEORIA	199	990.2	1013.7	26.7	13.3	20.0	-2.1	33.9	3	5.0	11	2	0	12.2	63	152	48	47	8	8	0	0	0.1	2	13.4	S	14	8	14	8	5.4	76
ROCKFORD	221	986.8	1013.4	25.6	12.2	18.8	-2.2	34.4	3	3.3	11	1	0	12.2	66	210	101	102	7	6	0	0	0.4	35	12.1	28	19+	11	9	10	5.1	
SPRINGFIELD	179	991.5	1013.3	28.9	13.9	21.4	-1.9	33.9	4	5.6	11	7	0	13.3	62	69	-44	25	8	7	0	0	0.3	27	13.0	NW	28+	10	14	6	4.7	76
INDIANA																																
EVANSVILLE	116	999.7	1013.6	28.9	15.0	21.9	-2.4	35.0	4	5.6	1	8	0	12.8	58	49	-46	21	5	3	0	0	0.4	27	14.8	NE	4	11	14	5	4.8	87

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JUNE 1972

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32 2 °C or above	Temperature: No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1 6 kilometers): Speed	Wind: Fastest mile (1 6 kilometers): Direction	Wind: Fastest mile (1 6 kilometers): Date	No of days (sunrise to sunset): Clear, 0-3	No of days (sunrise to sunset): Partly cloudy, 4-7	No of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
INDIANA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
FORT WAYNE	241	984.4	1014.1	25.0	12.8	18.9	- 2.5	31.7	19	3.9	11	0	0	12.8	69	97	- 9	52	10	4	0	0	1.7	29	17.4	NW	3	2	13	15	7.0	68
INDIANAPOLIS	241	985.1	1013.7	26.7	14.4	20.4	- 1.3	33.3	4	6.7	11	1	0	12.8	65	153	36	56	8	7	0	0	1.1	29	14.3	SW	14	3	13	14	6.8	63
SOUTH BEND	236	985.4	1013.0	23.9	11.1	17.6	- 3.0	33.3	3	1.7	11	1	0	11.7	72	69	- 22	33	11	6	0	0	1.7	28	11.2	29	20	3	15	12	6.7	
IOWA																																
BURLINGTON	211			26.7	13.9	20.4	- 1.9	32.8	9	5.0	10	2	0	15.0	67	142	14	41	10	9	0	0	0.3	30	12.5	23	13	6	14	10	5.9	
DES MOINES	286	979.7	1013.8	27.2	15.0	21.2	- 0.4	34.4	12+	8.3	11	6	0	13.9	65	66	- 54	46	8	8	0	0	0.7	15	15.2	W	13	6	14	10	5.8	71
DUBUQUE	322	975.3		25.6	12.8	19.1	- 0.8	32.2	3	2.2	11	1	0			63	- 44	15	7		0	0						7	15	8	5.8	
SIOUX CITY	334	973.9	1012.9	28.9	16.1	22.4	0.5	37.8	8	7.2	21	8	0	13.9	62	96	- 14	27	11	8	0	0	1.2	13	23.2	SW	27	9	8	13	6.2	67
WATERLOO	265	982.4	1013.8	26.1	12.8	19.6	- 1.6	33.3	3	5.6	10	3	0	12.2	66	110	- 13	31	10	10	0	0	0.2	14	17.9	28	12	7	6	17	6.3	
KANSAS																																
CONCORDIA	448	960.0	1011.8	30.0	16.1	23.0	- 0.4	35.6	30	8.3	21	10	0	14.4	63	43	- 64	33	7	9	0	0	2.2	16	14.3	NW	19	8	12	10	5.6	92
DODGE CITY	787	922.5	1011.0	30.0	16.7	23.2	- 0.3	33.9	3	11.1	21	10	0	13.3	58	151	74	76	8	10	0	0	2.9	17	21.9	NW	18	9	12	9	5.4	85
GOODLAND	1114	886.9	1011.0	28.9	13.9	21.4	0.4	33.3	4	8.9	20	5	0	12.2	63	121	53	66	13	16	0	0	2.4	15	13.0	4	26+	8	15	7	5.3	
TOPEKA	267	981.7	1012.7	31.1	16.1	23.5	- 0.2	36.1	8+	8.9	21	13	0	15.0	62	29	- 86	28	4	4	0	0	1.3	16	13.0	SW	13	9	15	6	5.3	71
WICHITA	403	964.8	1011.4	32.2	17.2	24.8	0.1	36.7	30+	10.0	1	18	0	14.4	55	51	- 56	26	5	7	0	0	2.3	16	21.0	NW	19	9	13	8	5.4	80
KENTUCKY																																
COVINGTON	265	982.4	1013.6	24.4	12.8	18.5	- 3.6	30.0	27+	3.9	11	0	0	12.2	68	61	- 38	36	7	4	0	0	1.1	25	9.4	36	23	4	11	15	7.1	
LEXINGTON	294	979.3	1014.3	25.6	13.9	19.8	- 3.3	31.1	19	5.6	11+	0	0	13.3	69	92	- 28	25	9	7	0	0	0.8	23	9.4	21	15	7	11	12	6.1	
LOUISVILLE	145	995.9	1013.3	27.8	15.6	21.4	- 1.6	32.8	14	7.2	1	2	0	13.3	62	27	- 74	9	8	8	0	0	0.6	26	11.6	S	28	4	16	10	5.9	67
LOUISIANA																																
ALEXANDRIA	28	1009.1	1013.5	32.2	20.0	26.1	- 0.4	35.6	27+	10.0	1	18	0	20.0	75	47	- 62	15	7	8	0	0	0.6	21	15.6	12	8	10	11	9	5.0	
BATON ROUGE	20	1010.8	1013.4	33.9	21.7	27.8	0.6	37.2	7+	12.8	1	28	0	21.7	74	62	- 42	27	6	3	0	0	0.3	16	11.2	6	9	7	16	7	5.5	
LAKE CHARLES	3	1012.2	1013.1	32.8	22.2	27.4	0.1	35.0	30+	16.1	1	20	0	21.7	76	24	- 96	14	6	5	0	0	1.0	18	11.6	35	16	9	15	6	5.3	
NEW ORLEANS	1	1012.2	1013.2	32.8	21.7	27.1	0.4	35.0	30+	12.8	3+	19	0	21.1	72	79	- 34	70	5	4	0	0	0.2	20	13.0	5	9	9	15	6	5.3	
SHREVEPORT	77	1003.7	1012.8	33.3	21.1	27.1	0.1	36.7	26+	12.8	1	19	0	20.6	72	70	- 15	21	9	6	0	0	0.9	17	15.6	27	30	11	7	12	5.5	62
MAINE																																
CARIBOU	190	988.8		21.7	11.1	16.4	1.4	28.3	15	2.8	12	0	0			126	23	39	12		0	0						3	7	20	7.5	
PORTLAND	13	1010.2	1012.4	20.0	11.1	15.3	- 1.4	23.9	17+	2.8	12	0	0	12.8	87	108	27	47	16	2	0	0	1.3	16	13.0	NW	9	3	8	19	7.7	32
MARYLAND																																
BALTIMORE	45	1007.1	1012.5	25.0	15.0	20.1	- 2.4	31.7	4	4.4	11	0	0	14.4	74	253	169	133	16	5	0	0	1.2	25	16.5	NW	22	5	9	16	7.0	43
MASSACHUSETTS																																
BLUE HILL OBS R	192			21.7	12.2	17.2	- 1.2	27.8	4	4.4	11	0	0			182	86	44	16		0	0			19.7	SSE	22					42
BOSTON	5	1011.2	1012.1	22.8	14.4	18.6	- 1.3	30.0	4	8.9	11	0	0	13.3	76	172	83	40	16	5	0	0	1.0	21	13.4	E	22	4	5	21	7.5	41
WORCESTER	301	976.6	1013.2	21.1	12.2	16.8	- 1.3	27.2	28+	3.3	11	0	0	11.1	71	235	137	67	18	4	0	0	1.3	24	11.2	33	10	2	7	21	7.9	
MICHIGAN																																
ALPENA	210	987.8	1013.0	21.1	7.2	14.1	- 1.8	30.6	14	- 0.6	11	0	2	8.3	70	37	- 31	14	11	3	0	0	0.5	34	12.1	NW	22	9	7	14	6.3	54
DETROIT METRO	189			23.3	12.8	18.1	- 2.8	32.2	14	5.0	11+	1	0	10.6	62	55	- 17	17	12	3	0		1.0	31	11.6	34	22					
	193	988.5	1012.4	23.9	12.2	17.9	- 2.1	31.1	14	2.2	11	0	0	12.2	71	84	T	50	13	3	0	0	1.1	31	13.0	N	23	7	6	17	6.8	59
FLINT	235	984.8	1012.4	22.2	11.7	16.9	- 2.3	30.0	14	3.3	11	0	0	11.1	70	79	- 1	38	13	4	0	0	0.8	33	12.5	27	14	5	11	14	6.8	
GRAND RAPIDS	239	984.4	1013.1	23.9	11.1	17.5	- 2.2	31.7	14	0.6	11	0	0	11.1	68	118	34	83	12	4	0	0	1.2	29	10.7	SW	14+	6	9	15	6.7	59
HOUGHTON LAKE	350	971.6	1013.5	21.7	8.3	15.1	- 1.9	28.9	3	- 1.7	11	0	1	10.0	72	51	- 28	12	13	5	0	0	1.2	33	8.9	24	14	6	11	13	6.5	
LANSING	256	981.7	1013.0	22.8	10.0	16.4	- 3.2	31.1	14	0.0	11	0	1	11.7	73	83	- 2	47	14	4	0	0	1.0	30	12.1	SW	14	6	8	16	6.9	45
MARQUETTE U	206			18.9	8.9	13.9	- 1.7	30.0	19	0.6	10	0	0			43	- 45	33	7		0	0			11.2	S	19	9	9	12	5.9	60
MUSKEGON	191	990.9	1013.7	23.3	10.0	16.5	- 2.8	30.6	19	- 0.6	11	0	1	10.0	68	84	15	46	11	4	0	0	1.3	30	10.3	34	22	11	5	14	5.9	
SAULT STE MARIE	220	986.5	1012.7	21.1	7.2	14.1	- 0.9	27.8	29	- 0.6	10	0	2	8.9	73	33	- 51	17	6	2	0	0	0.9	33	11.2	W	15	7	10	13	6.4	59
MINNESOTA																																
DULUTH	435	963.1	1014.2	21.7	7.8	14.7	- 0.2	31.1	8	- 2.8	10	0	2	7.8	66	94	- 14	33	10	4	0	0	0.4	11	14.8	NW	14	9	10	11	5.9	68
INTERNATIONAL FALLS	359	970.5	1013.3	24.4	9.4	17.1	1.6	31.7	7	0.0	16	0	1	8.3	58	39	- 60	14	8	3	0	0	0.4	25	11.2	29	14	12	10	8	5.0	
MINNEAPOLIS	254	983.7	1013.7	25.6	12.2	18.9	- 0.4	33.3	13+	5.0	10	2	0	11.1	61	84	- 18	27	9	5	0	0	0.4	8	16.1	SW	13	7	8	15	6.2	75
ROCHESTER	395	966.8	1014.0	26.1	11.1	18.7	- 0.8	33.3	12	2.2	10	2	0	11.7	65	28	- 85	18	9	3	0	0	0.4	21	17.4	20	13	6	10	14	6.2	
ST CLOUD	313	977.3	1014.1	25.0	10.6	17.7	- 0.7	32.8	13	1.7	10	1	0			49	- 66	17	6		0	0						7	11	12	5.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JUNE 1972

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1 6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10		
MISSISSIPPI	M.	Mb.	Mb.	C.	C.	C.	C.	C		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s		M p.s							%
JACKSON	94	1002.0	1013.7	32.8	20.0	26.4	- 0.1	36.7	7	9.4	1	22	0	20.0	74	51	- 45	29	7	8	0	0	0.3	16	15.2	N	25	7	11	12	5.7	72
MERIDIAN	88	1002.7	1013.8	32.2	18.9	25.5	- 0.9	37.2	7	9.4	2+	16	0	18.3	70	106	3	40	6	6	0	0	0.1	26	11.2	35	29	7	13	10	5.7	
MISSOURI																																
COLUMBIA REGIONAL	270	982.4	1014.0	29.4	15.6	22.7	- 0.1	34.4	30	7.2	11+	9	0	14.4	61	17	- 93	12	5	4	0	0	0.5	20	11.6	NE	9	12	12	6	4.9	86
KANSAS CITY	226	986.1	1012.5	31.1	18.9	24.9	0.6	36.7	8	13.3	23+	13	0	14.4	55	69	- 47	51	6	5	0	0	0.6	15	16.5	NW	28	11	15	4	4.5	72
ST JOSEPH	247			31.7	16.7	24.2	0.9	37.8	9+	8.9	22+	14	0	13.3	56	67	- 84		5				1.0	15	10.3	32	20+	10	12	8	5.2	
ST LOUIS	163	993.6	1013.6	30.6	15.6	23.0	- 0.4	35.6	9	7.2	11+	9	0	14.4	60	30	- 79	15	7	6	0	0	0.4	28	12.5	S	14	7	13	10	5.6	80
SPRINGFIELD	386	969.2	1013.7	31.7	15.0	23.4	0.0	36.1	8	6.1	1	16	0	13.9	58	41	- 86	27	6	7	0	0	1.3	16	15.2	W	26	12	13	5	4.4	81
MONTANA																																
BILLINGS	1087	889.3	1011.0	26.7	12.2	19.4	1.1	34.4	29	6.7	20	2	0	6.1	46	23	- 42	10	10	10	0	0	1.3	27	17.9	NW	2	5	17	8	5.9	68
GLASGOW	696	930.6	1011.2	25.6	11.7	18.7	1.8	31.1	30+	5.0	20+	0	0	9.4	59	96	20	63	9	8	0	0	1.1	11	17.4	24	25	8	17	5	5.0	
GREAT FALLS	1116	885.9	1010.8	26.1	11.1	18.4	2.9	32.8	6	5.6	19	3	0	5.6	47	24	- 50	21	7	4	0	0	3.4	24	19.2	SW	16	6	15	9	5.7	74
HAVRE	788	919.7	1009.8	27.8	11.1	19.6	3.5	35.0	6	2.2	19	6	0	5.6	45	14	- 56	7	5	3	0	0	1.4	25	17.0	SW	11	7	20	3	5.0	82
HELENA	1167	879.1	1012.4	23.9	8.9	16.6	1.3	30.6	6	2.2	19	0	0	3.9	48	28	- 28	14	7	10	0	0	2.3	27	18.8	S	8	3	15	12	6.3	69
KALISPELL	904	909.9	1013.7	22.8	7.8	15.3	0.6	31.1	6	1.7	24	0	0	6.1	60	43	- 13	14	12	6	0	0	1.0	21	11.2	23	12+	7	7	16	6.6	
MILES CITY	801	919.4	1010.4	27.2	13.9	20.3	1.7	34.4	7	7.2	20	3	0	10.6	57	92	23		9	8	0		0.5	2								
MISSOULA	972	903.2	1013.7	25.0	8.3	16.7	1.9	33.3	6	1.7	12	1	0	7.2	59	35	- 14	17	11	5	0	0	1.0	30	14.8	SW	12	6	11	13	6.2	61
NEBRASKA																																
GRAND ISLAND	561	947.5	1012.2	29.4	15.6	22.5	0.8	36.7	8	6.1	21	8	0	11.7	55	47	- 49	17	8	5	0	0	1.5	16	13.4	34	19	6	13	11	6.1	
LINCOLN U	351			29.4	17.8	23.6	0.8	36.7	30	9.4	21	10	0			57	- 58	22	6		0	0			15.2	NE	9	7	10	13	6.1	74
NORFOLK	471			28.9	15.0	21.9	0.3	37.2	8	5.6	21	8	0			94	- 14	59	8		0	0						6	11	13	6.2	
NORTH PLATTE	846	916.0	1012.1	27.8	12.8	20.2	- 0.4	33.3	9+	5.0	21	5	0	12.8	66	75	- 7	28	12	15	0	0	2.1	13	16.1	NW	14	5	14	11	6.3	64
OMAHA	298	978.0	1012.5	29.4	15.6	22.6	- 0.3	36.7	30	7.2	21	10	0	14.4	64	26	- 89	23	5	6	0	0	1.3	15	13.4	NW	19	8	11	11	5.9	68
SCOTTSBLUFF	1206	878.1	1011.1	27.8	12.2	20.1	0.7	33.3	30+	5.0	20	3	0	10.0	59	113	34	36	14	12	0	0	1.6	12	14.3	2	3	8	14	8	5.8	
VALENTINE	789			27.2	12.2	19.8	0.1	34.4	30+	1.7	20	7	0			65	- 14	26	11		0	0			17.9	SW	26	4	14	12	6.5	61
NEVADA																																
ELKO	1539	843.6	1011.5	26.7	8.9	17.8	2.3	33.9	30	3.3	25	2	0	2.8	41	37	19	21	6	11	0	0	1.0	25	10.7	18	15	11	8	11	5.2	
ELY	1906	808.7	1010.0	26.1	7.2	16.6	1.8	34.4	30	2.2	26	2	0	2.8	45	21	8	9	7	7	0	0	2.3	20	17.9	W	18	7	16	7	5.4	73
LAS VEGAS	659	934.0	1008.4	36.7	21.7	29.3	1.0	45.6	30	18.3	27+	29	0	3.3	22	8	7	6	3	6	0	0	3.0	21	14.3	SW	6	17	5	8	3.8	86
RENO	1342	864.5	1011.5	29.4	7.8	18.4	2.8	37.8	30+	0.6	11	8	0	2.8	38	5	- 5	4	4	3	0	0	1.5	27	13.9	W	23	19	3	8	3.6	92
WINNEMUCCA	1311	866.9	1011.2	30.6	10.0	20.1	3.7	39.4	29	- 1.7	11	13	1	3.3	37	14	- 5	10	5	7	0	0	1.2	30	15.2	SE	22	15	7	8	4.5	83
NEW HAMPSHIRE																																
CONCORD	104	999.7	1012.2	22.8	11.7	17.1	- 0.9	30.6	15	- 1.1	12	0	2	13.9	83	90	- 2	50	16	1	0	0	0.8	17	13.0	W	10	3	6	21	7.9	33
MT WASHINGTON OBS	1909			8.9	3.3	6.2	- 0.9	15.6	15	- 7.2	11	0	5			264	99	46	16	0	51	T			41.6Y	E	22	0	3	27	9.3	14
NEW JERSEY																																
ATLANTIC CITY	20	1009.8	1012.3	23.9	14.4	18.9	- 2.2	29.4	9	3.3	11	0	0	13.9	75	122	51	49	11	2	0	0	2.0	21	13.9	29	22	4	10	16	7.0	47
ATLANTIC CITY U	3			20.6	15.6	18.1	- 2.5	26.7	8	7.2	11	0	0			132	55	39	10						21.9	NW	22					
NEWARK	2	1010.8	1012.0	24.4	16.7	20.4	- 1.4	31.1	15+	7.8	11	0	0	15.0	73	153	66	43	17	4	0	0	1.3	20	13.0	22	22	3	7	20	7.7	
TRENTON U	17			23.9	15.6	19.8	- 1.9	28.9	15+	6.1	11	0	0			155	63	50	20		0	0			13.0	SW	22	4	9	17	7.5	40
NEW MEXICO																																
ALBUQUERQUE	1619	837.8	1009.9	32.2	13.9	23.2	- 0.7	38.9	29	10.0	9	18	0	3.9	36	14	- 1	8	4	5	0	0	0.8	19	21.0	E	29+	15	12	3	3.6	78
CLAYTON	1515			28.9	13.3	21.2	- 0.1	34.4	25	11.7	25+	2	0			78	41	44	6		0	0						13	11	6	4.2	
ROSWELL	1101			34.4	16.1	25.3	0.2	39.4	28+	8.3	1	21	0			52	26	29	7		0	0			17.0	SW	29					80
NEW YORK																																
ALBANY	84	1001.4	1011.9	22.8	12.2	17.6	- 2.1	28.3	29+	2.8	11	0	0	11.1	69	174	91	42	15	6	0	0	1.3	18	13.0	NW	10	2	6	22	8.3	35
BINGHAMTON	485	953.9	1011.8	21.1	12.7	16.8	- 0.7	28.9	15	1.7	11	0	0	12.2	76	233	135	81	19	8	0	0	1.1	23	12.5	SE	23	2	5	23	8.3	33
BUFFALO	215	986.1	1011.5	21.7	12.2	17.0	- 1.2	29.4	19	2.2	11	0	0	11.7	73	154	89	59	15	4	0	0	1.0	26	13.9	SW	8	3	6	21	7.8	47
NEW YORK U	40	1008.8	1012.1	23.9	16.1	19.9	- 1.9	30.0	4	7.8	11	0	0	14.4	75	236	152	56	18	3	0	0	0.7	22	16.1	NE	22					29
NEW YORK KENNEDY	4	1011.5	1012.4	23.3	16.7	20.0	- 1.2	30.6	9	10.0	11	0	0	14.4	73	170	85	41	18	4	0	0	2.1	18	14.3	24	22	4	10	16	7.4	
NEW YORK LA GUARDIA	3	1011.2	1012.1	22.8	15.0	18.8	- 3.2	28.3	9	7.8	11	0	0	13.3	74	207	121	55	17	4	0	0	1.1	19	18.3	NE	22	4	7	19	7.7	
ROCHESTER	167	991.5	1011.5	23.9	12.8	18.4	- 0.9	33.9	15	2.2	11	2	0	13.9	77	167	102	56	12	2	0	0	1.3	27	16.1	W	15	4	8	18	7.3	54
SYRACUSE	125	996.3	1011.1	23.3	12.8	18.1	- 1.6	33.3	15	3.3	11	1	0	13.3	75	312	237	99	15	4	0	0	0.6	26	14.8	NW	15	6	4	20	7.4	29

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
NORTH CAROLINA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ASHEVILLE	652	939.4	1014.4	26.1	12.2	19.2	-2.0	30.0	5	4.4	12+	0	0	13.9	75	166	77	90	8	5	0	0	1.3	34	13.0	33	21	11	12	7	5.1	79
CAPE HATTERAS R	2	1013.5	1013.9	26.1	17.8	21.9	-2.1	28.9	28+	7.2	12	0	0	17.2	73	46	-59	76	9	5	0	0	1.9	20	16.5	29	21	10	13	7	5.3	63
CHARLOTTE	224	986.1	1013.2	28.3	15.6	21.8	-3.2	32.2	6	7.2	12	1	0	13.9	64	76	-15	52	7	2	0	0	0.8	24	10.3	W	23+	12	8	10	5.2	77
GREENSBORO	273	982.4	1013.5	26.7	14.4	20.4	-3.4	29.4	18+	5.6	12+	0	0	13.9	69	162	74	125	8	2	0	0	1.0	23	13.9	NW	22	9	9	12	5.8	66
RALEIGH	132	997.6	1013.1	27.8	14.4	21.1	-2.9	31.1	6	6.1	12	0	0	14.4	67	106	12	63	6	3	0	0	1.0	22	12.5	26	28	10	8	12	5.7	52
WILMINGTON	9	1012.2	1013.6	28.9	16.7	22.6	-2.8	32.2	29+	9.4	12	3	0	16.7	73	89	-19	48	10	4	0	0	1.1	19	12.1	NE	10	9	10	11	5.7	75
NORTH DAKOTA																																
BISMARCK	502	953.3	1012.4	25.0	11.7	18.4	0.4	32.2	29	2.2	20	1	0	11.7	66	46	-40	17	7	9	0	0	1.0	14	20.1	SW	12	5	12	13	6.4	66
FARGO	273	980.7	1013.0	27.2	11.7	19.4	1.2	33.3	29+	3.3	16+	2	0	10.6	57	15	-62	7	8	6	0	0	0.8	16	16.1	W	2	7	15	8	5.7	73
WILLISTON	579	944.1	1011.5	25.6	12.2	18.8	1.5	31.1	29+	3.3	20	0	0	10.6	63	30	-54	11	10	7	0	0	0.8	16	17.0	SE	23	5	17	8	5.8	72
OHIO																																
AKRON	368	968.8	1012.8	23.3	11.7	17.3	-3.4	30.0	19+	0.0	11	0	1	11.7	73	81	-27	16	13	4	0	0	1.5	27	12.5	32	22	6	5	19	7.3	
CINCINNATI ABBE OB	232			25.0	13.9	19.4	-3.6	32.2	4	4.4	11	1	0			64	-43	29	7		0	0			13.0	NW	29					53
CLEVELAND	237	984.1	1013.1	22.2	11.7	17.1	-2.8	30.6	19+	-0.6	11	0	1	12.2	75	230	143	102	15	4	0	0	1.1	27	14.8	NW	22	6	6	18	7.1	50
COLUMBUS	247	983.7	1013.5	23.3	12.2	17.6	-4.0	30.0	19	1.7	11	0	0	11.1	68	101	-5	50	9	5	0	0	1.1	25	15.6	SW	29	5	8	17	7.0	52
DAYTON	305	977.7	1013.4	25.0	13.3	19.3	-2.6	31.7	4	4.4	11	0	0	12.8	68	77	-27	42	7	4	0	0	1.3	26	11.2	NW	23	4	11	15	6.9	50
MANSFIELD	395			24.4	13.3	18.9	-2.4	32.2	19	3.3	11	1	0	13.3	70	95	-12	39	12	3	0	0	1.9	26	10.3	31	23+	6	7	17	7.3	
TOLEDO	204	987.8	1012.6	23.9	11.7	17.7	-2.4	31.1	14	0.0	11	0	1	11.7	70	104	8	46	14	7	0	0	1.1	29	11.2	N	23+	3	9	18	7.3	44
YOUNGSTOWN	359	970.5	1012.7	21.7	10.0	16.0	-3.5	29.4	19	-1.1	11	0	1	12.2	81	113	22	30	15	5	0	0	1.4	27	12.5	28	15	2	10	18	7.6	
OKLAHOMA																																
OKLAHOMA CITY	392	966.8	1011.9	33.3	18.9	26.1	0.6	38.9	27+	11.1	1	21	0	16.7	62	35	-79	17	8	10	0	0	2.7	14	15.6	NW	27	15	7	8	4.4	82
TULSA	198	988.5	1012.3	32.8	20.0	26.4	1.2	36.1	30+	11.1	1	23	0	16.7	58	68	-51	27	5	5	0	0	2.2	17	15.2	E	14	13	12	5	4.3	81
OREGON																																
ASTORIA	2	1016.9	1017.6	18.3	10.6	14.6	0.6	22.8	13	5.0	2	0	0	11.7	84	23	-53	10	12	1	0	0	2.3	29	11.2	21	8	4	8	18	7.5	
BURNS U	1265	872.0	1013.0	25.6	8.3	16.8	1.3	33.3	28	-0.6	11	2	1	4.4	46	10	-12	7	3		0	0	1.5	30				14	11	5	4.2	
EUGENE	109	1002.7	1016.1	23.9	8.3	16.1	0.0	31.7	28	3.9	10	0	0	10.0	70	49	12	29	6	4	0	0	1.8	33	10.3	26	10	7	9	14	6.2	
MEACHAM	1234	876.7	1014.4	19.4	7.8	13.4	1.3	28.9	6	2.2	26	0	0			34	-28	15	9		0	0			7.2	31	23	5	14	11	6.1	
MEDFORD	396	967.2	1014.1	27.8	9.4	18.6	0.7	36.7	28	3.3	11	5	0	8.9	59	40	14	25	5	4	0	0	1.5	32	8.9	21	10	11	11	8	4.4	
PENDLETON	452	960.7	1013.6	27.8	12.8	20.2	1.4	35.6	28	8.3	22	4	0	6.7	45	20	-9	7	7	5	0	0	2.1	25	14.3	26	20	6	17	7	5.8	
PORTLAND	6	1015.2	1016.4	23.9	11.7	17.8	1.1	31.1	28	8.3	10	0	0	10.0	64	17	-25	9	5	2	0	0	1.7	32	10.3	NW	30+	6	9	15	6.8	66
SALEM	60	1008.8	1016.2	22.8	8.3	15.6	-0.3	30.6	28	4.4	10+	0	0	8.3	63	18	-19	11	6	2	0	0	1.1	33	9.4	36	30	10	6	14	6.0	
SEXTON SUMMIT R	1169	883.8	1014.4	20.6	7.8	14.2	1.0	28.3	28	1.1	10+	0	0			24	-15	14	2		0	0			17.0	23	10					
PACIFIC AREA																																
GUAM TAGUAC R	110	996.6	1009.3	30.0	22.8	26.3	-0.4	31.7	9	17.2	9	0	0	23.3	85	202	53	87	23	0	0	0	3.6	8	11.6	E	19	3	12	15	7.0	63
JOHNSTON	2	1012.9	1013.4	28.3	25.0	26.4	-0.4	28.9	25+	22.8	12	0	0	22.2	77	26	5	5	13	0	0	0	7.3	8	12.1	E	26	4	9	17	7.1	70
KOROR R	29	1005.1	1008.9	31.1	24.4	27.6	0.3	32.8	17	22.8	27+	8	0	24.4	86	525	196	148	20	2	0	0	1.2	27	10.3	SW	7	0	4	26	9.4	48
KWAJALEIN	2	1008.1	1009.1	30.6	25.0	27.7	0.3	31.7	2	23.3	2	0	0	24.4	82	301	80	51	24	1	0	0	3.7	8	15.6	7	30	1	3	26	9.0	
MAJURO	3	1009.5	1009.7	30.0	25.0	27.5	0.7	31.1	20+	22.2	26+	0	0	23.9	81	378	52	171	21	1	0	0	2.8	8	13.9	E	25	0	10	20	8.4	58
PAGO PAGO	4	1011.5	1011.6	30.0	23.9	26.7		31.1	13+	20.0	28	0	0	22.8	81	93		28	12	1	0	0	2.5	11	10.7	SE	22	0	13	17	7.1	42
PONAPE R	37	1002.7	1007.8	31.1	23.3	27.2	0.5	32.2	22+	21.7	12+	2	0	23.9	85	247	-177	58	25	3	0	0	1.0	16	11.6	SW	1	0	7	23	8.7	70
TRUK MOEN ISLAND	2	1008.1	1008.5	30.0	24.4	27.4	0.4	31.7	25+	21.7	4	0	0	24.4	85	374	73	193	23	3	0	0	0.2	20	17.9	SW	4	0	3	27	9.4	70
WAKE	3	1012.2	1012.6	30.6	25.0	27.7	0.3	32.2	18	22.8	2	1	0	22.2	75	33	-15	10	13	1	0	0	5.9	9	14.3	S	4	7	11	12	6.1	65
YAP R	13			30.6	23.9	27.4	-0.3	32.2	25	22.8	5	1	0			259	-14	85	24	4	0	0			7.6	SW	8+	1	13	16	7.6	71
PENNSYLVANIA																																
ALLENTOWN	118	998.3	1012.2	23.9	14.4	19.2	-1.6	30.6	15	3.9	11	0	0	14.4	75	218	115	89	17	6	0	0	0.8	22	13.0	32	10	5	5	20	7.7	
ERIE	223	985.8	1012.4	19.4	11.1	15.4	-2.5	27.8	15+	0.0	11	0	1	11.7	80	191	113	53	15	5	0	0	1.0	24	16.5	32	15	2	9	19	7.7	
HARRISBURG	103	999.7	1012.2	23.9	15.6	19.8	-2.0	30.6	15	6.7	11	0	0	13.9	70	471	384	319	16	5	0	0	0.7	26	13.4	W	22	6	5	19	7.3	44
PHILADELPHIA	2	1011.2	1012.1	25.0	15.6	20.4	-1.3	30.0	15+	6.7	11	0	0	15.6	76	147	44	82	18	4	0	0	1.3	22	15.2	W	22	4	7	19	7.3	44
PITTSBURGH	347	969.2	1012.8	22.8	12.2	17.7	-2.6	29.4	19+	1.1	11	0	0	11.7	70	129	33	42	16	6	0	0	2.3	27	13.0	30	23	2	8	20	7.9	43
SCRANTON	283	977.7	1011.6	21.7	12.8	17.2	-2.9	27.8	15	1.1	11	0	0	13.3	79	179	80	79	17	5	0	0	1.1	21	11.2	NW	10	3	4	23	8.3	34
WILLIAMSPORT	160	993.2	1011.9	22.2	13.3	17.8	-2.9	28.9	15	5.0	11	0	0	13.9	79	427	345	220	18	8	0	0	0.5	28	10.3	27	22+	2	6	22	8.2	
RHODE ISLAND																																
BLOCK ISLAND	34			19.4	13.3	16.4	-0.7	23.9	30+	6.7	12	0	0			157	92	61	12		0	0										
PROVIDENCE	16	1010.5	1012.7	22.8	13.9	18.3	-0.7	29.4	9	6.7	12	0	0	13.9	78	173	103	53	16	6	0	0	1.6	19	11.6	18	22	2	8	20	7.8	38

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
SOUTH CAROLINA	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M p.s.		M.p.s							%
CHARLESTON	12	1011.9	1013.6	29.4	17.2	23.3	- 2.9	32.8	21+	10.0	12+	4	0	17.2	71	134	8	58	9	6	0	0	1.1	20	19.7Y	W	10	14	10	6	4.6	72
CHARLESTON U	3			28.3	20.6	24.4	- 2.1	33.3	21	16.1	2	2	0			122	14	43	9		0	0			21.0	E	19					
COLUMBIA	65	1005.4	1013.5	30.0	16.7	23.3	- 3.2	33.9	6	7.8	12	10	0	16.7	71	155	57	78	9	5	0	0	0.4	23	10.7	8	19	9	15	6	4.7	67
GRNVLLE-SPRTNBRG	292	979.3	1013.3	28.3	15.0	21.6	- 3.4	33.3	6+	4.4	1	2	0	13.3	63	207	134	118	9	6	0	0	0.5	25	12.1	N	9	11	12	7	5.0	67
SOUTH DAKOTA																																
ABERDEEN	395	966.5	1012.6	26.7	12.8	19.6	0.3	32.2	29+	6.1	21	2	0	13.3	68	46	- 50	21	6	8	0	0	0.8	12	11.2	32	27	10	9	11	5.7	
HURON	390	966.1	1012.1	25.6	12.2	18.9	- 0.8	32.2	12	4.4	21	1	0	13.9	72	32	- 48	17	9	5	0	0	1.4	13	11.6	S	11	7	12	11	6.1	68
RAPID CITY	964	902.8	1011.8	25.0	11.7	18.2	- 0.1	30.6	29+	2.2	20	0	0	12.8	75	104	26	59	12	14	0	0	0.5	3	18.8	NW	13	4	13	13	6.6	43
SIOUX FALLS	432	962.4	1013.1	26.1	12.2	19.3	- 0.8	32.2	12	3.9	22	1	0	12.2	66	53	- 57	19	10	4	0	0	1.3	12	11.6	7	9	9	10	11	5.9	
TENNESSEE																																
BRISTOL	459	960.7	1014.0	25.6	13.9	19.7	- 3.2	31.1	15	5.6	11	0	0	13.9	72	75	- 10	26	11	5	0	0	0.7	29	9.4	31	21	8	10	12	6.3	
CHATTANOOGA	203	989.2	1013.6	28.3	14.4	21.2	- 4.4	33.3	6+	5.0	1	2	0	13.3	64	100	6	61	13	5	0	0	0.4	31	13.0	N	6	13	11	6	4.5	66
KNOXVILLE	299	979.7	1014.3	27.2	15.6	21.6	- 2.7	32.8	15	6.7	1	1	0	12.9	65	128	43	91	7	4	0	0	1.3	30	13.9	NW	6	9	14	7	5.6	64
MEMPHIS	79	1003.4	1013.4	31.1	19.4	25.3	- 0.6	35.0	20+	11.1	1	14	0	16.1	57	140	46	53	7	6	0	0	0.8	17	15.6	23	14	12	13	5	4.4	83
NASHVILLE	180	992.2	1013.4	29.4	16.1	22.8	- 2.4	33.9	27+	6.1	1	6	0	15.6	66	65	- 18	24	7	7	0	0	0.9	27	15.2	SW	28	9	13	8	5.3	60
OAK RIDGE R	276			27.2	14.4	21.0	- 2.6	32.8	6	4.4	1	1	0			141	59	73	11		0	0			20.6Y		29	9	12	9	5.2	
TEXAS																																
ABILENE	544	950.6	1011.9	33.3	20.6	27.0	0.2	41.1	27+	13.9	1	17	0	17.2	60	93	25	53	4	6	0	0	3.5	17	22.8	NE	28	13	9	8	4.7	90
AMARILLO	1098	889.6	1009.9	30.6	16.1	23.1	- 1.9	35.6	25	11.1	1	8	0	11.1	52	98	25	33	9	10	0	0	3.5	17	28.6	NE	21	15	12	3	3.6	83
AUSTIN	182	990.5	1011.8	32.8	22.2	27.6	- 0.1	36.7	26+	18.3	4+	20	0	20.0	69	56	- 26	46	8	4	0	0	2.5	17	9.4	N	29	10	12	8	4.9	75
BROWNSVILLE	6	1010.8	1011.5	30.6	23.3	27.0	- 1.2	32.8	30+	20.0	5+	11	0	22.8	79	216	141	110	12	1	0	0	3.0	13	11.6	SE	10	13	8	9	5.1	76
CORPUS CHRISTI	12	1010.5	1012.0	32.2	23.3	27.8	- 0.2	36.1	30	20.0	6+	13	0	23.3	81	93	32	44	9	3	0	0	3.6	13	11.6	SE	28	11	11	8	4.8	85
DALLAS	147	994.6	1011.6	33.3	22.2	27.8	0.4	40.0	25	16.1	1	20	0	19.4	63	71	- 11	38	6	7	0	0	3.4	15	21.0	NW	21	12	11	7	4.6	69
DEL RIO	313	975.3	1010.6	34.4	21.7	27.9	- 1.2	39.4	21	14.4	1	23	0	19.4	63	46	- 12	21	7	2	0	0	4.4	13	10.3	S	15	9	13	8	5.1	
EL PASO	1194	880.5	1009.2	32.8	18.3	25.7	- 1.5	38.3	29	11.1	1	22	0	8.3	39	41	24	13	8	8	0	0	0.4	24	19.7	W	8	16	10	4	3.8	88
FORT WORTH	164	991.9	1011.8	33.9	21.1	27.4	- 0.1	40.6	25	12.8	1	22	0	18.9	64	38	- 38	20	4	9	0	0	2.8	16	12.5	2	21	13	10	7	4.5	
GALVESTON U	2			30.0	25.6	27.7	0.1	33.9	19	21.1	2	3	0			13	- 55	6	7		0	0			12.5	S	25					75
HOUSTON INTERCON	29	1009.1	1012.8	32.8	21.1	27.1	- 0.1	36.7	29	16.1	4+	20	0	21.7	77	77	- 13	30	6	6	0	0	1.2	16	13.0	2	21	11	8	11	5.4	65
LUBBOCK	992	901.8	1010.0	31.7	18.3	24.9	- 0.3	38.9	27	13.3	5+	12	0	14.4	59	136	72	47	9	10	0	0	2.3	17	17.9	14	28	13	13	4	3.9	
MIDLAND	869	914.0	1009.8	33.3	18.9	26.1	- 1.3	40.0	28	11.7	1	16	0	14.4	57	43	2	20	5	7	0	0	2.6	15	15.6	36	15+	14	11	5	4.3	
PORT ARTHUR	5	1012.5		31.7	21.7	26.8	- 0.2	33.9	30+	17.2	3	19	0	21.7	78	87	- 22	74	7	6	0	0	1.6	17	13.9	N	21	14	8	8	4.7	68
SAN ANGELO	580	945.8	1010.2	33.9	21.1	27.3	- 0.9	40.0	28	10.6	1	16	0	16.7	57	107	61	59	5	5	0	0	2.7	18	13.0	32	15	16	7	7	4.1	
SAN ANTONIO	240	984.8	1012.2	31.7	21.7	26.8	- 0.9	35.6	26+	15.0	1	15	0	21.1	75	73	- 2	27	7	1	0	0	2.4	14	12.5	NW	16	10	13	7	5.3	63
VICTORIA	32	1008.5	1012.5	32.8	23.3	27.8	0.4	35.0	30+	18.3	6	17	0	21.7	76	81	3	29	9	4	0	0	2.2	15	13.4Y	SW	26	11	10	9	5.3	
WACO	153	994.2	1011.8	33.9	22.2	28.2	0.4	39.4	26	13.9	1	23	0	20.0	65	77	10	31	6	7	0	0	3.8	17	11.2	36	22+	15	5	10	4.9	
WICHITA FALLS	303	974.9	1010.5	36.1	19.4	27.8	0.1	43.9	25	13.3	1	29	0	17.8	59	44	- 37	25	5	6	0	0	3.4	16	13.9	28	22	11	8	11	5.0	
UTAH																																
MILFORD	1533	844.9		30.0	11.1	20.6	2.1	37.2	30	6.7	12	7	0			17	6	7	6		0	0			16.5	SW	23+	11	11	8	4.7	70
SALT LAKE CITY	1286	870.0	1010.5	29.4	14.4	22.2	2.5	36.1	30	8.9	19	8	0	6.7	39	4	- 21	2	7	10	0	0	1.4	17	16.5	N	17+	10	11	9	5.5	77
WENDOVER	1291	868.9	1011.1	28.9	16.1	22.6	1.6	35.6	30	11.7	19	4	0	2.8	30	8	- 4	3	6		0	0						9	10	11	5.3	
VERMONT																																
BURLINGTON	101	999.0	1011.3	22.2	12.2	17.3	- 0.6	31.1	15	1.7	11	0	0	12.8	77	166	77	72	16	3	0	0	1.3	19	13.9	S	15	2	8	20	7.7	39
VIRGINIA																																
LYNCHBURG	279			25.6	13.9	19.8	- 2.0	30.6	15	5.0	11	0	0			218	115	159	12		0	0			10.7	W	22	8	8	14	6.3	54
NORFOLK	7	1011.9	1012.9	26.1	16.7	21.4	- 2.8	30.6	16	9.4	12	0	0	15.6	72	125	34	43	13	5	0	0	1.8	19	18.8	NW	22	10	11	9	5.4	75
RICHMOND	50	1006.1	1012.6	26.7	15.6	21.2	- 2.8	31.7	16	7.8	12	0	0	16.1	75	224	129	99	14	5	0	0	0.8	22	13.9	NW	21	7	9	14	6.0	66
ROANOKE	350	971.6	1013.1	26.1	13.9	19.8	- 3.2	31.1	5	5.6	12+	0	0	12.8	68	192	95	101	10	4	0	0	1.4	30	14.3	32	22	5	11	14	6.6	
WALLOPS ISLAND	3			22.8	16.1	19.6		28.9	29	8.9	11	0	0			193		84	12		0	0			20.4Y	NW	22					
WASHINGTON																																
OLYMPIA	59	1009.5	1016.6	21.1	7.8	14.4	- 0.6	27.8	8	2.2	2	0	0	9.4	75	27	- 18	13	6	1	0	0	1.4	19	8.9	21	23	4	6	20	7.5	
QUILLAYUTE	55	1009.8	1017.4	17.8	8.3	13.2	0.0	23.9	8	2.8	1	0	0	9.4	79	38	- 48	13	14	0	0	0	1.2	26	7.6	NW	2	2	7	21	8.1	29
SEATTLE-TACOMA	122	1000.0	1016.2	20.0	11.1	15.6	0.2	25.6	8	9.4	22+	0	0	9.4	72	46	6	19	12	2	0	0	0.6	24	9.8	SW	10+	4	6	20	7.6	46
SPOKANE	718	929.9	1012.8	22.8	10.6	16.7	0.1	32.2	6	5.0	13	1	0	6.7	56	40	2	16	8	4	0	0	1.0	21	11.2	W	11	7	5	18	6.8	51
STAMPEDE PASS R	1206	879.4		13.3	6.1	9.7	0.3	23.9	6	2.2	11+	0	0			141	37	60	15		0	1540						4	3	23	8.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
WALLA WALLA U	289			26.7	13.9	20.2	0.6	35.6	6	10.0	24+	4	0			28	- 3	13	8		0	0			12.1	SW	6	4	16	10	6.0	65
YAKIMA	321	975.3	1013.1	27.2	10.0	18.7	0.7	34.4	6	4.4	12	5	0	7.2	50	38	18	17	6	4	0	0	1.9	31	17.0	20	9	6	15	9	6.0	
WEST INDIES																																
SAN JUAN P.R.	4	1013.9	1016.6	32.2	25.6	28.8	2.1	35.6	21	23.9	15+	13	0	21.1	66	40	-104	16	7	5	0	0	3.7	11	14.3	E	29	4	14	12	6.6	48
WEST VIRGINIA																																
BECKLEY	763	926.9	1013.8	21.7	11.1	16.3	- 3.6	28.9	15	0.0	11	0	1	11.7	77	139	25	35	15	5	0	0	1.7	26	11.2	27	23	2	9	19	7.7	
CHARLESTON	286	979.7	1013.5	24.4	12.2	18.3	- 3.9	31.7	15	0.6	11	0	0	13.3	77	110	16	42	14	6	0	0	1.0	25	10.3	4	4	3	8	19	7.4	
ELKINS	594	943.8		22.2	10.0	16.0	- 3.5	28.9	15	- 1.7	11	0	1			179	47	59	19		0	0						3	5	22	8.1	
HUNTINGTON	252	984.1	1013.8	24.4	13.3	19.1	- 3.2	31.1	19	4.4	1	0	0	13.9	75	112	7	29	13	5	0	0	1.0	23	8.0	28	23	1	13	16	7.3	
PARKERSBURG U	187			24.4	13.9	18.9	- 3.6	31.1	19+	2.2	11	0	0			138	29	49	14		0	0			14.3	N	4					49
WISCONSIN																																
GREEN BAY	208	988.5	1013.8	25.0	10.6	17.9	- 0.7	32.8	30	2.2	10	1	0	10.6	65	57	- 28	29	10	6	0	0	0.7	34	11.2	SW	11	9	8	13	6.0	70
LA CROSSE	198	990.2	1014.4	26.1	12.2	19.2	- 1.3	33.3	3	4.4	10	1	0	12.8	71	71	- 35		10	8	0		0.5	8								
MADISON	262	982.4	1013.6	25.6	8.9	17.1	- 1.8	32.8	30+	- 0.6	10	2	1	11.1	67	42	- 58	19	7	5	0	0	0.5	32	14.3	NW	2	9	12	9	5.4	64
MILWAUKEE	205	988.5	1013.6	22.2	10.6	16.4	- 0.9	32.2	3	6.1	17+	1	0	10.6	72	85	- 8	31	10	4	0	0	1.5	35	15.2	N	9	10	9	11	5.6	64
WYOMING																																
CASPER	1627	836.8	1011.1	27.2	9.4	18.3	1.1	33.3	30	3.9	26	1	0	7.2	57	21	- 11	9	11	13	0	0	1.6	24	15.6	27	25	3	20	7	5.7	
CHEYENNE	1867	812.7	1012.2	24.4	10.0	17.3	0.1	27.8	30+	6.7	20	0	0	6.7	55	43	- 10	13	12	17	0	0	1.4	25	17.0	SW	23	5	14	11	6.1	63
LANDER	1696	828.7	1011.0	26.1	10.0	17.8	1.2	31.7	30	3.9	26	0	0	5.0	46	18	- 17	13	8	15	0	0	1.4	25	18.8	SW	22	6	12	12	6.0	68
SHERIDAN	1208	877.1	1011.5	26.1	10.0	18.2	1.6	32.8	29	4.4	20	1	0	9.4	61	50	- 15	27	13	10	0	0	0.8	30	15.2	W	29	5	20	5	5.7	67

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

[illegible]

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
ALABAMA														
BIRMINGHAM	0	0	▪	28	437	320	548	526	348	138	21	7	2373	2551
HUNTSVILLE	0	0	0	44	469	440	606	590	382	163	36	4	2734	3070
MOBILE	0	0	0	8	204	136	244	295	131	35	0	0	1053	1560
MONTGOMERY	0	0	0	18	343	242	391	443	241	91	0	0	1769	2291
ALASKA														
ANCHORAGE	291	302	561	1008	1396	1508	1814	1488	1521	1138	666	384	12077	10648
ANNETTE	145	220	349	648	766	1062	1181	1006	862	803	488	363	7893	7069
BARROW	755	970	990	1568	1966	2372	2523	2447	2630	2081	1448	968	20718	20174
BARTER ISLAND	676	905	1031	1652	1928	2400	2529	2464	2621	2094	1426	920	20646	19862
BETHEL	374	398	621	1050	1500	1611	1947	1883	2088	1516	856	486	14330	13196
BETTLES	221	391	782	1573	2090	2254	2785	2467	2420	1549	685	254	17471	
BIG DELTA	197	348	664	1261	1904	2162	2530	2149	2069	1374	601	269	15528	
COLD BAY	527	504	608	809	973	1004	1165	1260	1503	1056	814	697	10920	9880
FAIRBANKS	134	271	600	1143	1932	2195	2524	2178	2102	1318	539	205	15141	14279
GULKANA	257	381	686	1254	1973	2195	2596	2082	1881	1391	704	410	15810	
HOMER	409	360	568	866	1166	1297	1538	1324	1509	1128	764	542	11471	
JUNEAU	227	290	504	811	1001	1360	1519	1315	1186	906	618	432	10169	9075
KING SALMON	324	306	541	945	1296	1436	1806	1706	1963	1281	739	545	12888	11343
KOTZEBUE	276	499	700	1335	1757	2014	2154	2141	2434	1725	953	646	16634	16105
MC GRATH	251	274	597	1146	1929	2002	2500	2097	2144	1415	680	290	15325	14283
NOME	427	503	697	1140	1478	1767	1923	1759	2250	1584	911	555	14994	14171
ST. PAUL ISLAND	713	628	677	835	972	1079	1205	1458	1670	1193	993	813	12236	11199
SHEMYA	633	563	556	741	847	1006	1052	914	998	857	816	643	9626	9687
SUMMIT	449	474	779	1382	1781	1941	2240	1908	1998	1539	855	540	15886	
TALKEETNA	260	272	594	1148	1631	1772	2013	1621	1706	1310	703	376	13406	11559
UNALAKLEET	332	407	648	1116	1642	1791	1985	1801	2249	1551	832	483	14837	
YAKUTAT	375	356	608	799	1017	1326	1527	1308	1236	1079	766	505	10902	9092
ARIZONA														
FLAGSTAFF	24	40	352	809	938	1310	1126	956	768	749	573	220	7865	7152
PHOENIX	0	0	0	79	185	455	414	174	22	12	0	0	1341	1765
TUCSON	▪	0	0	120	249	548	444	259	73	50	0	0	1743	1800
WINSLOW	0	0	59	342	623	1068	911	711	403	316	110	2	4545	4782
YUMA	0	0	0	76	155	415	372	129	11	9	0	0	1167	1217
ARKANSAS														
FORT SMITH	0	0	23	26	441	571	804	616	378	145	36	1	3041	3292
LITTLE ROCK	0	0	▪	6	437	466	659	525	360	149	20	0	2631	3219
CALIFORNIA														
BAKERSFIELD	0	0	16	163	329	597	717	286	97	82	25	▪	2312	2122
BISHOP	0	0	100	391	648	972	841	578	305	330	103	1	4269	4227
BLUE CANYON	17	20	207	522	703	1077	889	741	601	667	316	121	5881	5507
EUREKA U	299	154	242	440	463	612	624	456	422	472	423	306	4913	4643
FRESNO	0	▪	20	209	423	678	750	357	142	128	37	0	2744	2492
LONG BEACH	0	0	1	62	138	379	354	241	164	62	33	0	1434	1711
LOS ANGELES	0	0	3	92	180	371	339	229	161	103	53	0	1531	1799
LOS ANGELES U	0	▪	0	94	153	369	288	132	61	61	35	0	1193	1349
MT SHASTA R	31	24	228	535	746	1099	1031	752	599	627	296	110	6078	5722
OAKLAND	97	17	34	226	355	559	566	341	257	246	175	102	2975	2870
RED BLUFF	0	0	35	210	368	689	672	422	251	218	69	12	2946	2515
SACRAMENTO	0	0	33	191	363	673	731	390	197	190	63	11	2842	2773
SANDBERG R	0	6	103	401	534	982	773	523	355	448	266	84	4475	4209
SAN DIEGO	0	▪	0	78	160	326	310	203	139	78	34	0	1328	1439
SAN FRANCISCO	133	21	47	252	349	579	594	368	294	282	226	135	3280	3012
SAN FRANCISCO U	225	120	85	229	275	490	506	312	279	278	287	226	3312	3001
SANTA MARIA	110	22	76	301	421	596	510	340	284	280	252	116	3308	2967
STOCKTON	0	0	18	174	382	676	751	394	163	165	53	4	2780	2676
COLORADO														
ALAMOSA	64	63	361	698	1098	1518	1467	1071	855	666	462	111	8434	8529
COLORADO SPRINGS	33	5	285	481	806	1067	1080	832	665	469	273	6	6002	6423
DENVER	24	0	273	479	771	1019	1063	832	621	486	246	4	5818	6283
GRAND JUNCTION	▪	0	134	389	792	1204	1076	813	563	346	139	0	5456	5641
PUEBLO	3	0	180	371	723	968	1081	756	585	359	170	0	5196	5462
CONNECTICUT														
BRIDGEPORT	0	4	27	150	643	813	983	1009	853	564	187	33	5266	5617
HARTFORD	2	11	55	214	756	992	1140	1125	935	619	172	50	6071	6172
DIST.OF COLUMBIA														
WASHINGTON DULLES	0	2	34	141	631	699	901	935	687	404	117	46	4597	
WASHINGTON NATIONAL	▪	0	12	61	518	597	815	817	599	326	56	21	3822	4224
DELAWARE														
WILMINGTON	▪	2	23	93	585	702	889	935	732	443	105	27	4536	4930
FLORIDA														
APALACHICOLA U	0	0	0	1	125	106	215	291	115	16	0	0	869	1308
DAYTONA BEACH	0	0	0	0	71	19	85	182	69	15	0	0	441	879
FORT MYERS	0	0	▪	0	3	3	19	60	0	0	0	0	85	442
JACKSONVILLE	0	0	0	6	144	92	159	289	131	40	3	0	864	1239
KEY WEST	0	0	0	0	0	0	0	▪	0	0	0	0	8	108
LAKELAND U	0	0	▪	0	38	14	71	139	31	6	▪	0	299	661
MIAMI	0	0	0	0	0	▪	2	39	0	0	0	0	41	214
ORLANDO	0	0	0	0	26	9	51	124	24	6	0	0	240	766
PENSACOLA	0	0	0	9	175	130	234	299	143	29	0	0	1019	1463
TALLAHASSEE	0	0	0	8	226	134	219	337	167	42	0	0	1133	1485
TAMPA	0	0	0	0	41	13	62	139	26	5	0	0	286	683
WEST PALM BEACH	0	0	▪	0	0	0	4	48	0	0	0	0	52	253
GEORGIA														
ATHENS	▪	0	0	33	415	381	519	622	352	152	17	5	2496	2929
ATLANTA	0	0	0	36	436	390	559	643	387	161	21	5	2638	2983
AUGUSTA	0	0	0	18	355	301	406	523	306	123	5	2	2039	2397
COLUMBUS	0	0	0	11	313	252	371	468	250	84	0	1	1750	2383
MACON	0	0	0	9	321	288	403	493	270	96	0	0	1880	2136
ROME	0	0	0	45	491	433	616	665	426	177	28	7	2888	3326
SAVANNAH	0	0	0	10	236	187	256	400	183	74	1	0	1347	1819

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1971-1972

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
IDAHO														
BOISE	10	6	210	492	753	1069	1047	818	598	543	194	45	5785	5809
LEWISTON	16	11	206	498	748	948	1007	789	551	530	171	46	5521	5542
POCATELLO	19	13	374	684	964	1309	1300	1039	735	654	346	101	7538	7033
ILLINOIS														
CAIRO U	0	0	9	29	470	562	881	726	491	195	25	0	3388	3821
CHICAGO O HARE	7	[illegible]	64	154	693	948	1405	1197	954	602	178	80	6285	6639
CHICAGO MIDWAY	5	2	56	146	683	871	1311	1139	929	539	177	78	5936	6155
MOLINE	17	3	94	195	740	1026	1434	1280	893	504	155	25	6366	6408
PEORIA	17	5	85	186	728	945	1402	1167	866	475	150	42	6068	6025
ROCKFORD	14	5	95	209	771	1031	1483	1287	1006	606	164	79	6750	6830
SPRINGFIELD	9	[illegible]	65	130	633	820	1253	1040	745	375	114	27	5212	5429
INDIANA														
EVANSVILLE	0	0	23	85	571	701	1000	887	639	274	64	16	4260	4435
FORT WAYNE	5	2	71	181	743	894	1269	1152	900	513	154	66	5950	6205
INDIANAPOLIS	[illegible]	1	49	129	648	813	1186	1054	774	389	89	35	5170	5699
SOUTH BEND	16	13	86	171	716	892	1269	1110	972	582	197	109	6133	6439
IOWA														
BURLINGTON	15	4	94	181	711	993	1403	1187	849	464	147	40	6088	6114
DES MOINES	8	4	96	184	756	1132	1495	1303	857	478	149	23	6485	6808
DUBUQUE	29	24	127	266	818	1150	1594	1379	1051	632	174	63	7307	7376
SIOUX CITY	11	2	126	283	807	1252	1530	1350	838	463	156	16	6834	6951
WATERLOO	37	40	146	328	903	1266	1694	1536	1053	611	196	56	7866	7320
KANSAS														
CONCORDIA	3	0	99	227	669	982	1229	965	606	388	151	12	5331	5479
DODGE CITY	2	0	110	238	639	929	1111	812	485	301	129	3	4759	4986
GOODLAND	11	0	193	388	756	998	1138	862	615	445	222	10	5638	6141
TOPEKA	4	0	69	143	580	927	1216	958	567	324	109	10	4907	5182
WICHITA	4	0	77	165	628	897	1171	871	524	310	109	0	4756	4620
KENTUCKY														
COVINGTON	0	0	31	128	649	731	1073	1024	751	374	116	79	4956	5265
LEXINGTON	0	0	8	69	536	591	909	917	700	343	96	47	4216	4683
LOUISVILLE	0	0	13	65	537	610	914	866	623	282	61	19	3990	4660
LOUISIANA														
ALEXANDRIA	0	0	1	16	316	251	411	362	172	60	5	0	1594	1921
BATON ROUGE	0	0	[illegible]	11	242	142	284	288	123	32	[illegible]	0	1122	1560
LAKE CHARLES	0	0	[illegible]	3	191	159	297	267	102	22	0	[illegible]	1041	1459
NEW ORLEANS	0	0	[illegible]	10	208	137	245	278	126	25	[illegible]	0	1029	1385
SHREVEPORT	0	0	4	7	282	304	499	382	185	62	0	[illegible]	1725	2184
MAINE														
CARIBOU	59	141	274	569	1106	1648	1759	1698	1440	903	405	134	10136	9767
PORTLAND	3	20	147	381	878	1164	1322	1265	1112	725	379	155	7551	7511
MARYLAND														
BALTIMORE	0	0	24	96	571	652	841	884	663	396	94	42	4263	4654
MASSACHUSETTS														
BLUE HILL OBS R	0	15	68	237	779	1025	1122	1141	1004	686	288	105	6470	6368
BOSTON	0	2	37	169	651	882	985	1021	883	598	250	54	5532	5634
WORCESTER	3	35	98	258	844	1061	1189	1203	1065	733	290	116	6895	6969
MICHIGAN														
ALPENA	93	122	193	353	871	1154	1433	1403	1329	883	376	232	8442	8506
DETROIT	0	4	56	148	698	896	1219	1141	993	596	165	89	6005	6232
DETROIT METRO	13	6	72	213	788	977	1272	1165	997	608	174	91	6376	6516
FLINT	29	28	108	248	782	1005	1328	1226	1052	669	192	117	6784	6885
GRAND RAPIDS	15	11	107	233	800	1016	1365	1240	1089	675	204	102	6857	6998
HOUGHTON LAKE	70	95	183	327	912	1197	1502	1401	1320	847	254	191	8299	8342
LANSING	35	39	129	234	792	1016	1348	1246	1088	696	219	142	6985	6909
MARQUETTE U	90	123	182	350	897	1218	1586	1447	1304	897	403	257	8754	8393
MUSKEGON	31	22	120	246	801	1031	1333	1231	1068	665	233	133	6914	6696
SAULT STE MARIE	144	190	262	434	998	1324	1582	1566	1420	926	314	232	9392	9048
MINNESOTA														
DULUTH	111	133	273	531	1099	1553	2012	1698	1458	946	357	211	10382	10000
INTERNATIONAL FALLS	111	106	318	609	1201	1745	2195	1848	1413	833	236	109	10724	10606
MINNEAPOLIS	16	22	164	413	962	1438	1844	1576	1188	687	204	73	8587	8382
ROCHESTER	29	31	170	361	917	1387	1810	1521	1142	704	219	88	8379	8295
ST CLOUD	42	44	221	466	1023	1528	1907	1690	1265	752	237	96	9271	8879
MISSISSIPPI														
JACKSON	0	0	[illegible]	19	328	235	431	410	216	76	[illegible]	0	1716	2203
MERIDIAN	0	[illegible]	[illegible]	17	359	244	418	404	231	81	3	0	1757	2289
MISSOURI														
COLUMBIA REGIONAL	4	2	71	113	582	775	1129	901	634	304	94	13	4622	5046
KANSAS CITY	4	0	57	87	538	863	1163	920	557	263	71	0	4523	4711
ST JOSEPH	15	6	106	192	653	983	1263	976	629	303	88	[illegible]	5223	5484
ST LOUIS	0	0	47	97	574	751	1081	884	619	295	80	10	4438	4900
SPRINGFIELD	3	0	61	117	561	683	988	767	549	243	79	2	4053	4561
MONTANA														
BILLINGS	25	7	305	659	869	1397	1601	1118	764	633	353	36	7767	7049
GLASGOW	27	0	267	635	973	1676	1883	1579	1067	614	305	55	9081	8996
GREAT FALLS	34	5	326	628	854	1455	1616	1226	820	667	368	77	8076	7750
HAVRE	27	5	312	673	957	1785	1906	1520	969	635	281	32	9102	8700
HELENA	91	22	454	707	936	1524	1628	1102	796	747	430	120	8557	8129
KALISPELL	116	28	470	768	950	1440	1581	1118	817	742	381	181	8592	8191
MILES CITY	8	3	245	621	905	1636	1732	1376	890	569	277	28	8290	7723
MISSOULA	75	12	386	700	934	1352	1371	1062	749	666	338	133	7778	8125

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

[illegible]

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
NEBRASKA														
GRAND ISLAND	6	0	131	284	743	1083	1335	1089	714	463	181	19	6048	6530
LINCOLN U	4	0	89	223	693	1042	1306	1046	681	393	144	13	5634	5864
NORFOLK	14	0	148	328	824	1257	1481	1251	824	506	204	25	6862	6979
NORTH PLATTE	12	0	210	472	829	1157	1368	1013	745	549	250	32	6637	6684
OMAHA	5	1	95	228	707	1113	1392	1143	741	408	147	12	5992	6218
SCOTTSBLUFF	13	0	243	537	807	1096	1237	908	714	561	273	19	6408	6673
VALENTINE	25	0	215	492	861	1251	1500	1180	827	584	257	43	7235	7425
NEVADA														
ELKO	14	6	351	651	928	1426	1284	940	704	673	339	59	7375	7433
ELY	18	4	369	760	983	1422	1257	936	732	693	425	102	7701	7733
LAS VEGAS	0	0	4	207	417	724	697	373	99	69	6	0	2596	2709
RENO	9	13	264	588	819	1183	1216	709	548	558	259	54	6221	6332
WINNEMUCCA	3	3	306	625	860	1260	1151	808	626	617	218	36	6513	6761
NEW HAMPSHIRE														
CONCORD	26	49	165	396	970	1185	1327	1267	1142	736	262	112	7637	7383
MT WASHINGTON OBS	527	554	587	780	1404	1714	1838	1846	1639	1450	832	646	13817	13817
NEW JERSEY														
ATLANTIC CITY	4	15	47	143	620	736	958	936	816	550	187	44	5056	4812
ATLANTIC CITY U					560	615	812	818	755	494	209	47	4497	4741
NEWARK	0	1	12	95	569	724	909	969	757	444	93	19	4592	5067
TRENTON U	0	3	31	109	599	700	907	958	771	455	127	31	4691	4980
NEW MEXICO														
ALBUQUERQUE	0	0	101	341	587	1022	889	648	346	244	75	1	4254	4348
CLAYTON	25	8	180	351	649	930	946	719	511	293	171	0	4783	5158
ROSWELL	0	0	82	183	495	743	750	551	273	109	25	0	3211	3793
NEW YORK														
ALBANY	20	45	109	311	838	1080	1298	1269	1060	707	175	97	7009	6875
BINGHAMTON	45	85	144	296	872	1050	1243	1280	1133	732	205	116	7201	7286
BUFFALO	11	29	87	202	771	971	1218	1237	1070	707	187	112	6602	7062
NEW YORK U	0	0	14	106	596	743	920	965	775	445	94	26	4684	4871
NEW YORK KENNEDY	0	0	11	83	532	685	881	904	755	449	123	9	4432	5219
NEW YORK LA GUARDIA	0	1	17	108	612	768	945	987	837	520	164	43	5002	4811
ROCHESTER	17	33	74	194	792	1048	1200	1199	1071	677	161	78	6544	6748
SYRACUSE	13	51	96	256	840	980	1189	1216	1098	731	204	84	6758	6756
NORTH CAROLINA														
ASHEVILLE	0	0	6	129	576	530	704	790	569	294	116	35	3749	4466
CAPE HATTERAS R	0	0	0	6	289	278	379	517	393	267	39	16	2184	2612
CHARLOTTE	0	0	4	72	490	444	625	710	472	226	47	13	3103	3191
GREENSBORO	0	0	9	101	523	501	696	783	550	282	76	30	3551	3805
RALEIGH	0	0	3	61	496	456	623	718	478	237	51	16	3139	3393
WILMINGTON	0	0	0	11	318	276	404	516	340	167	29	4	2065	2347
NORTH DAKOTA														
BISMARCK	52	20	271	608	1043	1672	1868	1618	1157	671	243	65	9288	8851
FARGO	57	36	241	535	1052	1630	1931	1763	1269	718	231	60	9523	9226
WILLISTON	42	5	283	674	1063	1713	1913	1644	1209	702	291	50	9589	9243
OHIO														
AKRON	0	18	68	202	786	899	1214	1182	999	581	184	110	6243	6037
CINCINNATI ABBE OB	0	0	29	80	602	729	1044	954	730	349	98	64	4679	4806
CLEVELAND	9	13	63	168	704	828	1160	1133	930	564	196	124	5892	6196
COLUMBUS	3	5	52	181	733	815	1133	1077	860	482	146	101	5588	5660
DAYTON	0	0	50	97	661	806	1155	1058	870	438	130	67	5332	5622
MANSFIELD	3	12	54	170	722	840	1143	1085	886	515	143	71	5644	5782
TOLEDO	18	12	78	197	813	966	1283	1169	952	560	158	95	6301	6494
YOUNGSTOWN	16	26	76	221	788	898	1186	1198	1028	611	208	157	6413	6417
OKLAHOMA														
OKLAHOMA CITY	0	0	59	88	475	702	923	660	365	144	46	0	3462	3725
TULSA	0	0	53	60	446	653	932	670	373	161	47	0	3395	3860
OREGON														
ASTORIA	165	85	212	420	538	728	768	623	526	545	313	196	5119	5188
BURNS U	68	31	381	647	900	1267	1287	989	716	730	330	114	7460	6957
EUGENE	60	23	169	474	638	811	834	617	503	547	256	123	5055	4726
MEACHAM	143	52	460	734	949	1236	1258	975	833	871	461	272	8244	7874
MEDFORD	16	12	108	424	698	889	891	624	465	505	237	54	4923	5008
PENDLETON	11	9	182	428	633	868	955	793	528	515	171	29	5122	5127
PORTLAND	33	5	123	388	578	756	793	607	466	501	174	61	4485	4635
SALEM	61	18	169	440	607	784	821	625	523	560	267	148	5023	4754
SEXTON SUMMIT R	123	74	276	569	756	1072	1008	808	679	795	412	236	6808	6254
PENNSYLVANIA														
ALLENTOWN	0	8	52	191	719	877	1064	1102	853	531	127	54	5578	5810
ERIE	32	55	97	242	763	895	1172	1217	1082	742	287	184	6768	6927
HARRISBURG	0	3	40	146	643	759	940	1001	766	457	108	44	4907	5251
PHILADELPHIA	0	0	17	79	576	719	920	941	748	450	86	26	4562	5101
PITTSBURGH	1	6	41	184	729	807	1093	1112	881	489	128	96	5567	5987
SCRANTON	5	22	90	263	783	951	1152	1175	992	634	168	109	6344	6254
WILLIAMSPORT	0	7	58	201	757	921	1122	1176	923	562	141	90	5958	5934
RHODE ISLAND														
BLOCK ISLAND	0	12	31	162	619	805	962	982	895	669	350	105	5592	5804
PROVIDENCE	0	7	42	181	736	922	1054	1064	879	616	226	55	5782	5954
SOUTH CAROLINA														
CHARLESTON	0	0	0	13	261	220	317	463	249	113	8	0	1644	2033
CHARLESTON U					221	194	290	435	208	89	6	0	1449	1794
COLUMBIA	0	0	0	13	354	292	429	555	341	136	12	1	2133	2484
GRNVLLE SPRTNBRG	0	0	2	74	492	449	625	694	434	205	48	14	3037	3044
SOUTH DAKOTA														
ABERDEEN	32	15	220	504	977	1621	1821	1603	1100	597	201	39	8730	8473
HURON	32	8	211	478	946	1486	1714	1510	1032	600	210	57	8284	8223
RAPID CITY	43	2	267	578	909	1284	1473	1182	877	634	322	74	7645	7345
SIOUX FALLS	29	12	177	409	945	1470	1737	1551	1031	628	236	50	8275	7839

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1971-1972

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
TENNESSEE														
BRISTOL	0	0	0	87	560	537	743	844	610	307	86	36	3810	4143
CHATTANOOGA	0	0	0	45	496	478	661	721	496	215	62	10	3184	3254
KNOXVILLE	0	0	0	53	496	450	692	735	516	211	47	11	3211	3494
MEMPHIS	0	0	9	13	432	435	698	582	391	146	27	0	2733	3232
NASHVILLE	0	0	0	39	462	483	713	667	454	193	36	6	3053	3578
OAK RIDGE R	0	0	0	73	551	526	748	792	568	244	67	17	3586	3817
TEXAS														
ABILENE	0	0	44	44	312	492	651	464	207	49	12	0	2275	2624
AMARILLO	1	0	120	245	575	843	900	692	409	203	106	0	4094	3985
AUSTIN	0	0	3	0	184	271	434	298	66	6	0	0	1262	1711
BROWNSVILLE	0	0	0	0	16	67	112	93	11	2	0	0	301	600
CORPUS CHRISTI	0	0	0	0	51	112	188	166	22	2	0	0	541	914
DALLAS	0	0	8	5	265	384	577	412	142	33	0	0	1826	2363
DEL RIO	0	0	9	6	135	263	350	228	34	2	0	0	1027	1504
EL PASO	0	0	31	112	381	624	607	364	126	56	3	0	2304	2700
FORT WORTH	0	0	12	7	270	389	615	398	143	26	1	0	1861	2405
GALVESTON U	0	0	0	0	91	131	210	211	53	2	0	0	698	1235
HOUSTON INTERCON	0	0	2	6	195	194	315	295	85	17	0	0	1109	1676
LUBBOCK	0	0	83	124	421	656	728	549	275	94	40	0	2970	3578
MIDLAND	0	0	51	71	350	528	639	446	176	37	12	0	2310	2591
PORT ARTHUR	0	0	0	6	208	199	317	291	109	20	0	0	1150	1447
SAN ANGELO	0	0	23	33	289	450	539	382	138	26	3	0	1883	2255
SAN ANTONIO	0	0	1	0	129	266	382	263	61	7	0	0	1109	1546
VICTORIA	0	0	2	0	96	152	270	229	50	2	0	0	801	1173
WACO	0	0	6	5	230	360	543	368	109	19	2	0	1642	2030
WICHITA FALLS	0	0	37	25	364	578	787	574	273	77	12	0	2727	2832
UTAH														
MILFORD	0	0	224	612	899	1229	1107	847	631	516	265			
SALT LAKE CITY	0	0	201	535	817	1176	1085	783	556	499	168	2	5822	6052
WENDOVER	0	0	186	500	896	1174	1103	870	542	447	117	0	5835	5778
VERMONT														
BURLINGTON	12	49	131	344	938	1254	1357	1387	1239	872	281	113	7977	8269
VIRGINIA														
LYNCHBURG	0	0	13	110	613	546	796	826	571	282	73	36	3866	4166
NORFOLK	0	0	3	27	391	390	572	628	494	272	81	11	2869	3421
RICHMOND	0	0	11	69	512	526	748	788	554	286	58	21	3573	3865
ROANOKE	0	0	12	117	595	603	780	837	594	305	99	31	3973	4150
WALLOPS ISLAND					450	534	741	767	678	399	142	26	3768	
WASHINGTON														
OLYMPIA	113	49	286	500	639	891	954	752	602	632	315	204	5937	5236
QUILLAYUTE	201	126	305	493	614	879	903	716	660	663	354	269	6183	5745
SEATTLE TACOMA	82	17	214	429	570	843	863	678	557	531	222	144	5150	5145
SPOKANE	64	19	297	641	882	1208	1308	991	726	684	274	127	7221	6655
STAMPEDE PASS R	247	175	536	770	1004	1265	1313	1111	1002	1033	600	459	9515	9283
WALLA WALLA U	12	5	157	409	593	842	949	786	480	469	147	35	4884	4805
YAKIMA	52	21	282	549	790	1146	1096	941	633	578	192	55	6335	5941
WEST VIRGINIA														
BECKLEY	6	10	46	212	714	692	916	987	775	446	204	139	5147	5390
CHARLESTON	0	1	13	78	578	543	809	856	649	333	90	81	4031	4476
ELKINS	0	18	54	233	756	731	961	1047	815	494	217	156	5482	5675
HUNTINGTON	2	0	11	84	606	597	899	877	661	335	110	57	4239	4446
PARKERSBURG U	0	1	22	96	622	656	941	930	720	334	92	74	4488	4754
WISCONSIN														
GREEN BAY	32	57	155	328	902	1282	1694	1463	1253	762	215	92	8235	8029
LA CROSSE	15	22	140	301	850	1244	1668	1414	1140	655	154	62	7665	7589
MADISON	28	21	131	293	885	1179	1616	1401	1119	705	212	117	7707	7863
MILWAUKEE	20	37	119	308	824	1097	1518	1305	1149	758	305	139	7579	7635
WYOMING														
CASPER	36	0	352	681	1026	1268	1461	1052	824	653	393	48	7794	7410
CHEYENNE	56	6	364	633	863	1108	1226	916	791	668	419	61	7111	7278
LANDER	12	0	366	738	1133	1343	1404	1083	739	643	402	63	7926	7870
SHERIDAN	59	5	328	683	963	1501	1577	1082	761	607	339	56	7961	7683

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Note: "Heating Degree Days" has been discontinued in the June issues of this publication. Data which would usually be shown in that table for June are shown in the last three columns of the above Table.

COOLING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	291	489	
HUNTSVILLE	262	429	
MOBILE	478	1062	
MONTGOMERY	408	749	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	42	42	
BIG DELTA	22	22	
COLD BAY	0	0	
FAIRBANKS	40	40	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	[illegible]	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	4	4	
PHOENIX	691	1533	
TUCSON	506	907	
WINSLOW	210	240	
YUMA	683	1568	
ARKANSAS			
FORT SMITH	369	534	
LITTLE ROCK	440	700	
CALIFORNIA			
BAKERSFIELD	466	821	
BISHOP	237	283	
BLUE CANYON	60	74	
EUREKA U	0	0	
FRESNO	383	613	
LONG BEACH	177	286	
LOS ANGELES			
LOS ANGELES U	288	413	
MT SHASTA R	58	63	
OAKLAND	15	29	
RED BLUFF	416	597	
SACRAMENTO	245	385	
SANDBERG R	147	204	
SAN DIEGO	68	105	
SAN FRANCISCO	14	22	
SAN FRANCISCO U	4	8	
SANTA MARIA	2	5	
STOCKTON	286	448	
COLORADO			
ALAMOSA	1	1	
COLORADO SPRINGS	96	98	
DENVER	110	116	
GRAND JUNCTION	288	374	
PUEBLO	255	291	
CONNECTICUT			
BRIDGEPORT	53	61	
HARTFORD	83	116	
DELAWARE			
WILMINGTON	143	180	
DIST.OF COLUMBIA			
WASHINGTON DULLES	123	157	
WASHINGTON NATIONAL	184	242	
FLORIDA			
APALACHICOLA U	441	942	
DAYTONA BEACH	447	1129	
FORT MYERS	504	1699	
JACKSONVILLE	346	845	
KEY WEST	496	2254	
LAKELAND U	443	1300	
MIAMI	454	1792	
ORLANDO	524	1529	
PENSACOLA	449	979	
TALLAHASSEE	395	857	
TAMPA	487	1297	
WEST PALM BEACH	511	1751	
GEORGIA			
ATHENS	239	380	
ATLANTA	227	358	
AUGUSTA	283	489	
COLUMBUS	360	690	
MACON	323	594	
ROME	226	361	
SAVANNAH	328	722	
HAWAII			
HILO	316	1423	
HONOLULU	425	1715	
KAHULUI	338	1443	
LIHUE	383	1618	
IDAHO			
BOISE	129	191	
LEWISTON	114	166	
POCATELLO	26	33	
ILLINOIS			
CAIRO U	348	570	
CHICAGO O HARE	106	170	
CHICAGO MIDWAY	120	204	
MOLINE	165	270	
PEORIA	140	243	
ROCKFORD	104	193	
SPRINGFIELD	199	319	
INDIANA			
EVANSVILLE	214	336	
FORT WAYNE	106	166	
INDIANAPOLIS	156	259	
SOUTH BEND	74	121	
IOWA			
BURLINGTON	158	251	
DES MOINES	184	264	
DUBUQUE	110	205	
SIOUX CITY	241	337	
WATERLOO	128	202	
KANSAS			
CONCORDIA	270	341	
DODGE CITY	275	362	
GOODLAND	183	225	
TOPEKA	297	398	
WICHITA	358	474	
KENTUCKY			
COVINGTON	96	168	
LEXINGTON	130	188	
LOUISVILLE	193	302	
LOUISIANA			
ALEXANDRIA	427	828	
BATON ROUGE	519	1099	
LAKE CHARLES	499	1055	
NEW ORLEANS	479	1049	
SHREVEPORT	480	906	
MAINE			
CARIBOU	35	56	
PORTLAND	3	3	
MARYLAND			
BALTIMORE	140	175	
MASSACHUSETTS			
BLUE HILL OBS R	46	55	
BOSTON	74	100	
WORCESTER	41	50	
MICHIGAN			
ALPENA	9	10	
DETROIT	83	124	
DETROIT METRO	73	109	
FLINT	50	68	
GRAND RAPIDS	61	98	
HOUGHTON LAKE	19	30	
LANSING	46	58	
MARQUETTE U	26	40	
MUSKEGON	41	84	
SAULT STE MARIE	7	19	
MINNESOTA			
DULUTH	22	30	
INTERNATIONAL FALLS	51	121	
MINNEAPOLIS	109	203	
ROCHESTER	112	185	
ST CLOUD	70	126	
MISSISSIPPI			
JACKSON	445	859	
MERIDIAN	393	716	
MISSOURI			
COLUMBIA REGIONAL	256	397	
KANSAS CITY	368	565	
ST JOSEPH	334	451	
ST LOUIS	268	437	
SPRINGFIELD	288	435	
MONTANA			
BILLINGS	102	114	
GLASGOW	80	100	
GREAT FALLS	87	106	
HAVRE	108	127	
HELENA	30	32	
KALISPELL	26	33	
MILES CITY	143	177	
MISSOULA	47	58	
NEBRASKA			
GRAND ISLAND	251	329	
LINCOLN U	304	415	
NORFOLK	225	299	
NORTH PLATTE	137	180	
OMAHA	249	326	
SCOTTSBLUFF	121	137	
VALENTINE	132	188	
NEVADA			
ELKO	38	41	
ELY	16	16	
LAS VEGAS	597	1053	
RENO	65	77	
WINNEMUCCA	136	176	
NEW HAMPSHIRE			
CONCORD	52	69	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	83	94	
ATLANTIC CITY U	39	39	
NEWARK	142	190	
TRENTON U	115	150	
NEW MEXICO			
ALBUQUERQUE	267	324	
CLAYTON	160	192	
ROSWELL	382	590	
NEW YORK			
ALBANY	58	70	
BINGHAMTON	36	55	
BUFFALO	48	60	
NEW YORK U	118	170	
NEW YORK KENNEDY	107	118	
NEW YORK LA GUARDIA	77	87	
ROCHESTER	94	118	
SYRACUSE	78	87	
NORTH CAROLINA			
ASHEVILLE	84	114	
CAPE HATTERAS R	218	313	
CHARLOTTE	208	291	
GREENSBORO	147	194	
RALEIGH	170	248	
WILMINGTON	241	413	
NORTH DAKOTA			
BISMARCK	76	113	
FARGO	125	199	
WILLISTON	80	108	
OHIO			
AKRON	63	76	
CINCINNATI ABBE OB	129	225	
CLEVELAND	63	69	
COLUMBUS	67	92	
DAYTON	130	176	
MANSFIELD	109	144	
TOLEDO	67	89	
YOUNGSTOWN	38	46	
OKLAHOMA			
OKLAHOMA CITY	429	672	
TULSA	446	706	
OREGON			
ASTORIA	1	1	
BURNS U	38	52	
EUGENE	6	17	
MEACHAM	9	16	
MEDFORD	70	97	
PENDLETON	134	184	
PORTLAND	39	66	
SALEM	6	16	
SEXTON SUMMIT R	16	29	
PACIFIC AREA			
GUAM TAGUAC R	437	2367	
JOHNSTON	447	2378	
KOROR R	509	3031	
KWAJALEIN	515	3078	
MAJURO	504	2940	
PAGO PAGO	461	2801	
PONAPE R	488	2874	
TRUK MOEN ISLAND	499	2969	
WAKE	513	2215	
YAP R	503	2907	
PENNSYLVANIA			
ALLENTOWN	106	124	
ERIE	32	34	
HARRISBURG	133	166	
PHILADELPHIA	143	193	
PITTSBURGH	68	102	
SCRANTON	53	73	
WILLIAMSPORT	67	92	
RHODE ISLAND			
BLOCK ISLAND	8	8	
PROVIDENCE	60	68	
SOUTH CAROLINA			
CHARLESTON	275	546	
CHARLESTON U	334	615	
COLUMBIA	274	492	
GRNVLLE-SPRTNBRG	197	294	
SOUTH DAKOTA			
ABERDEEN	112	185	
HURON	94	156	
RAPID CITY	70	91	
SIOUX FALLS	108	168	
TENNESSEE			
BRISTOL	113	146	
CHATTANOOGA	177	263	
KNOXVILLE	193	297	
MEMPHIS	383	660	
NASHVILLE	250	430	
OAK RIDGE R	168	249	
TEXAS			
ABILENE	474	904	
AMARILLO	265	372	
AUSTIN	510	1202	
BROWNSVILLE	475	1740	
CORPUS CHRISTI	520	1601	
DALLAS	518	1112	
DEL RIO	521	1354	
EL PASO	404	652	
FORT WORTH	498	1005	
GALVESTON U	510	1245	
HOUSTON INTERCON	480	1112	
LUBBOCK	362	615	
MIDLAND	423	824	
PORT ARTHUR	461	978	
SAN ANGELO	488	996	
SAN ANTONIO	465	1140	
VICTORIA	519	1388	
WACO	539	1107	
WICHITA FALLS	517	865	
UTAH			
MILFORD	103	118	
SALT LAKE CITY	213	247	
WENDOVER	236	285	
VERMONT			
BURLINGTON	64	78	
VIRGINIA			
LYNCHBURG	126	171	
NORFOLK	183	251	
RICHMOND	180	269	
ROANOKE	118	157	
WALLOPS ISLAND	101	110	
WASHINGTON			
OLYMPIA	0	8	
QUILLAYUTE	0	11	
SEATTLE-TACOMA	3	25	
SPOKANE	41	69	
STAMPEDE PASS R	0	0	
WALLA WALLA U	144	209	
YAKIMA	80	122	
WEST INDIES			
SAN JUAN P.R.	569	2759	
WEST VIRGINIA			
BECKLEY	34	40	
CHARLESTON	85	165	
ELKINS	36	39	
HUNTINGTON	102	149	
PARKERSBURG U	115	186	
WISCONSIN			
GREEN BAY	75	127	
LA CROSSE	112	225	
MADISON	61	102	
MILWAUKEE	42	45	
WYOMING			
CASPER	54	54	
CHEYENNE	11	11	
LANDER	43	44	
SHERIDAN	55	64	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JUNE 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	2	2		2	5			4	4		3	6	5													2			
Alaska*																													
Arizona	7	2		26	7				5		3	6																7	
Arkansas	2	2			4			4	C			4		2	1	5													
California	1	1																								1		5	
Colorado	6	3		3	4			4	5		1	4				3												5	5
Connecticut									3			5				4										1		7	6
Delaware										1		4	4															5	6
Florida	21	5	1	74	6					7	57	6	4	2	7	6	4									2		7	4
Georgia	9	3		2	5			4			1	5			3	4												5	4
Hawaii																												4	
Idaho	1	1			4				4			3	2			3												4	
Illinois	4	3		3	5			5	4		3	5	4	5	1	5													
Indiana								3	3			4	3	1		4													
Iowa	7	3		2	5			5	6		1	5	4		2	5												4	4
Kansas	1	1			3			6	6			5	5			4													
Kentucky								°6	C			?	?	1		5													
Louisiana											6	4		2	4	3													
Maine									2							4													
Maryland												4	4	1												19	57	8	5
Massachusetts								3				4			2	5											6	5	4
Michigan	1	1			3						2	4				4													7
Minnesota	1	1						?	6		1	5	5		1	5													
Mississippi	1	1		3	4			?	?	5	2	°6	C															?	?
Missouri								°5			3	5		2		4													
Montana	4	1			4			3	5			4		1														5	
Nebraska	4	3			3			6	6			5	?	1		4												5	3
Nevada*																													
New Hampshire									2			4				3												4	3
New Jersey												4														2		6	7
New Mexico	5	4			2			5	6					1														4	?
New York	1	1		2	5																					24	50	8	8
North Carolina									6		1	5	5		1	5										2		7	7
North Dakota	4	4		1	5			3	4		1	5				3												3	3
Ohio	1	1	1		4		?	?			?	6			?	4											?	6	
Oklahoma	6	4			4			6	5		3	6	5			5													
Oregon								5	5																			6	5
Pacific																												4	
Pennsylvania								3	4			4				6										50	?	9	8
Puerto Rico*																													
Rhode Island												3																4	
South Carolina									3	2		4		1		3												4	5
South Dakota	6	5		1	4			4	3																	237	2932	8	5
Tennessee	2	1		3	5		1	6	4	1	5	°6	C		1	6												5	4
Texas	12	9		6	6			6	6		5	6	5	1		3										2		4	5
Utah									1																			4	1
Vermont												5				3												5	4
U.S. Virgin Is.*																													
Virginia																										13		8	4
Washington								3	5																	4		7	7
West Virginia																4												5	?
Wisconsin	2	2			4						1	5				4												4	6
Wyoming	2	1			3			°6	C						1														

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JUNE 1972

Elmer R. Nelson, Office of Hydrology

Two of the worst flood disasters in the history of our country occurred during June. The first one occurred on the 9th-10th in southwestern South Dakota over the Black Hills area. The second one occurred on the 21st-24th in the eastern United States, where six states were declared a disaster area.

The flood in southwestern South Dakota, in terms of both lives lost and damage done, ranks as the worst natural disaster in the history of that State. Two hundred thirty-six people lost their lives in this devastating flash flood. Damage was estimated at $163 million. The greatest damage and loss of life occurred along Rapid Creek, which flows through Rapid City. This flood was due to torrential rains that fell in the Black Hills Region in a short period of time - mostly between 6 p.m. and midnight on the 9th. Fifteen inches of rain was recorded at Nemo on Box Elder Creek and 14.5 inches in 5 hours near Sheridan Lake on the divide between Spring and Rapid Creeks, southwest of Rapid City. The total rainfall during this storm nearly equalled the yearly average and fell in a period of 6 hours just above and west of Rapid City. The rainfall amounts which caused this flooding are unlikely to occur more than once in several thousand years. Record floods occurred on Rapid, Box Elder, Spring, Battle, Bear Butte, Boulder, Canyon, Elk, and Little Elk Creeks. More than two-thirds of the city of Keystone on Battle Creek was totally destroyed. Rivers that drained areas of less than 100 square miles rose from below bankfull to 8 to 10 feet over bankfull in less than 3 hours. A dam on Canyon Lake on the western outskirts of Rapid City failed around 10:45 p.m. on the 9th after debris clogged the spillway, causing the Lake Level to rise nearly 12 feet. The increase in magnitude of the flood crest due to this stored water is not yet known, but it most certainly contributed significantly to the severity of the flood wave which swept through Rapid City causing such death and destruction.

The flood in the eastern United States resulted from excessive rains accompanying Hurricane Agnes. It was one of the most destructive floods, in terms of property damage, to ever strike this country. Preliminary estimates place the flood damage at approximately $3 billion and the loss of life from flooding at 113. The subsequent suffering of the survivors is incalcuable. The great flood disaster commenced with the landfall of Hurricane Agnes near Panama City, Fla., on the 19th. For one full week, the Eastern Seaboard was under the continuous assault of torrential rains and floods, and flash floods, which became progressively worse as the week passed. Hardly a river basin north of the Carolinas and east of the Appalachians as far north as New York State was unaffected. Many of the basins experienced floods far exceeding the flood of record, and others experienced disastrous floods of near record levels. Previous record stages were exceeded by as much as 4 feet on the Chemung River at Corning, N. Y. (Previous record 24.4 feet in 1946; Agnes, 28 feet). On the Schuylkill River at Reading, Pa., the record flood of 1850 (26 feet) was exceeded by 5.5 feet. At Wilkes-Barre, Pa., the previous record of 33 feet in 1936 was exceeded by 7.5 feet. River gaging stations located to accomodate all reasonable stages were overtopped and washed away. The most recent floods in the disaster area approaching this magnitude were the 1936 Pennsylvania floods and the Hurricane Camille floods in Virginia in 1969. The rainfall causing the greatest disaster in the history of our country totalled as high as 18 inches in some sections of the disaster area. See report on Hurricane Agnes, by Richard M. DeAngeles, for more detailed information on events leading up to this natural disaster.

Only flood events resulting in loss of life and/or flood damage during the month are summarized. They are listed by drainage basins below:

FLOOD EVENT

ST. LAWRENCE DRAINAGE

Lake Ontario

Date June		Lives Lost	Preliminary estimate of property damage thousands of dollars
21-29	Heavy rains in conjunction with "Agnes" during the latter part of June caused major flooding in the Genesee Basin in New York. The precipitation averaged 6.89 inches from the 20th through the 25th. Four of the reporting stations reported over 9 inches, with one station reporting 14 inches (Wellsville, N. Y.) during this period. Record flooding occurred in the upper Genesee River. Gagehouse and equipment was swept away at Scio and Portageville, N. Y. Agricultural losses totalled more than $ 22 million.	1	$57,000

ATLANTIC SLOPE DRAINAGE

19	Major flooding occurred across Westchester and Rockland Counties of New York, coastal Connecticut, southeastern coastal Massachusetts, and Rhode Island. This was the most severe flooding in Bridgeport and Stratford, Conn., since 1955. The USGS made discharge measurements in 21 small streams in Connecticut and	1	18,356

Date June	FLOOD EVENT ATLANTIC SLOPE DRAINAGE (Continued)	Lives Lost	Preliminary estimate of property damage thousands of dollars
	of these, 13 set new records. The storm of the 18th-19th brought heavy to excessive amounts of rain to coastal southern New England and Westchester and Rockland Counties of New York (up to 7 inches). Damage in Connecticut was estimated to total over $15.4 million, with the counties of New London, New Haven, and Fairfield declared as disaster areas.		
19	Heavy rains caused flash flooding in northeastern New Jersey.	1	NA
22-24	"Agnes" caused severe flooding in southeastern Pennsylvania and New Jersey. The major portion of the damage occurred in the Schuylkill River Basin where record flooding occurred. Evacuations totalled tens of thousands. Crop damages are expected to reach tens of millions of dollars. Hundreds of homes are unfit for rehabilitation.	5	$1,000,000
22-25	Greatest flood of record occurred along the Chemung and Tioga Rivers in New York. Heavy runoff caused some localized flash flooding of small streams in the immediate areas of heaviest rainfall. The precipitation averaged nearly 9 inches. Damage is the greatest ever recorded along the Chemung River.	19	157,000
22-26	The worst natural disaster in the history of the Keystone State occurred in the Susquehanna Basin from the heavy rains accompanying "Agnes". The heavy rains began on the 21st. Three to 8 inches of rain occurred within 24 hours. Harrisburg, Pa., reported a record of 12.55 inches within 24 hours. Crests exceeded former high water marks set in March 1936 by 4 to 8 feet. At Harrisburg, Pa., the crest of 32.6 feet was 3.3 feet above the previous record level and nearly 16 feet over flood stage. Crests on the Juniata and West Branch of the Susquehanna were near to only slightly above the 1936 level. Flood waters destroyed or damaged 65,000 homes, and left 220,000 persons homeless. Swollen streams destroyed 126 bridges and ruined thousands of miles of the State's roads. Agricultural crop losses are believed to exceed $35 million, not counting losses to livestock, farm machinery, and farm buildings.	43	1,500,000
21-26	Torrential rains accompanying "Agnes" caused major flooding in the Potomac and Rappahannock Basins. Major flash flooding occurred on small streams in central Maryland and central Virginia on the 21st. Record to near-record flooding occurred on the main stem of the Potomac. At Washington, D. C., the Potomac reached the highest stage since 1942, or the third highest stage of record. Record flooding occurred on the Monocacy River at Frederick, Md.	23	36,100
21-23	Record flooding occurred on the Rapidan River at Rapidan, Va., and on the Rappahannock River at Remington, Va.	5	6,800
21-26	Severe flooding occurred throughout the entire James and Appomattox River Basins in Virginia. It was the greatest flood of record in the eastern half of the James Basin and in the western half of the Appomattox Basin.	13	#160,700

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS-Continued

JUNE 1972

Date June	FLOOD EVENT	Lives Lost	Preliminary estimate of property damage thousands of dollars
	ATLANTIC SLOPE DRAINAGE (Continued)		
	Crest stages exceeded those of Camille in 1969 by several feet and set new record crests above old high water marks dating back 200 years. At least 6 deaths occurred in the James Basin. Precipitation during the 4-day period ending the 23d averaged 6.1 inches. The city of Richmond was severely hard hit. Water supply and sewage treatment plants were inundated. Electrical and gas plants were inundated and partially closed. Of 5 bridges crossing the James, only one was available for limited traffic. The downtown area was closed and cordoned off for several days because of inundation and loss of electricity and water supply.		
21-27	The heavy rains from "Agnes" caused a major flood of record on the Roanoke River at Roanoke, Va., and on the Dan River at Danville, Va. The crest at Roanoke, Va., exceeded the previous record stage of 18.25 feet set on Aug. 14, 1940, by 1.36 feet. On the Dan River at Danville, Va., the crest of 21.34 feet exceeded the previous record of 20.47 feet set on Aug. 15, 1940, by 0.87 foot. The Kerr Reservoir, located on the North Carolina-Virginia border, reached a peak of 314.58 feet, m.s.l. This is the highest level of the lake since its completion in 1950. Most of the other streams in eastern North Carolina and south-central Virginia showed moderate rises. Flood damage was heavy and will likely run into millions of dollars. Many bridges and secondary roads were washed out.	2	NA
20 - 1/	Rainfall from "Agnes" produced severe flooding on the Yadkin - Pee Dee River in the Carolinas. The Yadkin River reached its highest stage since August 1940 at Yadkin College, N. C. Moderate flooding occurred on the Rocky, Catawba, and Lumber Rivers in North Carolina and on the Broad, Reedy, Saluda, and Congaree Rivers in South Carolina.	0	$4,276
	MISSISSIPPI SYSTEM		
	Upper Mississippi Basin		
7-8	Heavy rains (3 to 8 inches) in south-central Minnesota late on the 7th and early on the 8th over the Watonwan, Blue Earth, and LeSuer River Basins caused flash flooding. Most of the river fell within a 5-hour period. Many culverts, roadbeds, several bridges, and one railroad trestle were washed out. Soil erosion and crop damage was reported heavy.	0	NA
	Missouri Basin		
U	Flooding occurred on the Big Hole, Jefferson, Sun, and Milk Rivers in Montana during June. The total damage along the Milk River was estimated at $4,000 by the Corps of Engineers. This does not include the small dam or a couple of bridges reported to be washed out on some of the smaller tributary streams of the Milk.	0	479
17-18	Little Knife Creek flooded parts of Hebron, N. D., due to heavy rain ranging up to 4.5 inches. Citizens sandbagged their homes as the creek overflowed the south bank with 3 feet of flood water. Sixty percent of the homes had basement flooding or water seepage. Sandbagging prevented water from reaching most of the business district.	0	Nominal

Date June	FLOOD EVENT MISSISSIPPI SYSTEM (Continued)		
	Missouri Basin - Continued		
9-10	The worst disaster in the history of South Dakota and the greatest loss of life in the United States from a single flood event since 1927 occurred in southwestern South Dakota on the night of the 9th and early morning of the 10th. Torrential rains fell in the Black Hills Region of the State in a short period of time, mostly between 6 p.m. and midnight. The greatest devastation and loss of life occurred in Rapid City from overflow of Rapid Creek, but some other areas to the west of the city also were hard hit.	236	$163,000
16-17	Local flash flooding occurred on the South Fork of the Republican River in extreme northwest Kansas due to 2 to 4 inches of rain. Damage was primarily to crops.	0	62
	Ohio Basin		
21-29	The most devastating June flood of record occurred in the upper Ohio Basin. Flooding on the Allegheny River from Olean, N. Y., to above Eldred, Pa., was of record proportions. The water topped the earthern dikes at Salamanca, N. Y., and came within 0.8 foot of topping the flood wall at Olean, N. Y. Major flooding occurred on the Monongahela River from above Charleroi, Pa., down to its mouth and on the Ohio River from Point Pleasant, W. Va., upstream to Pittsburgh, Pa. Crests on the Ohio River ranged from 9 to 12 feet above flood stage from Pittsburgh, Pa., to Dam 14, Clarington, Ohio. The Pittsburgh Corps of Engineers estimated the damage in the Greater Pittsburgh area at $45 million. The Governor of West Virginia placed the damage along the Ohio River from New Martinsville, W. Va., to Chester, W. Va., at about $18 million. On the Ohio side of the river from Hannibal, Ohio, to East Liverpool losses will likely exceed $1 million. Powhatan Point was especially hard hit. Summertime lowland flooding was extensive on downstream, with Dam No. 50, Golconda, Ill., 877 miles below Pittsburgh, cresting 3 feet below flood stage on July 3. The heavy rains that caused this flood began on the 20th and continued with "Agnes through the 26th. The heaviest daily storm total reported was 13.5 inches near Mt. Pleasant, Pa.		100,000
	WEST GULF OF MEXICO DRAINAGE		
16	Heavy rains on the 15th-16th caused flooding of low water crossings and low roadways in Austin, Tex. Flash flood warnings were issued for Travis and Williamson Counties during periods of heavy rains.	2	NA
	GULF OF CALIFORNIA DRAINAGE		
	Colorado Basin		
22	Rainfall amounts in excess of 4 inches fell in the northeast sections of Phoenix, Arizona, in the north Scottsdale-Paradise Valley and over the desert northeast of Scottsdale, Ariz., on the 22d. Major flooding resulted. Irrigation canals of the Salt River project overflowed and were breached. Severe flooding oc-	0	10,800

Date June	FLOOD EVENT GULF OF CALIFORNIA DRAINAGE (Continued)	Lives Lost	Preliminary estimate of property damage thousands of dollars
	Colorado Basin (Continued)		
	curred on Indian Bend Wash and the Wash that drains westward from the area between Camelback and Mummy Mountains. Eight hundred twenty-four homes were damaged or destroyed. Torrential rains in amounts up to 4.87 inches fell within a 2-hour period.		
	GREAT BASIN		
4	A heavy thundershower in the southeast section of Salt Lake City, Utah, caused flash flooding. The rain totalled 1.3 inches in a 30- to 45-minute period. Seventy-five urban and commercial dwellings were damaged.	0	$ 10
16,22	The most damaging flash floods occurred in Zion National Park on the 16th and 22d when 1.3 inches of rain occurred on each occasion. The thundershowers occurred in a short time, producing mud flows and road damage blocking the park entrance overnight.	0	NA
	PACIFIC SLOPE DRAINAGE		
	San Joaquin Basin		
21	A levee failure occurred at Andrus Islands, in the Delta Region, early on the 21st. The small community of Isleton, north of the levee break, was being threatened at month's end. Andrus and Brannan Islands were inundated.	0	NA
	Columbia Basin		
*-27	Major high water occurred in the Clearwater, Salmon, Big Wood, and the Upper Snake Basins. Some isolated flash flooding occurred with the heavier showers.	0	NA
*-1/	The recordbreaking late (May 27-June 9) temperature sequence produced record flooding on the Okanogan River near Tonasket, Wash., and triggered major rises throughout the entire Columbia Basin. The Methow River flood was greater than the previous record high water of January 1967 at Pateros, Wash. During the cooler rainy weather of June 7-11, numerous thunderstorms caused flash flooding in widespread areas in the Columbia Basin. Four deaths and considerable property damage occurred in the Wenatchee, Wash., area and in the headwaters of Entiat River during the evening of the 9th. The 1972 crest of 21.5 feet on the Columbia River at Vancouver, Wash., was the highest since 1967. A dike at the Ridgefield National Wildlife Refuge ruptured on the 12th when the pumping plant intake pipe collapsed, inundating 1,600 acres of wildlife land. More than 80 percent of the total damage reported by the Corps of Engineers occurred on the Okanogan River and 15 percent on the lower Columbia.	5	10,309

NOTES

*	Flooding began during the preceding month
#	Damages for the entire state of Virginia
1/	Flooding continued at the end of the month
NA	Flood damages not available
U	Unknown

FLOOD STAGE DATA

(All dates in June unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
	Ft.			Ft.	
HUDSON BAY DRAINAGE					
Red River of the North:					
Fargo, N. Dak	17	May 30	3	19.1	1
ST. LAWRENCE DRAINAGE					
Lake Ontario					
Canaseraga Creek:					
Groveland, N. Y.	11	21	23	14.4	21
Oatka Creek:					
Garbutt, N. Y.	5	23	25	6.9	24
Genesee:					
Scio, N. Y.	8	21	24	C	23
Portageville, N. Y.	17	21	24	32.25	23
Mt. Morris, N. Y.	18	23	28	24.5	24
Avon, N. Y.	40	24	26	40.6	25
Rochester, N. Y.	13	24	29	15.9	25
ATLANTIC SLOPE DRAINAGE					
Schoharie Creek:					
Middleburg, N. Y.	12	23	23	E15.5	23
Rockaway:					
Boonton, N. J.	5	23	24	E 5.3	23
Wanaque:					
Wanaque, N. J.	5	22	26	E 6.3	23
Pequannock:					
Macopin Dam, N. J.	15	23	24	E15.3	23
Ramapo:					
Mahwah, N. J.	8	22	24	E 8.6	23
Pompton:					
Pompton Plains, N. J.	15	22	26	E18.1	23
Saddle:					
Lodi, N. J.	5	19 22	20 23	6.6 6.3	19 22
Passaic:					
Chatham, N. J.	6	22	27	6.6	25
Little Falls, N. J.	7	22	29	9.3	25
Millstone:					
Blackwells Mills, N. J.	7	22	24	10.4	23
Raritan:					
Manville, N. J.	12	1 22	1 24	13.0 17.9	1 23
Bound Brook, N. J.	8	22	24	14.2	23
Lehigh:					
Lehighton, Pa.	10	22	23	12.0	23
Walnutport, Pa.	8	22	23	11.0	23
Bethlehem, Pa.	16	23	23	20.9	23
Assunpink Creek:					
Trenton, N. J.	5	22	23	5.8	22
Neshaminy Creek:					
Langhorne, Pa.	9	22	23	9.65	22
Schuylkill:					
Berne, Pa.	12	22	23	E18.5	22
Reading, Pa.	13	22	24	31.5	23
Pottstown, Pa.	13	22	24	30.0	23
Norristown, Pa.	17	22	24	E24.25	23
Philadelphia, Pa.	11	22	24	14.7	23
Brandywine Creek:					
Chadds Ford, Pa.	9	22	23	16.6	22
Wilmington, Del.	11	22	23	15.4	23

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
	Ft.			Ft.	
ATLANTIC SLOPE DRAINAGE					
Chenango:					
Sherburne, N. Y.	8	22	24	9.6	23
Greene, N. Y.	13	23	24	14.6	23
Whitney Point, N. Y.	12	22	24	14.3	23
Chenango Forks, N. Y.	10	22	24	11.2	23
Canisteo:					
Addison, N. Y.	17	22	23	23.0	22
Tioga:					
Lindley, N. Y.	17	22	23	26.1	23
Chemung:					
Corning, N. Y.	16	22	25	C 27.8	
Elmira, N. Y.	10	22	25	C 25.2	23
Chemung, N. Y.	12	22	25	C 31.6	24
Tunkhannock Creek:					
Dixon, Pa.	9	22	23	11.2	23
Pine Creek:					
Cedar Run, Pa.	12	22	23	15.3	23
West Branch Susquehanna:					
Karthaus, Pa.	19	22	23	18.6	23
Sinnemahoning, Pa.	15	22	24	21.8	23
Renova, Pa.	16	22	24	26.6	23
Lock Haven, Pa.	21	22	25	32.7	23
Jersey Shore, Pa.	26	M	M	38.4	23
Williamsport, Pa.	20	22	25	34.75	23
Milton, Pa.	19	22	25	35.1	24
Lewisburg, Pa.	18	22	26	34.3	M
Juniata:					
Sexton, Pa.	17	22	23	17.3	22
Williamsburg, Pa.	12	22	24	18.35	23
Huntingdon, Pa.	12	22	24	20.0	23
Mapleton Depot, Pa.	20	22	25	33.1	24
Lewistown, Pa.	23	22	25	42.1	23
Newport, Pa.	22	22	25	33.9	23
Susquehanna:					
Conklin, N. Y.	11	23	24	12.9	23
Vestal, N. Y.	18	22	24	22.2	23
Towanda, Pa.	16	22	25	33.25	24
Wilkes-Barre, Pa.	22	22	26	40.6	24
Bloomsburg, Pa.	19	M	M	31.2	25
Danville, Pa.	20	22	26	32.3	24
Sunbury, Pa.	24	22	26	35.8	24
Harrisburg, Pa.	17	22	27	32.6	24
South Branch Potomac:					
Springfield, W. Va.	15	23	23	17.2	23
South Fork Shenandoah:					
Front Royal, Va.	16	22	23	23.8	22
Riverton, Va.	22	22	23	29.5	22
Shenandoah:					
Millville, W. Va.	13	22	24	21.8	23
Monocacy:					
Frederick, (nr.) Md.	15	21	24	36.1	23
Potomac:					
Hancock, Md.	30	23	23	30.9	23
Williamsport, Md.	23	23	23	34	23
Shepardstown, Md.	15	22	25	31.8	24

FLOOD STAGE DATA

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
ATLANTIC SLOPE DRAINAGE (Continued)					
Potomac (Cont.):					
Harpers Ferry, W. Va.	18	22	25	31.0	24
Point of Rocks, W. Va.	16	22	25	37.4	23
Washington (nr), D. C.	10	21	26	22.0	24
Washington, D. C.	7	22	25	15.45	24
Rapidan:					
Rapidan, Va.	14	21	23	26.0	22
Rappahannock:					
Remington, Va.	15	21	23	#24.8	22
Fredericksburg, Va.	18	22	23	#34.0	22
Jackson:					
Covington, Va.	9	21	22	17.6	21
Maury:					
Buena Vista, Va.	17	21	22	17.1	21
Rivanna:					
Palmyra, Va.	17	21	23	37.3	22
Appomattox:					
Farmville, Va.	16	21	23	30.0	22
Mattoax, Va.	21	21	28	34.1	25
Petersburg, Va.	[illegible]	24	29	16.0	26
James:					
Lick Run, Va.	16	21	23	27.0	21
Holcombs Rock, Va.	22	21	22	32.4	22
Lynchburg, Va.	18	21	22	26.0	22
Bent Creek, Va.	16	21	23	27.1	21
Scottsville, Va.	20	21	23	34.0	22
Bremo Bluff, Va.	19	21	24	44.8	22
Columbia, Va.	18	21	24	45.2	22
Cartersville, Va.	20	21	24	37.9	22
State Farm, Va.	12	21	25	[illegible]	23
Richmond (Westham), Va.	12	21	25	28.6	23
Richmond (City Locks), Va.	9	22	26	36.5	23
Dan:					
Danville, Va.	11	21	24	21.3	22
Roanoke:					
Roanoke, Va.	10	21	22	19.6	21
Alta Vista, Va.	18	21	24	26.8	22
Randolph, Va.	21	21	26	31.0	23
Williamston, N. C.	10	May 9 29	9 1/	11.2 11.4	May 29-31 Jul 12
Tar:					
Louisburg, N. C.	20	23	23	#20.35	23
Rocky Mount, N. C.	9	26	26	9.1	26
Neuse:					
Neuse, N. C.	14	23	26	16.1	25
Smithfield, N. C.	13	24	27	14.95	26
Cape Fear:					
Moncure, N. C.	20	22	22	20.1	22
Fayetteville, N. C.	35	23	24	37.2	24
Wm. O. Huske, L&D, Near Tarheel, N. C.	42	22	26	52.3	24
Lock No. 2, Elizabethtown, N. C.	20	23	27	#27.8	25
Yadkin:					
Elkin, N. C.	16	21	21	22.6	21
Yadkin College, N. C.	18	21	23	32.8	22

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft			Ft	
ATLANTIC SLOPE DRAINAGE (Continued)					
Rocky River:					
Norwood, N. C.	15	22	22	18	22
Lumber:					
Lumberton, N. C.	9	27	30	10.2	28
Pee Dee:					
Cheraw, S. C.	30	22	[illegible]	40.65	24
Peedee, S. C.	19	24	July 4	#23.9	29
Reedy:					
Greenville, S. C.	9	20	21	12.0	21
Saluda:					
West Pelzer, S. C.	9	21	22	#10.3	21
Chappells, S. C.	14	21	23	21.4	22
Broad:					
Gaffney, S. C.	10	21	22	#12.8	21
Blair, S. C.	14	21	24	25.5	23
Congaree:					
Columbia, S. C.	19	23	23	19.0	23
Catawba:					
Lookout Shoals Lake, N.C.	100	21	24	104.0	21
Savannah:					
Clyo, Ga.	11	27	July 13	13.2	July 6-9
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Crow:					
Delano, Minn.	8	May 31	6	9.4	2
Yellow Medicine:					
Granite Falls (nr.), Minn.	6	1	3	6.1	2
Minnesota:					
Montevideo, Minn.	14	May 30	13	15.8	4
Jordan, (nr.), Minn.	20	12	18	21.5	14
Green:					
Geneseo, Ill.	9	15	19	13.9	15
Pope Creek:					
Keithsburg, Ill.	17	12	16	25.1	15
Henderson:					
Oquawka, Ill.	21.5	15	16	24.0	15
Iowa:					
Marshalltown, Iowa	13	9	20	17.5	14
Skunk:					
Oskaloosa, Iowa	15	14 21	18 22	17.4 15.05	[illegible] 21
Fox:					
Dayton, Ill.	12	15	16	13.8	16
Illinois:					
Morris, Ill.	13	15	15	13.4	[illegible]
LaSalle, Ill.	20	15	18	22.9	16
Havana, Ill.	14	19	26	14.6	21-23
Missouri Basin					
Big Hole:					
Divide, Mont.	6.5	May 31	13	9.6	10
Melrose, Mont.	6	May 31	14	8.05	10
Jefferson:					
Sappington, Mont.	9	4	11	9.9	13
Sun: Simms, Mont.	7.5	1	3	8.0	2
Manchester Bridge, Mont.	12	[illegible]	12	13.1	3

FLOOD STAGE DATA

(All dates in June unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM (Continued)					
Missouri Basin (Continued)					
Milk:					
Harlem, Mont.	10	9	10	13.7	10
Beaver Creek:					
Buffalo Gap, S. D.	8.7	9	10	7.1	10
Battle Creek (tributary):					
Keystone (2.8 NW), S. D.	U	U	U	18.8	9
Battle Creek:					
Keystone (4.5 SE), S. D.	U	U	U	14.5	9
Hermosa (0.8 S), S. D.	6.8	9	10	17.7	10
Palmer Creek:					
Hill City (3 E), S. D.	U	U	U	17.1	9
Spring Creek:					
Hermosa (7.5 N), S. D.	8	9	10	13.1	10
Rapid Creek:					
Pactola Dam (blw), S. D.	8.7	9	10	8.6	9
Canyon Lake (abv), S. D.	7	9	10	15.8	9
Rapid City, S. D.	6	9	10	15.45	9
Farmingdale, (2 SE), S. D.	10	10	10	11.85	10
Boxelder Creek:					
Nemo (4.5 SE), S. D.	U	U	U	20.4	9
Elk Creek:					
Elm Springs (5 SE), S. D.	6	11	11	8.7	11
Boulder Creek:					
Deadwood (3.5 E), S. D.	U	U	U	5.6	9
Bear Butte Creek:					
Galena (nr.), S. D.	U	U	U	11.8	9
Sturgis (12.5 ENE), S. D.	8	10	10	11.45	10
James:					
Forestburg, S. D.	12	May 7	8	13.55	1
Mitchell, S. D.	14	May 27	7	15.0	May 30
Scotland, S. D.	13	May 23	15	14.3	6
Rock:					
Rock Valley, Iowa	11	7	7	11.2	7
Big Sioux:					
Brookings, S. Dak.	6	May 28	29	11.4	1
Flandreau, S. Dak.	4.5	May 29	5	5.5	2
Brandon, S. Dak.	10	May 2	8	12.2	4
Hawarden, Iowa	15	8	8	15.3	8
Akron, Iowa	16	8	9	17.0	8
Ohio Basin					
Conewango Creek:					
Russell, Pa.	8	25	29	8.8	26
Clarion:					
Ridgway, Pa.	11	21	25	19.5	23
Mahoning Creek:					
Punxsutawney, Pa.	7	M	M	15.9	23
Allegheny:					
Olean, N. Y.	10	21	27	24.2	23
Salamanca, N. Y.	1370	22	27	1381.95	23
Parker, Pa.	20	23	23	22.2	23
Lock No. 9, Rimerton, Pa.(upr)	21	23	24	22.8	23
Lock No. 8, Mosgrove, Pa.(upr)	24	23	24	26.7	23
Lock No. 7, Kittanning, Pa. (upr)	23	23	24	25.3	23
Lock No. 6, Clinton, Pa.(upr)	23	23	24	23.6	23

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM - Continued					
Ohio Basin - Continued					
Allegheny-Contd:					
Lock No. 5, Freeport, Pa. (upr)	21	23	27	25.8	23
Lock No. 4, Natrona, Pa. (upr)	20	23	27	25.0	23
Lock No. 3, Acmetonia, Pa. (upr)	20	23	27	23.7	23
Lock No. 2, Sharpsburg, Pa. (upr)	23	23	24	27.3	24
Tygart Valley:					
Belington, W. Va.	14	23	24	17.5	23
Phillippi, W. Va.	17	23	24	24.7	23
Cheat:					
Parsons, W. Va.	13	23	23	13.8	23
Rowlesburg, W. Va.	12	23	24	13.45	23
Wheeling Creek:					
Elm Grove (nr), W. Va.	7.5	23	23	9.3	23
Youghiogheny:					
Connellsville, Pa.	16	23	23	16.5	23
Sutersville, Pa.	20	23	24	29.7	23
Monongahela:					
Point Marion L & D, Pa. (Lwr)	26	23	23	27.1	23
Lock No. 7, Greensboro, Pa.(Upr)	21	23	24	23.6	23
Maxwell L & D, Pa. (Lwr)	32	23	24	#32.6	24
Lock No. 4, Charleroi, Pa.(Lwr)	26	23	25	35.4	24
Lock No. 3, Elizabeth, Pa.(Upr)	20	23	25	29.0	24
McKeesport, Pa.	12	23	25	22.4	24
Lock No. 2, Braddock, Pa. (Upr)	19	23	25	29.7	24
Greenbrier:					
Alderson, W. Va.	14	21	22	15.2	21
New:					
Radford, Va.	14	21	22	18.1	21
Swannanoa:					
Biltmore, N. C.	12	21	21	#12.0	21
French Broad:					
Blantyre, N. C.	17	21	22	#18.2	21
Asheville, N. C.	8	20	21	# 9.0	21
Ohio:					
Pittsburgh, Pa.	25	23	26	35.85	24
Dashields Dam, Glenwillard(upr) Pa.	26	23	25	34.4	24
Montgomery L & D, Pa. (lwr)	32	23	25	42.4	24
New Cumberland L & D, Ohio(lwr)	36	23	26	45.4	24
Wellsburg, W. Va.	33	23	27	45.1	24
Pike Island L&D, W.Va. (lwr)	37	23	27	47.5	24
Dam No. 12, Wheeling, W.Va.(upr)	36	24	27	46.6	24
Dam No. 13, McMechen,W.Va.(upr)	37	23	27	48.7	25
Dam No. 14, Clarington, Ohio (upr)	37	24	27	46.3	25
Steubenville, Ohio	33	23	26	43.5	24
Dam No. 15, Duffy, Ohio	37	24	27	43.8	25
Dam No. 16, New Matamoras,Ohio	38	25	27	42.4	25
Dam No. 17, Reno, Ohio	35	25	27	36.6	25
Marietta, Ohio	35	25	27	37.4	25
Parkersburg, W. Va.	36	25	26	36.8	26
Racine Lock & Dam, W. Va.	T38	25	28	42.9	26
Point Pleasant, W. Va.	40	26	27	40.9	27
Red Basin					
North Fork Red:					
Headrick, Okla.	12	16	16	12.2	16

FLOOD STAGE DATA

CONTINUED (All dates in June unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft			Ft	
WEST GULF OF MEXICO DRAINAGE					
Calcasieu:					
Hineston, La.	12	17	21	13.7	19
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Clark Fork:					
Missoula, Mont.	11	2	11	11.9	3
St. Regis, Mont.	19	3	11	19.1	10
Pend Oreille Lake:					
Hope, Idaho	62.5	2	23	65.7	12-13
Pend Oreille:					
Albani Falls Dam, Idaho	49	2	18	53.5	13-14
Okanogan:					
Tonasket, Wash.	15	May 16	20	17.7 22.5 H21.7	May 24 2 12
Methow					
Pateros, Wash.	10	May 29 8	2 12	H11.5 H11.9 H11.6	May 31 9 11
Wenatchee:					
Peshastin, Wash.	13	May 30 9	1 11	H13.6 H13.8	May 31 10
Yakima:					
Parker, Wash.	10	10	11	H10.3	11
PACIFIC SLOPE DRAINAGE (Continued)					
Columbia Basin (Continued)					
Henrys Fork:					
Rexburg, Idaho	9	5 25	14 27	9.4 M	11-12
Big Wood:					
Hailey, Idaho	4.5	May 29	18	6.7	10
Salmon:					
Salmon, Idaho	7	2	13	8.1	9-10
Clearwater:					
Orofino, Idaho	17	May 31	3	18.85	2
Willamette:					
Portland, Oreg.	18	May 30	26	20.8	12
Columbia:					
Vancouver, Wash.	16	May [illegible]	July 3	21.5	12
Northern Coastal Basins					
Skagit:					
Mt. Vernon, Wash.	21	9	11	22.4	10
ALASKA					
Yukon:					
Emmonak, Alaska	[illegible]	F	3	D	
Allakanuk, Alaska	[illegible]	F	F	B	

* Provisional
# Highest Stage observed
1 Continued at the end of month
___ Highest Stage of Record
B Bankfull
C High Water Marks
D Crest 1 to 3 ft. above bankfull
F Flooding occurred but data not available
H Hydrograph Analysis
M Missing
U Unknown

HURRICANE AGNES JUNE 14-23, 1972

Richard M. DeAngelis

On June 15, a depression developed near Cozumel, off the Yucatan coast. During the next 24 hours, the system intensified and became tropical storm Agnes. Agnes was revealed by satellite to have an unusually large circulation. However, reconnaissance reports indicated a poorly defined eye. On Saturday, the 17th, Agnes began moving northward at about 10 m.p.h. That afternoon, central pressure fell to 986 mb. See Figure 1. The following morning hurricane force winds were found near her center which was some 250 miles west of the Keys. Agnes lumbered northward. By Sunday, winds were gusting from 40 to 50 m.p.h., strengthening first in the Keys and by evening as far north as Orlando. Agnes' center was now about 200 miles west of Fort Myers. Maximum sustained winds over land were running 25 to 45 m.p.h. Agnes' large circulation was bringing an easterly-southeasterly flow over Florida. The result was winds along the east coast were often as strong or stronger than those along the closer west coast. Jacksonville, for example, had the highest gust in Florida at 56 m.p.h. early on the 19th, when Agnes was heading for the panhandle. Agnes was a minimum hurricane at best. Over the open Gulf maximum sustained surface winds reached 85 m.p.h. on the 18th. Minimum surface pressure (in the Gulf of Mexico) fell to 978 mb. on the 19th. Neither the eye, nor the wall cloud ever became fully developed. By the afternoon of the 18th, two things were obvious. Agnes would cross the coast along the Florida Panhandle, and her most destructive blow would be storm tides along the west coast.

On Monday morning, these destructive tides hit the west coast. At Fort Myers, tides rose 3 feet above normal. A short time later they were 4 to 5 feet above normal in the Tampa-St. Petersburg area. In the afternoon, Cedar Key recorded a tide 7 feet above normal. As Agnes neared the coast, Apalachicola recorded a 6.4-ft. tide.

Agnes moved ashore as a tropical storm near Panama City late Monday afternoon (19th). She was accompanied by 40- to 45-m.p.h. sustained winds and 45- to 55-m.p.h. gusts close to her center. Once into Georgia, Agnes weakened to depression stage. During the 20th, the large, weak depression moved northeastward across Georgia and into South Carolina. Cities like Augusta and Macon, close to the storm path, had recorded their strongest winds earlier, while Agnes was still at sea. Now the principal effect was rain. In Georgia, it was heaviest in the south. In the Carolinas, mountain areas were drenched while in the central and coastal areas rain was light. The system moved northeastward across the Carolinas at 12-15 m.p.h. on Wednesday (21st). The storm intensified as it moved closer to the Atlantic Ocean. Cape Hatteras reported a 37-m.p.h. wind with gusts to 62 m.p.h. Agnes reached Norfolk as a rejuvenated tropical storm Wednesday night. It was, however, an unusual system. At one time on the 22d, surface pressures were below 1,000 mb. over an area from upstate New York to the North Carolina Capes, while the lowest pressure hovered near 990 mb. This was due in part to a quasi-stationary trough in the Ohio Valley. The moisture-laden Gulf air in Agnes was replenished by the Atlantic. This moist air encountered the Appalachians and triggered torrential rains over river basins from South Carolina to New York. Many of these basins were already soaked by heavy June rains.

Agnes moved off the Virginia Capes and back out to sea late Wednesday. During the 22d the broad system moved up the east coast, across western Long Island and inland near New York City. While at sea, her lowest recorded central pressure was observed--977 mb. Winds along the coast from Norfolk to Providence ranged from 25 to 45 m.p.h. with gusts up to 55 m.p.h. Further inland, heavy rain continued. On Friday, the 23d, Agnes swung southwestward and was absorbed by a broad, deep extratropical low pressure system in central Pennsylvania. This large system continued to dominate the weather over the northeast for the next several days.

The extratropical storm moved twoard the Buffalo area and looped over southern Ontario on the 25th. It then sped east-northeastward across Lake Ontario, northern New York, southern Quebec, Maine, New Brunswick, and Nova Scotia. Once out to sea, the storm reintensified and affected shipping until the 7th of July.

TORNADOES

Agnes spawned 15 confirmed tornadoes in Florida. They all occurred on the 18th and 19th and were confined to the peninsula south of Daytona Beach. No deaths were tornado related. Total tornado damage was estimated at just over $4.5 million. Three tornadoes touched down in the Keys. The first ripped through Geiger and Big Coppitt Keys in the early morning hours of the 18th. It injured 40 people, destroyed 23 house trailers, and damaged 60 others along with five houses. Damage was estimated at $342,000. Before daylight, another tornado hit Key West ($400,000 damage) and a third tore through Key Colony Beach, Grass Key, Conch Key, and Key Largo. During Saturday afternoon and early evening, nine more tornadoes were reported. Four occurred in the vicinity of Fort Myers. The worst one hit Pine Island, where four trailers were demolished and several stores were damaged. Another tornado hit 17 miles north of Okeechobee and destroyed two trailers. At Haines City, west of Lakeland, six mobile homes were badly damaged. Tornadoes also touched down west of Lakeland, in southeastern Highlands County and in Palm Beach County. Early on the 19th, three tornadoes hit the Cape Kennedy area. On Merritt Island, aircraft and hangars were damaged to the tune of $2 million. Another $1 million damage was estimated in nearby subdivisions. A tornado at Cape Canaveral destroyed two homes and damaged the Port Canaveral Coast Guard Station. Total damage was estimated at $500,000.

In Georgia, tornadoes were reported near Douglas, in Coffee County, and near Blackshear, in Pierre County, during the afternoon of the 19th. The Douglas tornado hit a mobile home park and a factory causing $100,000 damage. Neither tornado resulted in any deaths.

HURRICANE AGNES JUNE 14-23, 1972 - CONTINUED

RAINS AND FLOODS

During the week preceding Agnes, frontal activity brought soaking rains to the mid-Atlantic region. From New England to Virginia, showers and thunderstorms dumped 1- to 3-inch rains with local amounts up to 6 inches. In central Pennsylvania, 2- to 3-inch falls were common. Throughout the rest of the state and over central New York, averages were 1 to 3 inches. In coastal Connecticut, flooding rains fell on the 18th and 19th; Bridgeport had weekend rains totaling 6 inches. Rains in New Jersey averaged 2 to 3 inches. Over Maryland, Delaware, and eastern Virginia, totals ranged from .5 to 2 inches. Local amounts were reported in excess of 4 inches in Virginia and 6 inches in Maryland. Meanwhile, dry weather continued to plague the southeast and was becoming critical in some sections of Georgia, Alabama, and central Florida. The stage was set for Agnes.

Rainfall over Cuba was a harbinger of things to come. Heavy rains drenched the western part of the island for 4 days. Cape San Antonio was deluged with more than 16 inches. In one 6-hour period, they received a 9-inch downpour. The isle of Pines recorded more than 17 inches of rain during the same 4-day span, which ended on the 18th.

Most sections of Florida received 2 to 3 days of soaking rains from Agnes. In the south, it rained from the 17th through the 19th, while in the north most rain fell from the 18th through the 20th. In the Florida Keys a cloud mass which was to become part of Agnes' circulation started dumping rain late on the 11th. Key West recorded 8.53 inches over a 7-day period. Big Pine Key had 12.69 inches. Five to 7 inches of rain fell over most areas east of Tallahassee. Among the highest totals were 7.87 inches at Naples and 7.17 inches at Tallahassee. Light amounts of less than 2 inches were confined to the east coast, south of Vero Beach.

Alabama, Georgia, and the Carolinas were in the throes of a critical dry spell when Agnes arrived. Rains were mostly beneficial. However, excessive rains in northwestern South Carolina and western North Carolina triggered damaging floods.

Heaviest rains occurred along the eastern slopes of the Blue Ridge Mountains from about Greenville, S. C., to Lake Lure, N. C., northeastward to the Danbury-Reidsville area. Totals ranged from 4 to 10 inches. Much of this fell in less than 48 hours from the 19th through the 21st. Mt. Mitchell, N. C., had a storm total of 10.6 inches. Major river flooding followed flash flooding of Mountain and Piedmont streams. Severe flooding occurred on the Yadkin-Pee Dee River system and the Dan River. Lesser flooding occurred along the Catawba, Saluda, Rock, Congaree, Lumber, and Broad Rivers.

The headwaters of Yadkin River received 6 to more than 10 inches of rain in less than 48 hours. During the night of the 20th and early morning hours of the 21st a rapid 10-ft. rise occurred at Elkin, N. C. Then a few hours after sunrise, the Yadkin crested at 22.6 feet--6.6 feet above flood stage. The crest reached Yadkin College on the afternoon of the 22d. It measured 14.8 feet above flood stage. Near the North Carolina-South Carolina border, 3- to 4-inch rains added to the overflowing river--now called the Pee Dee. The Pee Dee caused severe flooding from Blewett Lake, N. C., to below Cheraw, S. C. Flooding began on the 22d and continued for 4 days. The Pee Dee crested at 40.65 feet at Cheraw on the 24th. This is the fourth time since 1952 that the 40-ft. mark has been reached there. Downstream at Pee Dee, S. C., the 19-ft. flood stage was reached on the 24th, and a 23.89-ft. crest was measured on the 29th.

Five to 10 inches of rain fell along the Dan River and its tributaries. Many records were set on the Dan. Flooding was worst near Madison, Mayodan, and Eden. Kerr Reservoir rose to a new record height. While this caused flooding of recreational lowlands around the lake, it prevented major flooding downstream on the Roanoke River. Rainfall over the headwaters of the Saluda and Broad Rivers was 5 to more than 7 inches in a 48-hour period ending on the morning of the 21st. Along the Broad River a crest 3 feet above flood stage occurred at Gaffney, S. C., on the 21st. Farther downstream, at Blair, S. C., flooding began on the 21st and crested at 25.5 feet on the 23d. The Saluda crested 1.3 feet above flood stage at West Pelzer, S. C., on the 21st. These waters filled Lake Greenwood by the 22d. That evening, a crest 7.4 feet above flood stage was recorded at Chappells, S. C. Waters from the Saluda and Broad Rivers added to the already full Congaree River which flooded Columbia, S. C., during the evening of the 23d. Extensive flooding of lowlands occurred from below Columbia to St. Matthews. Lesser flooding occurred along the Catawba, Rocky, and Lumber Rivers.

Throughout the eastern Carolinas rain was relatively light. East of Charleston-Columbia-Raleigh, totals were generally less than 4 inches, while east of Wilmington-Norfolk, Va., totals less than 2 inches were common. Cape Hatteras recorded a .04-inch total. In the mountains west of Asheville, N. C., totals of 2-5 inches were common.

Eastern Alabama received 2 to more than 7 inches most of which was welcomed and absorbed. Headland reported a total of 7.67 inches. Throughout most of Georgia, 4- to 6-inch totals were common. Most occurred in a 48- to 60-hour period from the 18th to the 21st. East coast amounts ranged from 6 to 9 inches. At Brunswick Airport on St. Simons Island, a total of 9 inches was reported. Eight inches fell in a 24-hour period.

Heavy rains in Virginia produced severe flooding over the James and Appomattox River basins, and along the Potomac and many smaller rivers in the north. In the eastern half of the James River Basin and western half of the Appomattox Basin, flooding was the worst in history. Crest stages exceeded those of Camille '69 by several feet and topped high water records dating back 200 years.

Pre-Agnes rainfall that aided in the flooding occurred on the afternoon and evenings of the 17th and 18th. Heavy showers dumped up to 3 inches of rain over the upper and central James sub-basins. The rainshield of Agnes reached southern Virginia by the 20th. Heaviest precipitation fell on Wednesday the 21st and into early Thursday. Rains totaling 4 to 10 inches quickly flooded the small streams and tributaries in the upper James Basin and in the central Virginia counties along and east of the Blue Ridge Mountains. Big Meadows had a total of 13.60 inches. The average for the whole James Basin was 6.12 inches from the 19th to the 23d. The heavy rainfall concentrated in the upper portion of the Appomattox basin above Farmville, averaged 8 inches for the same 4 days.

In the upper James Basin, flooding was severe at Covington where the crest was second only to the record set in March 1913. Moderate flooding occurred at Buena Vista. In the Lick Run reach and at Buchanan, the high water marks were exceeded only by those in 1877 and 1913. At Lynchburg-Holcombs Rock reach crests were somewhat below hurricane Camille, 1969. At Lynchburg, flooding occurred on the 21st and 22d. The crest was 8 feet above flood stage. In the lower James Basin, new crest stage records were set at Bent Creek, Scottsville, Bremo Bluff, Columbia, Cartersville, Richmond, Westham, and Richmond City Locks. The river swamped a 200-block area of downtown Richmond, in what appears to be the worst flood in the city's history. A crest of 36.5 feet occurred at the City Locks on the 23d. This topped the old mark of 30.0 feet set back in 1771. Palmyra on the Rivanna recorded a crest just 2.5 feet below the one in hurricane Camille.

In the Appomattox Basin, Farmville suffered the most destructive flood in its history. The crest that occurred on the 22d was 6.5 feet above the record crest set in 1940. Downstream at Mattaox, the crest was 1 foot below the 1940 record. At Petersburg, near the confluence with the James, flooding was comparable to that in 1940. The 16-ft. crest at M.S. No. 1 bridge matched the 1940 record.

Heaviest rain in all Virginia fell in the north. Ten inches or more fell over the counties of Madison, Rappahannock, Culpeper, Fauquier, Prince William, Fairfax, and Loudoun. The highest total was about 16 inches near Chantilly. Nearby Dulles Airport recorded 13.65 inches total and a maximum 24-hour amount of 11.88 inches. Torrential downpours from Wednesday afternoon through Thursday morning were responsible for flash flooding throughout northern Virginia. Near Alexandria, Four Mile Run flooded the heavily populated section known as Arlandria. The Run began rising at 7:15 p.m., e.s.t. Less than 1 hour later, it reached flood stage. Shortly before midnight, flood stage was exceeded by 9.5 feet. Heaviest precipitation flooded Bull and Broad Runs and threatened the Occoquan Dam. Most northern Virginia streams and creeks overflowed their banks during the night, washing out roads and, in some cases, destroying homes. On the Rapidan River, a record 26.0-ft. crest occurred at Rapidan.

In Maryland and the District of Columbia, heavy rains in less than 24 hours, on the 21st and 22d, resulted in severe flooding. Delaware had local flash flooding from the 4 to 6 inches of rain that fell in the northern part of that state. Maryland's heaviest rains occurred in the north-central part of the state where totals set all-time records. Highest total rainfall was 14.68 inches at Westminster and 13.85 inches at Woodstock. Totals of 8 inches or more fell in an area west of Chesapeake Bay and east of Hagerstown. The District of Columbia reported more than 7 inches. In Delaware, the maximum reported total was 6.76 inches at Middletown. Flooding was abetted by the short period in which much of this rain fell. The 11.55 inches at Westminster and 11.35 inches at Woodstock on the 21st, are among the greatest 1-day falls in Maryland history. One-day record falls for Maryland include 14.75 inches at Jewell in July 1897 and 12.61 inches at White Marsh in August 1971. The previous 1-day June record was 6.05 inches at Elkton on June 27, 1938. A 24-hour (not limited to 1 day) total of 7.19 inches at Washington National Airport on June 21-22 was second only to the 7.31-inch total of August 11-12, 1928.

The heavy rains caused disastrous flash flooding of creeks and streams in Maryland, the District of Columbia, and Newcastle County, Delaware. Major flooding followed. The Potomac, fed by heavy rains over its entire basin, began flooding on the 22d. At Little Falls, just outside of Washington, the river crested at 22.0 feet in the early hours of the 24th. Flood stage here is 10.0 feet. Meanwhile at Wisconsin Avenue, downtown Washington, a 15.45-ft. crest had occurred and persisted for about 8 hours.

Along the Monocacy River, a crest of 36.1 feet occurred at Frederick, Md. The previous record was 30.0 feet set back in 1889. Flooding also occurred along the Anacostia and Patuxent Rivers and along Seneca and Rock Creeks. Flooding along the Patapsco River, broke all existing records. Near the Pennsylvania border the Susquehanna, which had devastated much of the Keystone State, threatened the Conowingo Dam. Flood waters covered small towns below the dam and a wide swath of land on both sides of the river from the dam to the river's mouth at Chesapeake Bay, some 12 miles away. Flood gates were opened for more than 48 hours and the dam held.

In Delaware, the Brandywine Creek flooded northeast Wilmington. It crested there at a record level of 15.4 feet.

In New Jersey, heavy rains caused extensive flooding. Rains of 1 to 2 inches, falling in a 24-hour period on wet ground, caused the Saddle, Ramapo, and Passaic Rivers to overflow their banks on the 22d. Total rainfall in northern New Jersey was 2 to nearly 5 inches. Greatest amounts fell in the northwest; Sussex recorded a total of 4.61 inches and Long Valley reported 4.90 inches. Crests were generally 1 to 2 feet above flood stage and flooding continued into the 24th. Along the Passaic, water remained high for 5 to 6 days as additional rain fell on the 24th and 25th. Flooding also occurred along the Pequannock, Pompton, Wanaque, Rockaway, and Millstone Rivers from the 22d to the 24th. Crests were 1 to 3 feet above flood stage. Heaviest rains occurred in southwestern New Jersey, south of Philadelphia, Pa. Twenty-four-hour rainfall averaged 3 to 5 inches over Camden, Gloucester, Salem, and Cumberland Counties. Total storm rainfall ranged up to 6.24 inches at Camden. Flash flooding in these counties caused extensive agricultural damage. The Delaware River was the beneficiary of rains from New York and New Jersey. However, it remained below flood stage.

Connecticut rains were spread out over a 5- to 6-day period and were heaviest mainly in the western half of the state. Heaviest amounts fell on the 22d, 23d, and 24th, and ranged from .5 to 2 inches. Total storm amounts generally ranged from 2 to 4 inches. Saugatuck Reservoir, for example, reported 4.04 inches of rain from the 21st through the 26th.

In Pennsylvania, Agnes' heavy rains fell on wet ground. Runoff was heavy, flooding disastrous. Torrential rains began Wednesday (21st) and continued through Thursday. Maximum 24-hour totals exceeded 7 inches in a band from north of Williamsport, southward through Sunbury, Harrisburg, and York to the Maryland border. Harrisburg had a maximum 24-hour amount of 12.55 inches. In extreme western Schuylkill County, a gauge at a watershed research site measured 14.5 inches in a 24-hour period. Total storm rainfall averaged 8 to 12 inches throughout the entire central section of the state with several areas where precipitation went above 12 inches. In western Schuylkill County up to 18.8 inches fell.

Small streams began flooding Wednesday night. Major river flooding followed on Thursday and Friday. Along the main stem of the Susquehanna River, flood levels exceeded previous marks set in March 1936 by 3 to 6 feet. Crests were generally 12 to 18 feet above flood stage. At Wilkes-Barre water crept over the levees early Friday morning. By Saturday evening, the powerful river crested more than 18 feet above flood stage. Along the West Branch of the Susquehanna, most of the flooding occurred downstream of Karthaus. Crests ranged 6 to 16 feet above flood stage. In Williamsport, Milton, and Lewisburg crests topped previous 1936 marks. Records were also set at Loch Haven and Jersey Shore. On the Juniata River, crests were generally a little less than the 1936 levels. On the 23d, at Lewistown, the Juniata crested at 42.1 feet, 19 feet above flood stage and just below the record 42.3-ft. crest of 1936.

In southeastern Pennsylvania, the Schuylkill River, beneficiary of some of Agnes' heaviest rain, reached record or near-record levels. At Berne, Pa., a 19-ft. crest topped a 1955 previous high by more than 3 feet. All time record crests quickly followed downstream at Reading, Pottstown, and Norristown. At Pottstown, flooding occurred from the 22d to the 24th. The Schuylkill crested almost 17 feet above flood stage and more than 3 feet above the previous record set in 1902. Sections of Philadelphia were also flooded. Four to 10 inches of rain swelled the Lehigh River to overflowing at Lehighton, Walnutport, Bethlehem, and Allentown.

Flooding occurred along most of the navigable streams in western Pennsylvania. At Pittsburgh the Ohio River reached its highest crest since 1942. Crests on the Ohio River ranged from 9.3 feet above flood stage at Dam 14, Clarington, Ohio, to 12.1 feet above flood stage at Wellsburg, W. Va. Along the Allegheny River record flooding occurred from Salamanca, N. Y., to above Eldred, Pa. At Olean, N. Y., where flood stage is 10 feet, the river crested at 24.2 feet on the 23d. At Eldred, Pa., the crest was 1.5 feet above the previous record set in 1942. Major flooding also occurred on the Clarion River. At Cooksburg and Johnsonburg crests were just below previous records. At Ridgway the crest, which came early on the 23d, was more than 8 feet above flood stage.

The Monongahela River flooded from Point Marion, Pa., down to its mouth at Pittsburgh; major flooding was continued between Charleroi and Pittsburgh. The Youghiogheny River was in flood through most of its length; greatest flooding occurred from Jacobs Creek on down to its mouth at McKeesport. Serious flash flooding occurred all over Westmoreland County where up to 13.50 inches of rain was measured in a bucket survey (near Mt. Pleasant).

Shortly before midnight on Tuesday (20th), rains turned heavy in New York's southwestern highlands. Morning reports showed falls of 4 inches, 5 inches, and 6 inches over the upper reaches of the Chemung River Basin. Runoff caused local flash flooding in Allegany and Steuben Counties. A few hours later, most of New York State was under the Agnes rainshield. Over the Chemung watershed an average of more inches fell during Wednesday. Runoff from the 2-day rains brought the main rivers to above bankfull stages. By the morning of the 23d, another to 5 inches was added to the river basin.

Before it was over 10 to 13 inches fell in Allegany and western Steuben Counties. Wellsville had an unofficial total of more than 13 inches. At Alfred, 12.9 inches was measured. The 4-day average along the basin was near 9 inches. This resulted in highest stages of record all along the Chemung River. At Chemung, N. Y., where flood stage is 12 feet, the river flooded from the 22d to the 25th and crested at 31.62 feet early on the 24th. At Elmira, the river crested about 15 feet above flood stage. During the height of the flood, a lake 4 miles wide was created by the Chemung River between Corning and Elmira. The Allegheny, Genesee, Canesteo, and lower Susquehanna Rivers were also in this heavy rain area. Total rainfall was greater than 6 inches, west of Binghamton and south of Rochester. The Allegheny crested nearly 3 feet higher than the all-time record in the Olean-Salamanca area. At Addison, the Canesteo crested about 3 feet above flood stage on the 23d. Flood stage is 17 feet.

In the Finger Lakes region, from Wyoming County, eastward to Cortland County, totals of 6 to 9 inches were common. Ten inches of rain was measured in the hilly terrain just west of Canandaigua Lake in Ontario County. The inflow of streams into the Finger Lakes produced record high lake levels and severe flooding of shore areas. Cayuga Lake, near Ithaca, reached a peak level of 387.75 feet on June 25. This exceeded the previous record of 386.4 feet in April 1916. Record water levels also occurred in Seneca and Canandaigua Lakes. Between June 20 and the 25th, the Keuka Lake level rose 5 feet. Severe flooding also occurred along the south shore of Oneida Lake from Bridgeport, west of Brewerton.

Three to 5 inches of rain fell over the Chenango River watershed, in south-central New York. Flooding occurred along the river from the 22d to the 24th. Crests were generally 1 to 2 feet above flood stage. Farther south in the Catskills, 4- to 6-inch rainfall totals were common.

DEATHS AND DAMAGES

Agnes is the costliest hurricane in United States history. Total storm damage is presently estimated at $3.09 billion. For flooding of this consequence the storm death toll of 117 is very light. Pennsylvania is responsible for more than two-thirds of the damage and 48 of the deaths. Table I shows the deaths and damages by States. The impact of the hurricane on property is summarized in Table 2.

Outside the United States, Cuba suffered heavily. On the western part of the island, torrential rains caused severe flooding. In Pinar Del Rio, some 97 homes were destroyed and another 300 damaged. There were seven deaths.

Florida suffered nine deaths, 170 injuries and $8.243 million damage. Damage resulted from tides, winds, and tornadoes. All Gulf coast counties from Monroe to Bay were declared disaster areas. Panama City, some 18 feet above sea level, suffered little damage, but low lying coastal villages between Carabelle and Apalachicola suffered great damage. Storm tides, highest in many years, destroyed homes and businesses, washed out roads, and cut off access to many offshore islands. Pinellas County was also hard hit particularly in the St. Petersburg area. Inland, winds and tornadoes were responsible for the damage and for most of the deaths. Inland disaster counties include Brevard, Hardee, Hendry, and Okeechobee. At Okeechobee City, a series of windstorms cut a path 100 yards wide through Treasure Island Park, a fishing lodge and several other mobile home parks. Six people were killed and 40 injured. Damage, including destruction of 50 mobile homes, was estimated at

$500,000. A windstorm near Ft. Denaud, in Hendry County, destroyed a trailer, killing a woman and injuring her daughter. It then tore up some citrus groves and several other trailer parks near La Belle. Damage was estimated at $200,000 to property and $10,000 to crops. As mentioned before, 15 tornadoes were responsible for more than $4.5 million damage. Other deaths included a child drowning in a rain-swollen stream and a heart attack attributed to Agnes.

The Yadkin River in North Carolina flooded more than 86,000 acres. Total losses in the Basin were estimated at $4.22 million. Of the losses, more than $3.5 million were agricultural and mainly to growing crops. Street flooding in Elkin, Yadkin College, and other river towns accounted for the remainder. Two deaths occurred in North Carolina, one in Surry County when a canoe overturned and the other in Iredell County, when a man driving a tractor was swept away in flood waters. Estimates of flooding in the Catawba, Congaree, and Reedy River Basins total $32,000; mostly minor home and trailer damage and some crop losses. Total North Carolina damage is estimated at $6.558 million.

Total storm damage in Georgia was estimated at $205,000. The tornado near Douglas was responsible for $100,000 damage. The Blackshear tornado destroyed a mobile home and damage was estimated at $5,000. Over the rest of the state, property damage was estimated at $80,000 and crop damage at $20,000. South Carolina damage was also minimal and restricted to flooding. In the Pee Dee Basin, floods caused an estimated $25,000 in crop losses. Total storm damage for South Carolina was about $50,000.

Flood damage in Virginia has been estimated at $125.987 million. The death toll stands at 13. Destruction was widespread throughout central Virginia. It ranged from agricultural damage on small streams, to inundated towns and cities on the larger rivers. Richmond was hit hard. Water supply and sewage treatment plants were inundated. Electrical and gas plants were flooded and partially closed. Only one of the five bridges crossing the James was usable. Downtown Richmond was closed for several days. Industry and business suffered immense damage. Many residents were evacuated from their homes. Other hard hit towns and cities included Manassas, Occoquan, Fredericksburg, Scottsville, Glascow, Buchanan, Farmville, Roanoke, Salem, Danville, Alexandria, Charlottesville, Lynchburg, Lexington, and Waynesboro. Highways were also devastated. At the height of the flood, 600 miles of road were under water. Some 103 state highway bridges were destroyed or damaged. Most of these were small bridges on secondary highways.

The real tragedies occurred along the smaller tributaries. Every creek and stream worthy of the name, overflowed its banks and wiped clean the adjacent land. Uninsured homes and a lifetime accumulation of household goods were quickly swept away. Northern Virginia was particularly hard hit. Fairfax County reported an estimated $25 million damage, by far the largest in the state. This tragedy was lessened somewhat by timely warnings that saved an untold number of lives.

Total storm damage in Maryland has been estimated at $110.186 million. There were 19 storm deaths in Maryland, one in Delaware, and none in the District of Columbia. The following Maryland counties, including Baltimore City, were declared disaster areas: Anne Arundel, Baltimore, Carroll, Cecil, Charles, Frederick, Harford, Howard, Montgomery, Prince Georges, and Washington. Along the Chesapeake Bay, the counties named were Calvert, Dorchester, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, and Wicomico. Damage in Delaware was mostly minor.

Disaster to the Chesapeake Bay counties was primarily in the form of losses to the shellfish and oyster industry with resultant unemployment. Heavy rains cause excessive freshwater runoff into the Bay. This greatly reduces the salinity. The freshwater forms a layer on the surface of the Bay, which moves downstream mixing with and diluting the bottom layer of salty water. Oysters cannot survive prolonged exposure to low salinities. In addition, there is a lack of dissolved oxygen which occurs when fresh water flows over top of heavier salt water with little mixing. It appears now that the damage to the industry will be less than that attributed to the floods of hurricane Camille in 1969.

An indication of the severity of damage in Pennsylvania, is that the whole state has been declared a disaster area. Total storm damage is currently estimated at $2.119 billion. The enormity of this figure can be realized when compared to the total storm damages of hurricanes Camille and Betsy. In each storm, the total was about $1.4 billion. The floods resulting from Agnes have caused the worst natural disaster to ever hit Pennsylvania. In addition to the damage, there were 48 deaths. Altogether, some 250,000 people were forced to evacuate their homes. Many returned to find their homes gone. Public water and sewage facilities flooded out in many areas. Some towns had to ration water. Fires broke out in many communities where firemen, unable to reach the blaze because of flooding, stood helplessly by.

Crop losses were initially estimated at $120 million. Full effects on some crops will not be known until later this season. Roads and bridges suffered some $300 million damage. There were 569 bridges either washed out or closed by floodwaters. Industry suffered heavily.

Damage in Ohio was mainly confined to the southern shore of Lake Erie. Northeasterly winds generated 15-ft. waves and caused a 3.5-ft. rise in the lake level along the south shore.

There was some flooding along the Ohio River from Hannibal to East Liverpool. Powhatan Point was especially hard hit. Total damage in Ohio is estimated at $2.002 million.

Total damage in West Virginia was estimated at $7.753 million. Almost all of this occurred along the Ohio River from New Martinsville, W. Va., to Chester. Wheeling was particularly hard hit. Some 3,000 homes and 1,500 businesses were inundated. In Greenbrier County, Dry and Howard Creeks overflowed their banks, damaging some 22 businesses and

56 homes. Five houses were completely destroyed.

Total damage in New York has been estimated at $702.502 million. The death toll stands at 24. Some 100,000 people had to evacuate their houses. In Corning, almost the entire population was forced to flee the floodwaters. In Elmira about one-half the city evacuated. Pressure on dams forced many people below the dams to flee. Lake shore residents also moved to higher ground. These counties were declared disaster areas: Allegany, Cattaraugus, Cayuga, Chemung, Livingston, Ontario, Schuyler, Seneca, Steuben, Tompkins, Wyoming, and Yates. About 5,000 homes were destroyed or badly damaged. The greatest loss of homes was in the Elmira-Corning area. Other hard hit cities include Salamanca, Olean, Wellsville, and Hornell. The overflow of several Finger Lakes caused damage to boats, docks, marinas, and surrounding properties. Rains and floods caused severe crop damage throughout the southwestern tier and Finger Lake counties. Hardest hit were potatoes, corn and hay. Dairy farmers also suffered serious losses. Grape vineyards in the Naples area were inundated and heavy rains occurred at the critical bloom stage. Floods also caused the collapse of a hospital wing at Wellsville. Another tragic loss was the famous Glass Museum at Corning Glassworks. Water rose almost to the ceiling of the museum rooms. Losses included many priceless, ancient glass objects.

Total storm damage in New Jersey was estimated at $15 million with one storm fatality. Crop damage contributed $10 million to the total. In New England damage from wind and rain was considered minor.

Table 1

U. S. DEATHS AND DAMAGE ATTRIBUTED TO AGNES

	Damage	Deaths
Pennsylvania	$2,119,269,000	48
New York	702,502,000	24
New Jersey	15,000,000	1
Maryland	110,186,000	19
Ohio	2,002,000	0
Delaware	Light	1
West Virginia	7,753,000	0
Virginia	125,987,000	13
North Carolina	6,558,380	2
South Carolina	50,000	0
Georgia	205,000	0
Florida	8,243,000	9
Total	$3,097,755,380	117

Table 2

IMPACT OF HURRICANE AGNES ON PROPERTY

	Virginia	Maryland	West Virginia	D.C.	New York	*Pennsylvania New Jersey	Ohio	Florida	Georgia	North Carolina	Total
Total Families suffering loss	7,063	3,479	1,946	506	40,090	69,860	405	2,893	1	-	126,250
Dwellings Destroyed	95	103	108	0	628	2,321		96	0	0	3,351
Dwellings, major damage	1,307	866	344		4,922	33,412	3	447	0	1	41,302
Dwellings, minor damage	3,086	1,664	1,214	350	27,910	29,455	302	1,355	0	0	65,336
Mobile Homes Destroyed	125	50	118	0	135	1,266	0	177	0	0	1,871
Mobile Homes, major damage	450	43	[illegible]	[illegible]	367	1,908	100	374	1	6	3,340
Farm Buildings Destroyed	11	17	0	0	92	435	0	0	0	0	555
Farm Buildings, major damage	27	44	10	0	341	1,249	0	0	0	0	1,671
Small Businesses, Destroyed or major damage	205	81	18	-	1,547	3,003	0	988	0		5,842

*Almost all damage occurred in Pennsylvania

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	86	15.2	12.7	20	1.3
1000	18	144	14.7	11.3	22	1.3
950	29	544	13.8	10.1	25	2.8
900	29	999	11.6	8.3	26	5.1
850	28	1,476	9.2	5.3	26	6.1
800	28	1,977	6.4	2.3	26	7.2
750	28	2,504	3.4	-2.1	26	8.3
700	28	3,061	.5	-6.5	26	9.0
650	28	3,653	-2.4	-12.8	27	9.8
600	28	4,285	-5.9	-20.3	26	11.4
550	28	4,962	-9.6	-25.5	26	12.6
500	28	5,692	-13.8	-31.7	26	13.7
450	28	6,484	-19.3	-37.1	26	14.5
400	28	7,349	-25.6	-42.3	27	15.0
350	28	8,307	-32.5	-46.6	27	15.3
300	28	9,374	-39.8	-51.4	27	18.0
250	28	10,600	-47.4		28	18.2
200	28	12,054	-53.5		28	17.6
175	28	12,909	-55.4		27	16.4
150	28	13,889	-57.0		27	13.5
125	28	15,040	-58.0		27	11.1
100	28	16,446	-57.8		28	6.6
80	28	17,854	-57.2		30	2.3
70	28	18,701	-56.0		10	.3
60	28	19,684	-55.2		10	1.9
50	28	20,851	-54.1		08	2.8
40	28	22,288	-52.5		09	5.5
30	26	24,159	-50.1		09	7.7
25	26	25,355	-48.4		09	9.2
20	25	26,830	-46.0		09	10.3
15	23	28,752	-42.2		09	12.0
10	14	31,532	-37.2			
7						
5						
4						

ALBUQUERQUE, N. MEX.
838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,619	15.5	4.5	11	1.4
1000						
950						
900						
850						
800	29	2,019	17.1	1.2	23	.4
750	29	2,567	14.1	-1.8	28	3.2
700	29	3,145	9.9	-4.3	27	4.7
650	29	3,755	5.2	-6.7	27	5.2
600	29	4,403	.0	-11.1	27	5.9
550	29	5,094	-5.0	-15.6	25	7.0
500	29	5,836	-9.9	-24.4	26	8.2
450	29	6,641	-15.1	-30.8	26	9.2
400	29	7,521	-21.1	-37.5	26	9.5
350	29	8,496	-28.2	-43.9	25	9.4
300	28	9,579	-36.9	-52.0	25	12.1
250	28	10,815	-46.6		25	14.1
200	28	12,262	-56.5		25	15.8
175	28	13,101	-60.4		25	17.4
150	29	14,054	-63.6		25	15.3
125	28	15,166	-66.1		25	11.9
100	28	16,511	-68.1		26	7.8
80	28	17,854	-66.2		25	1.1
70	28	18,669	-62.9		08	1.7
60	28	19,624	-60.6		09	4.3
50	28	20,767	-57.7		09	5.9
40	27	22,180	-55.5		08	7.4
30	27	24,026	-52.7		09	8.7
25	27	25,208	-50.9		09	6.9
20	26	26,673	-48.1		08	10.3
15	25	28,588	-44.8		08	11.6
10	20	31,316	-39.7		09	13.3
7						
5						
4						

AMARILLO, TEXAS
890 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	17.9	11.7	18	3.2
1000						
950						
900						
850	30	1,492	20.0	8.8	21	6.9
800	30	2,013	17.8	5.2	21	5.4
750	30	2,562	14.2	1.7	23	3.9
700	30	3,140	10.0	-2.6	25	3.5
650	30	3,751	5.5	-7.0	27	3.7
600	30	4,400	.6	-11.6	27	4.1
550	30	5,092	-4.4	-16.6	26	4.6
500	30	5,836	-9.2	-23.7	26	5.8
450	30	6,644	-14.1	-30.9	26	6.6
400	30	7,528	-20.0	-36.8	26	7.1
350	30	8,507	-27.2	-42.6	26	9.0
300	30	9,595	-35.9	-49.3	26	10.6
250	30	10,836	-45.9		26	12.4
200	30	12,288	-56.0		27	15.1
175	30	13,128	-60.5		27	15.6
150	30	14,080	-64.3		26	16.0
125	30	15,187	-67.3		27	15.0
100	30	16,529	-67.9		28	8.2
80	30	17,873	-66.2		30	1.3
70	30	18,689	-63.1		08	2.4
60	30	19,643	-60.5		08	4.7
50	30	20,787	-57.8		09	6.4
40	28	22,200	-55.6		09	8.2
30	28	24,047	-52.5		09	9.8
25	28	25,231	-50.6		09	9.0
20	28	26,694	-47.8		08	10.0
15	26	28,609	-44.2		08	12.3
10	21	31,347	-39.4		09	14.4
7						
5						
4						

* ANCHORAGE, ALASKA
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	8.7	3.7	16	2.7
1000	26	114	9.0	3.1	16	2.9
950	30	526	6.9	1.0	15	3.5
900	30	968	4.1	-.9	15	3.3
850	30	1,430	.9	-2.4	14	3.6
800	30	1,915	-2.0	-5.1	13	4.5
750	30	2,427	-4.4	-8.7	14	5.1
700	30	2,968	-7.1	-12.1	13	4.8
650	30	3,543	-10.1	-18.0	14	4.6
600	30	4,156	-13.6	-22.7	14	5.0
550	30	4,812	-17.7	-27.9	13	5.6
500	30	5,519	-22.4	-32.0	14	6.6
450	30	6,286	-27.1	-38.8	13	6.4
400	30	7,124	-33.2	-44.9	13	7.4
350	30	8,052	-40.1	-48.2	14	6.8
300	30	9,085	-47.3		15	6.3
250	29	10,282	-51.5		16	4.9
200	29	11,737	-48.9		17	3.9
175	29	12,618	-47.3		18	3.6
150	28	13,641	-47.3		17	3.8
125	28	14,847	-47.8		16	3.5
100	28	16,317	-48.6		16	2.5
80	28	17,785	-48.6		12	2.9
70	27	18,663	-48.7		12	3.8
60	27	19,677	-48.3		11	4.1
50	27	20,879	-48.0		11	5.3
40	27	22,353	-47.3		10	6.0
30	26	24,258	-46.0		09	8.3
25	26	25,474	-44.9		09	9.8
20	26	26,971	-43.3		09	10.0
15	25	28,916	-40.5		09	10.7
10	23	31,702	-35.0		09	12.5
7	17	34,243	-30.0		09	16.3
5	7	36,609	-26.5			
4						

* ANNETTE, ALASKA
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	8.9	6.8	12	.7
1000	30	132	8.7	6.3	15	1.2
950	30	555	6.2	4.1	18	3.0
900	30	997	3.5	1.6	19	3.6
850	30	1,458	.6	-2.1	18	4.8
800	30	1,944	-1.3	-5.8	19	4.6
750	30	2,457	-3.7	-8.8	20	5.1
700	30	2,999	-6.5	-13.0	21	5.4
650	30	3,575	-9.4	-17.8	21	5.6
600	30	4,191	-12.6	-20.5	21	6.5
550	30	4,850	-16.4	-25.1	22	7.4
500	30	5,561	-21.0	-30.6	22	7.8
450	30	6,331	-26.0	-34.8	23	8.0
400	30	7,174	-31.9	-41.4	23	8.9
350	30	8,107	-38.7	-43.5	24	11.0
300	30	9,147	-45.7		24	11.7
250	30	10,350	-49.2		25	11.4
200	30	11,808	-50.8		24	8.7
175	30	12,680	-49.9		24	7.9
150	30	13,687	-50.1		24	6.2
125	30	14,878	-50.7		23	4.6
100	29	16,327	-51.2		20	3.0
80	28	17,774	-51.6		17	2.3
70	28	18,641	-51.8		15	2.2
60	27	19,642	-51.4		11	3.0
50	27	20,828	-50.8		10	4.6
40	27	22,285	-49.8		09	6.2
30	26	24,173	-48.3		09	7.8
25	25	25,374	-46.8		09	8.9
20	23	26,869	-44.4		09	9.8
15	21	28,803	-41.2		08	11.0
10	19	31,593	-35.9		09	13.1
7	17	34,109	-30.9		09	15.5
5	11	36,519	-27.1			
4	5	38,093	-24.5			

ATHENS, GEORGIA
986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	17.3	14.7	32	.6
1000						
950	30	562	19.3	12.3	28	2.3
900	30	1,027	17.2	9.1	31	2.6
850	30	1,513	14.4	6.0	31	4.0
800	30	2,023	11.5	1.2	30	5.2
750	30	2,560	9.4	-7.0	30	6.1
700	30	3,129	6.2	-12.4	30	6.9
650	30	3,733	2.9	-15.0	30	8.0
600	30	4,376	-1.1	-19.9	29	8.6
550	30	5,065	-5.1	-25.4	30	10.1
500	30	5,806	-10.1	-29.6	29	11.2
450	30	6,611	-15.1	-34.3	29	11.8
400	30	7,491	-21.3	-39.3	29	13.1
350	30	8,466	-28.0	-44.5	29	13.4
300	30	9,552	-36.4	-50.7	29	14.6
250	30	10,791	-45.8		29	16.8
200	30	12,243	-56.1		30	17.7
175	30	13,082	-60.8		30	17.4
150	30	14,032	-64.5		30	16.1
125	30	15,141	-66.3		30	12.7
100	30	16,491	-66.1		31	7.5
80	30	17,847	-64.4		36	3.0
70	30	18,669	-62.0		07	3.5
60	30	19,627	-60.0		08	5.5
50	30	20,772	-57.6		09	7.6
40	30	22,188	-55.3		09	9.2
30	30	24,039	-51.7		09	9.2
25	30	25,226	-50.2		09	9.1
20	29	26,696	-47.7		08	9.1
15	27	28,611	-44.6		09	11.3
10	20	31,358	-39.4		09	13.8
7	10	33,824	-34.8			

* BARROW, ALASKA
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	11	8	-1.7	-2.1	09	5.3
1000	10	80	-2.2	-2.3	10	5.1
950	11	480	-.6	-4.9	13	3.9
900	11	914	-.1	-5.7	16	2.2
850	11	1,370	-2.1	-8.1	20	1.9
800	11	1,850	-4.5	-8.8	21	3.1
750	11	2,356	-7.4	-11.4	18	2.8
700	10	2,890	-10.6	-14.8	18	3.9
650	10	3,457	-13.4	-21.6	17	5.4
600	10	4,063	-16.8	-24.1	17	5.5
550	10	4,711	-20.7	-27.7		
500	9	5,390	-25.9	-31.6		
450	9	6,146	-31.0	-37.0		
400	9	6,971	-36.7	-41.3		
350	9	7,886	-43.2			
300	9	8,906	-49.8			
250	9	10,091	-51.4			
200	9	11,558	-46.0			
175	9	12,448	-45.4			
150	9	13,476	-45.8			
125	9	14,689	-46.2			
100	9	16,174	-45.9			
80	9	17,661	-45.4			
70	9	18,553	-45.1			
60	9	19,583	-45.0			
50	9	20,802	-44.7			
40	7	22,313	-44.3			
30	7	24,241	-44.4			
25	7	25,465	-43.6			
20	7	26,970	-42.5			
15						
10						
7						

BARTER IS., ALASKA
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	.2	-.1	07	3.0
1000	28	98	.3	-.3	08	3.2
950	30	505	4.5	.0	09	2.8
900	30	947	5.9	-1.4	06	.2
850	30	1,414	4.4	-3.2	25	1.4
800	30	1,906	1.8	-5.6	26	2.1
750	30	2,424	-1.2	-7.9	26	3.0
700	30	2,971	-4.7	-10.8	26	3.2
650	30	3,551	-7.9	-15.3	25	3.6
600	30	4,169	-11.5	-20.3	24	4.3
550	30	4,831	-15.6	-24.9	23	5.2
500	30	5,543	-20.6	-29.9	24	5.4
450	30	6,315	-25.9	-35.5	24	5.8
400	30	7,157	-32.2	-42.5	24	6.8
350	30	8,089	-39.2	-47.3	24	7.3
300	30	9,125	-47.3		24	7.9
250	30	10,314	-52.9		24	7.0
200	30	11,763	-49.8		24	6.3
175	30	12,641	-47.5		24	5.1
150	30	13,662	-46.7		24	4.7
125	30	14,872	-46.7		24	3.4
100	30	16,352	-46.7		24	2.5
80	30	17,835	-45.9		21	.8
70	30	18,726	-45.4		15	.6
60	30	19,756	-44.8		12	1.3
50	30	20,977	-44.3		08	2.3
40	30	22,475	-44.0		08	4.1
30	30	24,410	-43.2		09	5.5
25	30	25,640	-42.3		09	6.1
20	30	27,156	-40.3		09	7.4
15	29	29,133	-37.5		08	8.2
10	26	31,953	-32.3		08	10.3
7	7	34,545	-26.8			

BETHEL, ALASKA
1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	6.3	4.3	22	.8
1000	21	94	7.4	3.3	24	1.0
950	30	486	5.8	.5	15	2.4
900	30	927	2.9	-.6	16	3.9
850	30	1,387	.2	-3.7	16	5.7
800	30	1,871	-2.2	-6.5	16	5.2
750	30	2,382	-4.7	-9.7	15	5.3
700	30	2,922	-7.5	-13.9	15	6.0
650	30	3,496	-10.6	-16.7	15	6.3
600	30	4,109	-13.8	-20.3	15	6.4
550	30	4,765	-17.8	-25.7	14	6.0
500	30	5,472	-22.0	-33.0	14	5.9
450	30	6,240	-27.0	-35.7	15	5.7
400	30	7,079	-33.0	-42.0	15	5.9
350	30	8,008	-39.7	-46.8	15	5.2
300	30	9,044	-46.3		16	4.0
250	30	10,244	-49.9		19	4.2
200	30	11,710	-47.1		20	4.4
175	30	12,595	-46.7		20	3.2
150	30	13,618	-46.8		20	3.2
125	30	14,826	-47.4		19	2.3
100	30	16,300	-47.8		16	2.6
80	30	17,771	-48.2		13	2.5
70	30	18,652	-48.1		12	3.3
60	30	19,668	-48.0		12	3.5
50	30	20,871	-48.0		10	4.7
40	29	22,348	-47.2		10	6.1
30	28	24,257	-46.1		09	7.2
25	26	25,468	-45.1		09	8.4
20	25	26,964	-43.7		09	10.2
15	24	28,905	-40.7		09	10.4
10	15	31,686	-36.2		09	11.9
7						

* BISMARCK, N. DAK.
954 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	503	12.9	10.2	10	1.2
1000						
950	24	552	12.9	9.2	11	1.9
900	30	995	15.1	7.6	17	4.2
850	30	1,478	13.6	5.5	20	3.4
800	30	1,987	10.7	2.8	24	3.1
750	30	2,522	7.6	-2.7	25	3.8
700	30	3,087	4.1	-5.5	27	5.2
650	30	3,686	.2	-9.7	28	6.5
600	30	4,323	-3.8	-14.5	27	7.8
550	30	5,005	-8.0	-21.8	28	8.2
500	30	5,739	-12.6	-27.9	27	9.5
450	30	6,535	-17.9	-32.4	27	10.9
400	30	7,405	-24.4	-38.9	27	11.8
350	30	8,367	-31.5	-44.4	27	13.3
300	30	9,436	-40.3	-51.1	27	16.2
250	30	10,655	-49.3		27	19.4
200	30	12,093	-56.5		27	20.5
175	30	12,937	-58.4		27	17.9
150	30	13,906	-58.2		27	14.1
125	30	15,054	-58.1		27	9.9
100	30	16,458	-58.5		28	6.0
80	30	17,863	-58.0		30	2.3
70	30	16,706	-57.2		35	.7
60	30	19,685	-55.5		06	2.2
50	30	20,853	-53.6		07	4.3
40	30	22,294	-52.0		08	6.0
30	29	24,169	-49.8		08	7.9
25	27	25,363	-47.9		08	9.4
20	24	26,838	-45.5		09	11.1
15	19	28,769	-41.9		09	12.8
10	14	31,540	-36.5		09	12.4
7	7	34,013	-32.6			

BOISE, IDAHO
913 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	871	14.0	6.2	18	.8
1000						
950						
900	30	996	15.9	5.4	27	.6
850	30	1,482	15.5	1.6	32	2.1
800	30	1,993	12.0	-.4	29	2.8
750	30	2,531	8.4	-3.3	27	4.2
700	30	3,096	4.5	-7.1	26	5.8
650	30	3,696	.6	-10.0	25	7.9
600	30	4,333	-3.7	-14.3	25	9.5
550	30	5,015	-8.3	-19.5	25	11.0
500	30	5,748	-13.0	-25.8	25	11.9
450	30	6,544	-18.2	-31.9	25	13.1
400	30	7,412	-24.8	-38.9	25	13.5
350	30	8,371	-32.5	-43.5	25	14.2
300	30	9,436	-40.9	-50.0	24	17.1
250	30	10,651	-50.3		24	17.8
200	30	12,082	-57.4		24	17.5
175	30	12,923	-58.5		24	16.1
150	30	13,894	-57.5		24	13.8
125	30	15,043	-58.6		24	10.2
100	27	16,448	-59.2		25	6.8
80	27	17,846	-59.0		24	2.3
70	27	18,685	-57.9		14	.4
60	27	19,660	-56.7		10	2.2
50	27	20,819	-55.2		09	3.7
40	24	22,241	-53.9		09	6.0
30	24	24,101	-51.1		08	8.7
25	24	25,292	-49.3		08	9.9
20	24	26,764	-46.6		08	11.4
15	22	28,604	-43.3		09	13.1
10	19	31,455	-37.5		09	14.3
7						

BOOTHVILLE, LA.
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	25.1	22.5	22	.5
1000	30	117	25.2	21.8	23	.4
950	30	567	22.4	18.1	23	.6
900	30	1,037	19.6	13.4	15	.9
850	30	1,528	17.1	8.5	12	.6
800	30	2,044	14.7	3.4	36	.2
750	30	2,587	11.9	-2.1	36	1.1
700	30	3,161	8.5	-6.9	34	2.4
650	30	3,770	4.6	-11.1	34	3.3
600	30	4,417	.3	-13.9	34	4.1
550	30	5,109	-4.2	-16.7	34	4.3
500	30	5,853	-8.8	-22.3	32	4.2
450	30	6,662	-13.6	-27.7	32	5.9
400	30	7,549	-18.9	-34.6	31	7.4
350	30	8,533	-26.0	-40.1	30	8.5
300	30	9,626	-34.5	-47.0	30	9.9
250	30	10,875	-44.1		29	11.9
200	29	12,343	-54.5		30	15.2
175	29	13,188	-59.8		30	17.0
150	28	14,137	-64.9		30	16.7
125	28	15,235	-70.3		30	14.6
100	28	16,550	-72.6		32	8.5
80	28	17,872	-68.7		02	5.6
70	27	18,677	-65.4		06	5.8
60	27	19,623	-62.4		08	8.1
50	27	20,758	-58.9		09	9.7
40	27	22,171	-55.5		09	10.8
30	26	24,022	-51.7		09	10.5
25	23	25,211	-49.8		08	10.3
20	22	26,678	-47.8		08	11.5
15	17	28,583	-44.3		09	12.0
10	9	31,343	-39.8			
7						

* BROWNSVILLE, TEXAS
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	23.8	21.7	15	1.1
1000	30	98	25.3	23.4	15	2.7
950	30	549	22.6	20.2	16	7.2
900	30	1,020	20.8	13.0	16	7.0
850	30	1,513	18.3	8.1	15	6.2
800	30	2,031	15.9	4.0	15	5.2
750	30	2,577	13.0	.3	13	4.6
700	30	3,153	9.6	-4.3	12	3.6
650	30	3,765	5.8	-6.8	10	2.9
600	30	4,415	2.0	-11.1	08	1.9
550	30	5,113	-2.1	-16.3	05	1.9
500	30	5,864	-6.5	-24.3	01	2.5
450	30	6,679	-11.7	-29.1	34	2.9
400	30	7,571	-18.0	-34.6	32	2.9
350	30	8,559	-24.9	-42.2	29	3.9
300	30	9,658	-33.3	-49.5	28	6.4
250	30	10,913	-43.1		28	8.9
200	30	12,380	-54.0		27	12.6
175	30	13,227	-59.6		27	14.9
150	30	14,176	-66.1		27	13.1
125	30	15,265	-72.0		29	8.6
100	30	16,563	-75.9		34	3.4
80	30	17,861	-72.4		05	5.0
70	30	18,654	-68.1		07	7.9
60	30	19,593	-63.4		08	9.0
50	30	20,721	-60.7		09	10.1
40	30	22,122	-57.0		09	11.5
30	29	23,963	-52.5		08	13.4
25	29	25,147	-50.2		09	13.9
20	28	26,610	-47.9		09	14.2
15	23	28,508	-45.2		08	13.3
10	12	31,233	-40.4			
7	5	33,678	-35.9			

BUFFALO, N. Y.
986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	14.5	11.3	20	.7
1000						
950	30	535	14.0	9.9	24	3.1
900	30	990	11.8	7.3	27	4.1
850	30	1,467	8.9	5.5	27	4.4
800	30	1,967	6.1	1.1	28	5.0
750	30	2,494	3.6	-3.6	28	5.8
700	30	3,051	.8	-7.7	29	7.3
650	30	3,644	-2.2	-14.6	30	7.9
600	30	4,276	-5.5	-20.4	30	8.0
550	30	4,954	-9.3	-25.5	30	9.1
500	30	5,684	-13.8	-30.4	30	10.0
450	30	6,476	-19.2	-35.4	30	10.6
400	30	7,342	-25.4	-40.8	30	11.7
350	30	8,301	-32.0	-45.0	30	13.5
300	30	9,371	-38.9	-51.0	29	16.1
250	30	10,600	-47.1		29	17.7
200	30	12,055	-53.6		29	18.1
175	30	12,910	-55.1		29	16.0
150	30	13,891	-56.5		29	11.9
125	30	15,044	-58.0		29	8.9
100	30	16,447	-58.6		29	5.1
80	29	17,855	-57.7		31	2.2
70	29	18,700	-56.6		03	1.2
60	29	19,681	-55.2		07	2.6
50	29	20,849	-54.1		09	4.3
40	28	22,287	-52.1		08	6.7
30	28	24,158	-50.2		09	8.7
25	27	25,350	-48.4		08	10.0
20	26	26,833	-45.5		09	11.8
15	23	28,764	-42.0		09	13.8
10	13	31,531	-37.8			
7						

CAPE HATTERAS, N. C.
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	20.5	17.1	23	1.1
1000	28	130	21.2	15.5	23	1.4
950	30	563	18.3	11.4	24	2.9
900	30	1,024	15.5	7.2	25	3.6
850	30	1,507	12.8	2.7	25	4.0
800	30	2,015	10.4	-2.6	25	5.0
750	30	2,549	7.6	-6.0	25	6.4
700	30	3,115	4.8	-9.8	26	7.6
650	30	3,716	1.8	-13.4	26	8.4
600	30	4,358	-1.5	-18.3	27	9.1
550	30	5,045	-5.5	-22.7	27	9.5
500	30	5,786	-10.4	-26.0	27	10.6
450	30	6,589	-15.6	-31.2	27	12.3
400	30	7,468	-21.6	-36.5	27	12.4
350	30	8,441	-28.8	-41.3	27	12.9
300	30	9,522	-37.3	-47.4	27	13.7
250	30	10,757	-46.7		27	14.8
200	30	12,204	-56.3		28	16.4
175	30	13,043	-60.5		29	15.7
150	30	13,996	-63.0		29	14.3
125	30	15,115	-64.0		29	10.1
100	30	16,481	-63.8		29	4.8
80	29	17,857	-61.6		34	.9
70	29	18,687	-60.3		07	2.1
60	29	19,652	-58.9		08	5.1
50	28	20,797	-57.1		09	7.4
40	28	22,218	-54.7		09	9.4
30	27	24,073	-51.0		09	9.4
25	27	25,266	-48.8		09	8.6
20	27	26,740	-46.7		08	9.4
15	27	28,660	-43.8		09	11.1
10	20	31,412	-39.3		09	13.6
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

• CARIBOU, MAINE
990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	13.8	11.9	16	1.4
1000						
950	30	536	12.6	8.0	21	2.5
900	30	990	11.1	5.4	23	3.7
850	30	1,465	8.2	2.6	24	4.3
800	30	1,963	5.3	-1.2	24	4.8
750	30	2,488	2.3	-6.4	23	5.7
700	30	3,043	-.3	-12.4	24	6.5
650	30	3,633	-3.2	-14.3	24	7.2
600	30	4,263	-6.5	-21.4	24	7.5
550	30	4,938	-10.8	-25.3	24	8.8
500	30	5,664	-15.4	-28.7	24	10.0
450	30	6,452	-20.7	-33.0	24	11.1
400	30	7,312	-26.8	-38.4	24	12.4
350	30	8,265	-33.6	-44.2	23	13.9
300	30	9,326	-41.4	-49.2	23	16.4
250	30	10,543	-48.8		23	16.3
200	30	11,994	-53.1		24	13.0
175	30	12,851	-54.9		24	11.3
150	30	13,834	-55.8		24	10.6
125	29	14,988	-56.6		24	8.8
100	29	16,403	-56.6		24	6.0
80	29	17,821	-55.5		23	3.5
70	29	18,675	-54.5		21	2.4
60	29	19,665	-53.8		16	1.1
50	29	20,838	-53.0		11	2.1
40	29	22,283	-51.2		10	4.5
30	29	24,163	-49.0		09	7.2
25	28	25,367	-47.1		09	8.7
20	25	26,840	-44.9		09	9.9
15	24	28,776	-42.0		09	11.5
10	20	31,550	-37.3		09	13.8
7	15	34,049	-32.1		10	14.6
5	7	36,355	-30.0			

CHARLESTON, S. C.
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	18.8	16.3	30	1.0
1000	29	122	20.4	15.2	28	.6
950	30	559	19.7	10.9	27	1.7
900	30	1,023	16.8	7.5	28	2.4
850	30	1,508	14.3	1.6	29	3.3
800	30	2,019	12.3	-3.6	29	4.7
750	30	2,557	9.7	-7.2	29	5.7
700	30	3,127	6.7	-12.0	28	6.6
650	30	3,731	3.3	-15.4	28	7.5
600	30	4,375	-.7	-20.3	28	8.4
550	30	5,065	-4.5	-26.2	28	9.0
500	30	5,809	-9.1	-29.8	28	9.8
450	30	6,616	-14.3	-33.4	28	11.1
400	30	7,499	-20.4	-38.2	28	12.3
350	30	8,476	-27.5	[illegible]	28	13.0
300	30	9,564	-36.0	-50.2	29	14.6
250	30	10,805	-45.6		29	15.1
200	30	12,258	-55.9		29	16.7
175	30	13,097	-61.2		29	17.7
150	30	14,044	-65.2		29	15.7
125	30	15,150	-66.7		30	12.2
100	30	16,499	-66.4		30	5.5
80	30	17,857	-63.7		35	2.6
70	30	18,681	-61.6		06	3.0
60	29	19,641	-60.0		08	5.8
50	29	20,786	-57.7		08	8.4
40	29	22,204	-54.9		09	10.0
30	28	24,061	-50.8		09	9.6
25	26	25,251	-49.0		09	8.0
20	24	26,730	-46.7		08	7.9
15	23	28,649	-44.3		08	10.5
10	16	31,387	-39.7		08	13.3
7						
5						

CHATHAM, MASS.
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	16	14.2	12.7	21	1.7
1000	29	115	14.9	12.9	22	3.4
950	30	547	15.4	9.5	23	5.6
900	30	1,004	13.1	7.2	23	6.1
850	30	1,483	10.5	4.1	23	6.7
800	30	1,986	7.5	[illegible]	23	7.4
750	30	2,516	4.7	-3.1	23	8.2
700	30	3,075	1.5	-5.5	24	8.9
650	30	3,669	-1.7	-10.8	24	9.5
600	30	4,302	-4.9	-19.8	24	10.1
550	30	4,982	-8.8	-26.1	24	10.9
500	30	5,714	-13.1	-29.6	24	12.1
450	30	6,509	-18.5	-35.3	24	12.1
400	30	7,376	-24.7	-40.2	24	13.2
350	30	8,337	-31.7	-45.9	24	14.5
300	30	9,407	-39.4	-50.0	24	16.5
250	30	10,632	-48.3		25	15.7
200	30	12,077	-55.1		26	16.1
175	30	12,926	-57.3		26	13.3
150	30	13,898	-58.8		26	11.2
125	30	15,040	-59.5		26	7.5
100	30	16,435	-59.8		26	4.1
80	30	17,835	-58.3		25	1.3
70	29	18,681	-57.2		15	1.1
60	28	19,654	-56.5		11	2.5
50	28	20,814	-55.4		09	4.5
40	26	22,240	-53.3		08	5.9
30	24	24,099	-51.0		09	8.5
25	22	25,290	-48.9		09	9.7
20	20	26,766	-46.1		09	10.2
15	20	28,695	-42.4		09	12.6
10	15	31,463	-36.7		09	14.0
7	11	33,956	-32.1			
5	5	36,370	-28.1			

CHIHUAHUA, MEXICO
856 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	18.3	[illegible]	23	.3
1000						
950						
900						
850	30	1,489	19.4	11.7	24	.5
800	30	2,013	19.1	7.3	23	.8
750	30	2,565	15.7	4.5	[illegible]	.9
700	30	3,146	11.4	1.2	09	1.6
650	30	3,761	6.6	-1.7	09	.9
600	29	4,412	1.4	-4.7	03	.4
550	29	5,107	-3.6	-9.6	22	.9
500	29	5,855	-7.8	[illegible]	23	2.3
450	29	6,667	-12.9	-25.8	23	2.8
400	29	7,555	-19.2	[illegible]	24	4.1
350	29	8,538	-26.3	[illegible]	25	5.6
300	29	9,631	-34.7	[illegible]	25	6.9
250	29	10,879	-44.4		[illegible]	9.9
200	29	12,342	-54.7		[illegible]	12.5
175	28	13,183	-59.5		25	13.9
150	28	14,135	-64.8		25	12.9
125	29	15,234	-69.6		25	10.6
100	28	16,551	-73.2		25	6.6
80	28	17,862	-70.5		07	.8
70	28	18,662	-67.1		08	3.9
60	28	19,602	-63.1		09	6.7
50	28	20,733	-59.9		09	8.1
40	28	22,139	-56.4		09	9.4
30	28	23,981	-52.7		08	10.4
25	28	25,164	-50.7		08	10.7
20	27	26,626	-48.3		08	11.3
15	23	28,541	-44.7		09	11.2
10	12	31,278	-40.1			
7						
5						

• COLD BAY, ALASKA
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	30	[illegible]	[illegible]	[illegible]	2.1
1000	[illegible]	99	3.3	[illegible]	[illegible]	2.9
950	[illegible]	474	[illegible]	.6	[illegible]	2.5
900	28	910	[illegible]	[illegible]	[illegible]	2.1
850	[illegible]	1,369	-.8	[illegible]	27	2.2
800	[illegible]	1,852	[illegible]	-5.8	27	2.1
750	[illegible]	2,362	[illegible]	-8.3	27	2.5
700	28	2,902	[illegible]	-12.1	[illegible]	2.1
650	[illegible]	3,476	[illegible]	-17.2	25	3.0
600	28	4,090	[illegible]	-20.3	26	4.2
550	[illegible]	4,748	-16.8	[illegible]	28	4.3
500	28	5,458	-21.4	[illegible]	28	4.7
450	28	6,227	-26.3	-34.3	29	5.7
400	[illegible]	7,069	[illegible]	-39.7	29	6.1
350	[illegible]	8,002	-38.8	-40.9	29	7.5
300	28	9,042	-45.4		28	9.9
250	28	10,249	-48.3		28	10.3
200	[illegible]	11,720	-48.0		27	9.7
175	[illegible]	12,601	-48.0		27	7.8
150	28	13,616	-48.6		27	4.9
125	28	14,814	-49.5		25	3.4
100	27	16,271	-50.3		25	1.5
80	[illegible]	17,726	-50.4		15	.6
70	27	18,597	-50.7		12	2.2
60	26	19,609	-50.7		10	3.3
50	26	20,798	-50.4		10	3.7
40	26	22,257	-49.6		09	5.2
30	25	24,151	-47.9		09	7.3
25	24	25,358	-46.8		10	8.7
20	23	26,840	-45.0		09	9.3
15	19	28,777	-41.9		09	11.2
10	[illegible]	31,564	-36.6		09	12.7
7	14	34,056	-32.4			
5	6	36,436	-30.7			

DAYTON, OHIO
979 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	299	14.5	11.2	25	1.0
1000						
950	30	553	15.9	9.0	26	2.9
900	30	1,012	13.8	7.0	29	5.0
850	30	1,492	11.4	5.1	29	6.1
800	30	1,997	9.0	.2	29	6.6
750	30	2,529	6.3	-5.5	29	7.0
700	30	3,093	3.7	-9.9	29	7.7
650	30	3,692	.7	-14.0	30	8.7
600	30	4,330	-2.9	-20.7	30	9.2
550	30	5,014	-6.8	-24.4	30	9.7
500	30	5,752	-11.5	-28.5	30	10.5
450	30	6,551	-16.6	-33.9	30	11.3
400	30	7,426	-22.7	-38.9	30	11.8
350	29	8,397	-29.8	-43.2	30	12.7
300	29	9,475	-37.9	-50.3	30	14.3
250	29	10,708	-46.9		30	16.2
200	29	12,158	-55.4		30	18.7
175	29	13,003	-58.5		30	18.7
150	29	13,968	-59.9		30	14.9
125	29	15,103	-61.5		30	11.2
100	29	16,485	-61.6		31	7.5
80	29	17,872	-60.2		33	3.0
70	29	18,708	-59.1		36	2.3
60	29	19,679	-57.1		06	3.2
50	27	20,842	-55.3		08	4.7
40	25	22,276	-53.5		08	6.3
30	24	24,136	-50.7		08	9.0
25	24	25,328	-49.1		08	9.3
20	24	25,801	-46.7		08	10.9
15	21	28,738	-42.6		08	13.3
10	18	31,514	-37.2		09	15.8
7	5	33,977	-33.4			

DEL RIO, TEXAS
976 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	23.1	20.5	12	4.3
1000						
950	30	546	22.3	20.0	15	6.9
900	30	1,016	20.7	16.6	16	8.6
850	30	1,510	19.0	10.2	16	7.8
800	30	2,030	17.0	5.3	16	5.1
750	30	2,578	14.1	.5	15	2.2
700	30	3,155	10.2	-3.8	05	1.0
650	30	3,769	6.1	-7.9	01	2.1
600	30	4,419	1.4	-12.6	01	2.5
550	30	5,114	-3.0	-18.3	35	2.6
500	30	5,862	-7.6	-25.0	30	2.3
450	30	6,674	-12.6	-30.5	28	3.5
400	30	7,563	-18.6	-37.1	28	5.1
350	30	8,548	-25.7	-41.7	28	6.6
300	30	9,643	-34.2	-49.1	28	7.7
250	30	10,893	-43.9		28	9.9
200	30	12,357	-54.2		27	13.0
175	30	13,203	-59.4		27	14.6
150	30	14,155	-64.9		27	15.1
125	30	15,254	-70.0		27	11.2
100	30	16,567	-73.7		28	6.0
80	30	17,878	-70.8		05	2.3
70	30	18,678	-66.7		08	5.2
60	30	19,621	-62.4		09	7.9
50	29	20,757	-59.1		09	8.8
40	29	22,166	-56.1		09	10.2
30	29	24,011	-52.6		09	10.3
25	29	25,195	-50.2		08	11.0
20	29	26,663	-47.1		09	12.0
15	27	28,575	-44.4		09	10.8
10	21	31,324	-40.2		08	14.4
7						

DENVER, COLO.
838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	13.4	10.2	22	2.3
1000						
950						
900						
850						
800	30	1,999	15.7	3.7	27	2.5
750	30	2,545	13.7	-.6	29	2.7
700	30	3,122	9.9	-4.2	28	3.8
650	30	3,733	5.0	-6.1	28	5.3
600	30	4,380	-.4	-9.0	28	6.9
550	30	5,070	-5.6	-14.7	28	7.6
500	30	5,810	-10.8	-20.8	26	7.9
450	30	6,612	-16.2	-27.5	26	8.6
400	30	7,489	-22.1	-34.8	26	9.5
350	30	8,459	-29.6	-42.6	26	10.9
300	30	9,537	-38.2	-51.5	25	12.7
250	30	10,766	-47.8		26	15.5
200	30	12,209	-56.3		26	18.0
175	30	13,051	-59.6		26	18.2
150	30	14,010	-61.5		26	17.3
125	30	15,137	-63.0		26	12.5
100	30	16,508	-64.0		26	7.5
80	30	17,877	-62.3		25	1.3
70	30	18,706	-60.6		07	.9
60	30	19,671	-58.1		08	3.0
50	30	20,825	-56.5		09	4.6
40	30	22,249	-54.3		09	6.6
30	28	24,100	-51.8		09	8.9
25	28	25,288	-49.8		09	9.5
20	28	26,755	-47.4		08	10.8
15	27	28,677	-43.8		09	12.6
10	13	31,448	-38.9			
7						

DODGE CITY, KANS.
922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	17.4	12.3	18	2.8
1000						
950						
900	30	1,003	20.0	11.3	19	6.3
850	30	1,497	19.3	8.5	20	7.1
800	30	2,017	16.9	5.3	22	5.0
750	30	2,564	13.5	.7	24	3.8
700	30	3,140	8.9	-2.3	26	2.7
650	30	3,750	4.5	-7.2	26	3.3
600	30	4,396	-.2	-12.3	28	3.5
550	30	5,087	-4.8	-17.0	27	4.2
500	30	5,830	-9.7	-23.4	27	5.0
450	30	6,636	-14.6	-30.2	26	6.5
400	30	7,518	-20.8	-37.5	27	8.3
350	30	8,494	-27.8	-43.0	27	9.1
300	30	9,580	-36.1	-50.1	26	11.3
250	30	10,819	-46.0		26	13.5
200	30	12,268	-56.7		26	14.6
175	30	13,106	-61.0		27	14.2
150	30	14,058	-63.4		27	15.4
125	29	15,174	-65.4		28	11.7
100	29	16,528	-65.9		28	6.7
80	28	17,888	-64.0		32	1.4
70	28	18,710	-61.8		08	2.1
60	28	19,671	-59.3		08	4.3
50	28	20,821	-56.7		08	6.1
40	27	22,241	-54.7		09	7.4
30	27	24,094	-51.8		09	9.5
25	26	25,281	-50.1		09	9.8
20	22	26,751	-48.0		08	9.4
15	20	28,654	-44.6		08	12.1
10	13	31,431	-38.1			
7						

EL PASO, TEXAS
880 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	20.7	8.3	36	.4
1000						
950						
900						
850	30	1,498	21.7	7.4	33	1.1
800	30	2,021	18.7	4.7	29	1.8
750	30	2,572	15.3	1.9	27	2.9
700	30	3,152	10.7	-.6	27	3.3
650	30	3,765	6.0	-3.4	25	3.6
600	30	4,415	.9	-6.9	25	3.6
550	30	5,108	-4.0	-12.9	25	2.8
500	30	5,854	-8.8	-20.2	24	3.6
450	30	6,662	-14.1	-30.3	26	5.9
400	30	7,545	-20.2	-35.5	26	6.9
350	30	8,524	-27.5	-41.0	25	8.2
300	30	9,611	-36.0	-49.0	25	10.6
250	30	10,851	-46.0		25	12.7
200	30	12,302	-55.9		25	16.6
175	30	13,143	-60.3		25	18.2
150	30	14,095	-64.3		26	16.4
125	30	15,197	-69.0		26	12.7
100	30	16,521	-71.4		24	7.9
80	29	17,847	-68.6		25	.8
70	29	18,654	-65.6		08	3.0
60	29	19,598	-62.6		09	6.2
50	29	20,733	-59.2		09	7.7
40	29	22,141	-56.4		09	9.3
30	29	23,982	-53.3		09	9.6
25	28	25,158	-51.1		08	10.3
20	28	26,619	-48.3		09	11.2
15	25	28,526	-44.9		09	10.5
10	22	31,261	-40.3		09	14.0
7						

ELY, NEV.
809 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	9.0	1.7	20	3.1
1000						
950						
900						
850						
800	30	1,999	12.7	2.9	19	2.7
750	30	2,543	12.3	-.3	18	2.6
700	30	3,117	8.5	-3.7	23	3.5
650	30	3,725	3.6	-5.7	24	5.1
600	30	4,369	-1.4	-8.8	23	7.5
550	30	5,056	-6.5	-13.7	23	8.3
500	30	5,794	-11.3	-22.6	24	8.3
450	30	6,595	-16.6	-29.4	24	9.0
400	30	7,468	-23.3	-35.2	24	9.9
350	30	8,433	-31.0	-42.3	24	10.6
300	30	9,505	-39.5	-49.0	23	13.2
250	30	10,727	-49.3		23	15.2
200	30	12,159	-58.2		23	17.1
175	30	12,995	-60.3		24	18.3
150	30	13,956	-60.3		24	15.0
125	30	15,090	-61.6		24	12.0
100	29	16,470	-62.3		24	7.2
80	29	17,846	-61.9		21	1.7
70	29	18,676	-60.3		13	1.7
60	29	19,640	-58.8		10	3.4
50	28	20,791	-57.2		09	4.8
40	28	22,211	-54.7		09	5.9
30	29	24,064	-51.9		09	8.6
25	28	25,251	-50.2		09	10.6
20	27	26,714	-47.4		09	10.8
15	25	28,623	-44.0		09	12.1
10	24	31,371	-38.2		09	15.0
7	17	33,811	-34.3			

EMPALME, MEXICO
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	23.9	20.2	08	1.2
1000	30	82	25.5	20.2	10	1.1
950	30	534	24.5	15.7	15	2.7
900	30	1,007	23.0	11.4	14	3.0
850	30	1,504	20.6	9.8	14	3.9
800	30	2,025	17.7	5.8	14	5.5
750	30	2,575	14.3	.4	15	5.9
700	30	3,153	10.6	-5.8	16	5.8
650	30	3,766	6.6	-10.4	17	6.0
600	30	4,418	2.3	-14.7	18	6.9
550	30	5,115	-2.3	-19.5	19	6.0
500	30	5,865	-7.1	-25.0	22	5.6
450	30	6,678	-12.4	-32.3	24	5.2
400	30	7,567	-18.7	-38.1	26	6.0
350	30	8,552	-25.8	-44.3	26	6.9
300	30	9,646	-34.5	-51.4	26	9.6
250	30	10,895	-44.2		25	14.0
200	30	12,357	-54.6		25	17.0
175	30	13,202	-59.7		25	17.6
150	30	14,153	-64.9		25	16.5
125	29	15,255	-69.3		25	13.4
100	29	16,575	-72.1		23	6.5
80	28	17,887	-71.1		11	1.5
70	28	18,685	-67.0		09	5.8
60	27	19,628	-63.1		09	8.6
50	27	20,759	-60.1		10	10.0
40	27	22,165	-56.4		09	11.6
30	27	24,007	-52.6		08	12.2
25	26	25,196	-50.3		08	12.5
20	25	26,660	-48.1		09	12.7
15	23	28,572	-45.1		09	13.7
10	13	31,291	-40.5		09	15.7
7						

• FAIRBANKS, ALASKA
992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	11.6	4.6	33	1.5
1000						
950	30	494	12.0	2.7	28	1.7
900	30	946	9.3	.1	25	2.3
850	30	1,416	5.8	-2.0	25	1.9
800	30	1,910	2.0	-4.0	21	1.3
750	30	2,427	-1.7	-6.9	19	1.7
700	30	2,973	-5.3	-9.8	17	2.5
650	30	3,551	-9.0	-13.6	17	3.3
600	30	4,167	-12.5	-18.5	16	4.0
550	30	4,826	-16.8	-23.5	16	4.3
500	30	5,536	-21.4	-29.0	16	5.1
450	29	6,309	-26.9	-35.6	15	6.4
400	29	7,148	-33.0	-41.2	14	7.1
350	29	8,076	-40.2	-45.9	14	8.2
300	29	9,107	-47.9		15	8.3
250	29	10,296	-52.4		16	6.8
200	29	11,745	-50.2		16	6.3
175	29	12,622	-48.2		17	5.1
150	29	13,638	-47.7		18	4.1
125	29	14,842	-48.1		16	3.2
100	29	16,313	-48.2		15	3.1
80	28	17,788	-47.9		14	2.7
70	27	18,669	-47.9		13	3.1
60	26	19,683	-47.8		11	3.5
50	26	20,888	-47.4		11	4.6
40	26	22,367	-46.4		10	5.9
30	26	24,282	-45.6		09	7.5
25	26	25,501	-44.3		09	8.4
20	26	27,003	-42.5		09	8.6
15	23	28,951	-39.4		09	10.7
10	7	31,761	-34.5			
7						

FLINT, MICH.
985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	236	13.1	10.1	29	.9
1000						
950	30	541	13.5	7.4	31	3.0
900	30	995	11.5	5.3	32	4.4
850	30	1,472	9.6	1.7	32	5.5
800	30	1,974	7.7	-1.6	31	5.8
750	30	2,504	4.9	-5.0	31	5.8
700	30	3,064	1.9	-8.9	31	6.2
650	30	3,659	-1.1	-13.1	31	7.4
600	30	4,294	-4.5	-17.1	31	8.4
550	30	4,973	-8.6	-21.8	31	9.8
500	30	5,706	-13.0	-27.9	31	11.0
450	30	6,501	-18.4	-33.8	31	11.7
400	30	7,370	-24.5	-38.1	31	13.2
350	30	8,331	-31.6	-46.1	31	14.7
300	30	9,401	-39.5	-52.4	31	15.2
250	30	10,627	-48.1		30	16.0
200	30	12,072	-55.1		30	17.7
175	30	12,921	-56.7		30	18.5
150	30	13,896	-57.7		30	14.9
125	30	15,045	-58.5		30	10.4
100	30	16,445	-59.5		31	6.5
80	30	17,846	-58.3		33	3.0
70	29	18,690	-57.2		34	2.5
60	29	19,668	-55.9		04	1.7
50	26	20,837	-54.3		07	4.0
40	28	22,274	-52.6		09	6.3
30	28	24,142	-50.4		09	7.3
25	28	25,335	-48.8		08	8.6
20	[illegible]	26,805	-46.3		08	11.2
15	24	28,745	-42.5		09	13.8
10	16	31,507	-37.5		09	14.9
7						

FORT WORTH, TEXAS
991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	22.9	18.9	19	1.8
1000						
950	30	551	23.2	16.3	21	6.1
900	30	1,023	21.3	13.4	22	6.4
850	30	1,517	19.0	9.6	22	4.7
800	30	2,035	16.0	4.4	[illegible]	3.1
750	30	2,581	12.8	-.3	27	2.8
700	30	3,157	9.2	-4.4	23	2.2
650	30	3,767	5.1	-7.7	24	2.2
600	30	4,415	.4	-10.1	25	2.0
550	30	5,108	-4.0	-17.7	25	1.5
500	30	5,853	-8.7	-26.5	27	2.3
450	30	6,662	-13.6	-31.5	28	3.3
400	30	7,548	-19.3	-36.6	29	5.4
350	30	8,530	-26.3	-42.8	30	7.1
300	30	9,623	-34.6	-50.2	29	8.3
250	30	10,871	-44.5		29	10.7
200	30	12,331	-54.7		29	13.1
175	30	13,176	-59.5		29	14.2
150	30	14,130	-64.0		28	15.1
125	30	15,237	-67.3		29	13.1
100	29	16,571	-69.6		29	6.9
80	29	17,907	-67.2		36	2.3
70	28	18,719	-63.9		07	3.2
60	28	19,671	-60.9		08	6.3
50	28	20,814	-57.6		09	7.1
40	28	22,230	-55.3		09	8.0
30	[illegible]	24,079	-52.1		09	9.8
25	28	25,264	-50.4		09	9.7
20	[illegible]	26,731	-47.2		08	10.9
15	[illegible]	28,648	-44.1		09	10.9
10	[illegible]	31,401	-39.1		08	15.3
7	[illegible]	33,901	-35.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 931 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	12.9	9.1	10	1.8
1000						
950						
900	30	986	15.6	6.6	20	1.2
850	30	1,470	14.0	2.9	26	3.2
800	30	1,979	10.8	-.2	26	4.1
750	30	2,514	7.2	-3.0	26	5.3
700	30	3,077	3.0	-4.7	26	6.7
650	30	3,674	-.8	-9.4	26	7.3
600	30	4,309	-4.7	-15.2	26	8.7
550	30	4,988	-9.0	-20.3	26	10.0
500	30	5,719	-13.9	-26.1	26	11.5
450	30	6,512	-19.1	-30.8	26	12.0
400	30	7,378	-25.2	-37.0	26	14.1
350	30	8,337	-32.5	-44.0	26	14.6
300	30	9,401	-41.1	-47.6	26	15.5
250	30	10,617	-49.5		26	16.7
200	30	12,056	-55.7		26	17.9
175	30	12,904	-56.9		26	17.1
150	30	13,882	-56.4		26	13.1
125	30	15,040	-56.7		26	9.2
100	30	16,453	-57.3		27	5.5
80	30	17,864	-57.1		28	1.7
70	30	18,711	-56.1		01	.4
60	30	19,693	-55.0		08	2.0
50	30	20,863	-53.4		08	3.1
40	30	22,307	-51.6		08	5.8
30	30	24,181	-49.6		09	8.3
25	30	25,379	-48.2		09	9.7
20	28	26,863	-45.5		09	10.7
15	28	28,796	-42.1		09	12.4
10	23	31,574	-37.5		09	14.0
7						
5						
4						

GRAND JUNCTION, COLO. 851 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,472	16.4	3.2	11	3.4
1000						
950						
900						
850	23	1,492	17.3	4.0	11	3.5
800	30	2,002	17.2	1.9	15	4.9
750	30	2,549	13.8	-1.0	20	3.4
700	30	3,126	9.6	-3.8	24	5.1
650	30	3,737	4.7	-5.8	25	6.4
600	30	4,383	-.6	-8.3	25	7.1
550	30	5,072	-5.8	-13.5	25	8.1
500	30	5,811	-10.8	-21.3	25	8.5
450	30	6,614	-15.9	-28.8	26	9.6
400	30	7,490	-22.3	-36.3	25	10.7
350	30	8,460	-29.7	-42.9	25	11.7
300	30	9,537	-38.4	-50.3	25	13.6
250	30	10,765	-48.0		25	15.3
200	30	12,206	-57.0		25	19.4
175	30	13,044	-60.3		25	18.6
150	30	14,003	-61.4		25	17.3
125	30	15,130	-62.7		25	13.0
100	30	16,501	-64.1		25	7.7
80	30	17,868	-62.8		24	1.2
70	30	18,695	-60.9		11	1.8
60	30	19,657	-59.1		09	3.5
50	30	20,807	-56.8		09	5.0
40	29	22,233	-54.3		09	7.4
30	29	24,090	-51.5		09	9.2
25	29	25,278	-49.9		09	9.8
20	27	26,748	-48.0		08	11.9
15	26	28,665	-44.1		09	12.6
10	19	31,409	-38.9		09	15.4
7						
5						
4						

*** GREAT FALLS, MONT.** 886 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,118	11.9	4.6	23	3.9
1000						
950						
900						
850	30	1,465	13.7	2.3	24	7.5
800	30	1,974	10.3	-.1	25	7.2
750	30	2,507	6.4	-2.6	26	7.3
700	30	3,069	2.4	-6.7	25	8.1
650	30	3,664	-1.2	-10.0	25	8.6
600	30	4,298	-5.0	-16.2	26	8.3
550	30	4,977	-9.1	-21.6	25	9.6
500	30	5,708	-13.8	-27.2	25	10.1
450	30	6,500	-19.6	-31.9	25	11.2
400	30	7,364	-25.8	-38.6	25	13.7
350	30	8,320	-33.0	-45.2	25	15.0
300	30	9,382	-41.6	-50.6	25	17.3
250	30	10,595	-50.3		25	17.5
200	30	12,031	-55.8		24	18.2
175	30	12,880	-56.3		25	16.2
150	30	13,860	-55.7		24	11.7
125	30	15,020	-56.4		25	9.3
100	30	16,434	-57.1		25	5.0
80	30	17,844	-56.9		24	1.8
70	30	18,692	-56.2		11	.9
60	30	19,674	-55.3		09	2.7
50	30	20,842	-53.6		09	4.3
40	30	22,283	-52.0		08	6.1
30	30	24,155	-50.0		08	8.3
25	30	25,352	-48.0		09	10.0
20	28	26,834	-45.6		09	11.4
15	25	28,770	-42.4		09	12.4
10	23	31,540	-36.8		08	14.8
7	23	34,033	-31.9		09	15.4
5	13	36,404	-29.0		09	18.4
4	7	38,037	-26.2			

GREEN BAY, WIS. 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	12.8	9.0	31	1.7
1000						
950	30	545	13.9	6.1	32	1.7
900	30	1,001	12.3	3.3	32	2.8
850	30	1,478	10.3	.4	32	3.6
800	30	1,981	7.9	-2.4	32	4.6
750	30	2,511	5.5	-6.5	32	5.8
700	30	3,073	2.7	-11.0	31	7.2
650	30	3,669	-.4	-15.8	32	8.4
600	30	4,305	-4.2	-21.5	31	9.4
550	30	4,986	-8.2	-25.3	31	10.6
500	30	5,719	-13.0	-30.3	31	10.9
450	30	6,514	-18.4	-34.5	31	11.2
400	30	7,382	-24.7	-39.1	30	12.4
350	30	8,343	-32.1	-45.1	31	13.8
300	30	9,410	-40.2	-50.2	30	14.8
250	30	10,631	-49.1		30	17.9
200	30	12,070	-55.8		30	19.5
175	30	12,917	-57.4		30	19.4
150	30	13,889	-58.1		30	15.3
125	30	15,039	-58.3		30	11.4
100	30	16,440	-59.0		31	7.5
80	30	17,841	-58.4		33	3.5
70	30	18,683	-57.3		35	2.0
60	30	19,661	-55.7		03	2.7
50	30	20,828	-53.7		07	4.3
40	28	22,270	-52.2		08	6.1
30	27	24,141	-49.9		08	8.3
25	25	25,334	-48.4		08	9.3
20	25	26,813	-45.5		08	11.7
15	25	28,746	-42.0		09	12.8
10	19	31,532	-36.7		09	15.7
7	11	34,024	-32.8			
5						
4						

GREENSBORO, N. C. 982 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	275	16.0	13.5	23	.9
1000						
950	30	558	17.9	11.1	26	3.8
900	30	1,020	15.7	8.0	28	4.9
850	30	1,503	12.5	4.6	28	5.2
800	29	2,011	10.0	-.4	29	5.7
750	29	2,546	7.8	-6.6	29	6.2
700	29	3,111	4.5	-9.6	28	7.2
650	29	3,712	1.5	-13.8	28	7.8
600	29	4,352	-2.1	-17.8	28	9.1
550	29	5,039	-5.9	-24.3	28	9.9
500	29	5,778	-10.5	-29.1	29	10.4
450	29	6,581	-15.7	-33.5	29	11.1
400	29	7,459	-21.8	-36.4	29	11.5
350	29	8,430	-29.2	-44.0	29	12.3
300	29	9,511	-37.3	-48.5	29	13.5
250	29	10,744	-46.8		29	15.0
200	29	12,194	-55.6		30	17.0
175	29	13,038	-59.3		30	16.5
150	29	13,996	-62.6		30	13.4
125	29	15,114	-64.4		30	10.3
100	29	16,480	-63.6		31	6.1
80	28	17,855	-61.9		35	2.3
70	28	18,685	-60.0		06	2.0
60	28	19,651	-58.5		09	4.5
50	28	20,802	-56.9		08	6.2
40	28	22,224	-54.6		09	8.3
30	27	24,079	-51.2		10	8.6
25	26	25,270	-49.3		09	8.2
20	25	26,742	-47.0		08	9.6
15	24	28,662	-44.0		09	12.2
10	17	31,428	-39.8			
7						
5						
4						

GUADALUPE IS., MEXICO 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	23	16.0	13.9	34	6.9
1000	27	112	14.8	12.4	33	7.0
950	27	544	12.3	8.0	31	4.8
900	27	1,001	16.4	-1.3	32	2.4
850	27	1,487	16.3	-5.0	31	1.5
800	27	2,001	15.0	-9.2	28	1.5
750	27	2,544	12.6	-11.4	24	2.2
700	27	3,119	9.7	-15.1	23	2.9
650	26	3,732	6.1	-18.3	22	3.8
600	26	4,382	2.2	-21.5	22	4.9
550	26	5,078	-2.4	-25.1	22	6.3
500	26	5,828	-7.3	-28.4	23	7.5
450	26	6,639	-13.2	-33.2	24	9.8
400	26	7,526	-19.4	-39.0	25	9.6
350	26	8,506	-27.0	-45.3	26	10.3
300	26	9,597	-35.5	-52.0	25	12.2
250	24	10,840	-44.9		26	12.6
200	23	12,296	-54.8		25	15.1
175	21	13,134	-59.3			
150	21	14,089	-63.8			
125	20	15,194	-68.1			
100	20	16,527	-70.3			
80	19	17,852	-69.0			
70	19	18,656	-65.9			
60	19	19,598	-63.3			
50	19	20,728	-60.2			
40	19	22,133	-56.4			
30	19	23,974	-53.1			
25	19	25,155	-50.8			
20	18	26,615	-48.7			
15	17	28,514	-45.4			
10	14	31,258	-39.9			
7						
5						
4						

*** GUAM, MARIANA IS.** 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	24.8	22.6	08	3.2
1000						
950	30	541	23.2	20.3	09	8.6
900	30	1,013	20.6	17.1	09	7.8
850	30	1,506	18.0	13.8	09	6.9
800	30	2,024	15.6	9.9	08	6.5
750	30	2,570	12.9	4.0	08	6.3
700	30	3,147	10.2	-2.0	09	6.3
650	30	3,761	7.2	-7.1	08	5.4
600	30	4,415	3.5	-11.7	08	4.3
550	30	5,116	-.5	-16.5	07	4.2
500	30	5,871	-5.0	-23.5	07	4.2
450	30	6,692	-9.9	-28.6	08	5.3
400	30	7,591	-15.7	-33.3	07	5.9
350	30	8,586	-22.9	-39.9	07	5.0
300	30	9,695	-31.2	-48.3	07	3.2
250	30	10,960	-41.4		13	1.5
200	30	12,435	-53.4		15	2.8
175	27	13,283	-60.1		13	3.6
150	27	14,228	-67.4		12	4.3
125	25	15,306	-74.4		09	4.8
100	24	16,587	-79.1		07	7.6
80	21	17,864	-75.7		08	9.1
70	20	18,646	-71.0		09	9.0
60	19	19,573	-66.3		08	9.9
50	19	20,688	-62.6		08	12.7
40	19	22,074	-59.8		09	16.8
30	16	23,889	-54.0		09	22.5
25	16	25,065	-51.6		09	24.5
20	15	26,526	-48.1		09	26.7
15	13	28,444	-44.8		09	30.3
10						
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5						
4						

HILO, HAWAII 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	21.3	18.4	25	1.8
1000	30	140	21.5	17.7	25	.9
950	30	584	18.8	16.0	09	2.2
900	30	1,047	15.7	13.3	09	3.3
850	30	1,531	12.9	10.5	08	2.9
800	30	2,040	11.4	2.9	08	2.1
750	30	2,579	9.7	-8.6	11	2.3
700	30	3,150	8.5	-14.6	16	1.5
650	30	3,760	5.8	-18.2	22	2.0
600	30	4,410	2.0	-21.1	24	3.8
550	30	5,105	-2.6	-24.0	25	5.3
500	30	5,854	-7.2	-29.0	25	7.5
450	30	6,667	-12.7	-33.8	25	9.1
400	30	7,555	-18.9	-36.7	25	11.9
350	30	8,538	-25.9	-40.9	25	15.3
300	30	9,633	-34.1	-46.0	25	19.4
250	30	10,883	-44.0		25	24.0
200	30	12,344	-55.6		25	28.1
175	30	13,183	-61.8		26	29.3
150	30	14,122	-68.4		26	28.8
125	29	15,198	-73.4		25	25.4
100	29	16,500	-73.6		25	14.8
80	29	17,815	-69.7		22	1.4
70	29	18,616	-67.3		10	5.0
60	29	19,553	-64.3		09	8.3
50	29	20,676	-61.4		09	10.5
40	29	22,073	-57.9		09	12.9
30	29	23,906	-53.9		09	16.0
25	29	25,084	-51.5		09	18.1
20	29	26,542	-48.8		09	20.6
15	26	28,445	-45.9		09	22.1
10	24	31,167	-41.8		09	23.5
7	9	33,591	-39.5			
5						
4						

HUNTINGTON W. VA. 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	14.5	12.0	20	.8
1000						
950	30	556	16.5	9.6	25	3.3
900	30	1,015	14.3	7.5	28	5.0
850	30	1,496	11.8	4.5	29	6.0
800	30	2,002	9.4	1.5	30	7.1
750	30	2,535	6.6	-2.4	30	7.2
700	30	3,099	3.8	-9.6	30	8.0
650	30	3,698	.5	-12.4	30	8.6
600	30	4,337	-2.7	-18.5	30	9.4
550	30	5,022	-6.5	-24.1	30	10.2
500	30	5,761	-10.9	-29.6	30	10.5
450	30	6,562	-16.1	-35.3	29	11.4
400	30	7,438	-22.3	-39.5	29	12.4
350	30	8,409	-29.4	-44.8	29	13.3
300	30	9,488	-37.6	-48.6	30	13.4
250	30	10,722	-46.7		30	15.7
200	30	12,171	-55.5		30	18.2
175	30	13,016	-58.5		30	17.2
150	30	13,980	-60.8		30	14.3
125	30	15,110	-62.1		30	10.4
100	30	16,489	-62.0		31	7.2
80	30	17,873	-60.6		33	2.8
70	30	18,708	-58.9		03	2.3
60	30	19,680	-57.1		06	3.3
50	29	20,837	-55.8		08	5.1
40	28	22,266	-53.8		09	7.4
30	28	24,128	-50.6		09	8.9
25	27	25,321	-48.9		09	8.9
20	25	26,789	-46.7		08	10.1
15	24	28,715	-42.9		08	12.0
10	7	31,512	-37.5			
7						
5						
4						

*** INTERNATIONAL FALLS, MINN.** 971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	11.3	7.3	21	.7
1000						
950	30	541	14.0	7.0	25	2.1
900	30	997	12.7	4.1	29	3.9
850	30	1,475	10.4	.7	30	4.2
800	30	1,978	7.9	-3.4	30	4.3
750	30	2,508	5.1	-7.9	30	4.5
700	30	3,068	2.2	-13.4	31	4.9
650	30	3,663	-1.0	-16.7	30	6.3
600	30	4,297	-4.7	-20.7	30	7.5
550	30	4,976	-9.0	-25.3	30	9.4
500	30	5,708	-13.6	-31.3	29	9.6
450	30	6,501	-19.2	-35.5	30	10.6
400	30	7,366	-25.5	-41.2	29	11.8
350	30	8,324	-32.7	-47.0	30	12.3
300	30	9,388	-41.1	-52.2	30	14.3
250	30	10,602	-50.2		30	18.4
200	30	12,034	-57.2		29	20.2
175	30	12,878	-56.9		29	17.5
150	30	13,856	-56.5		29	14.1
125	30	15,012	-57.0		30	10.2
100	30	16,425	-57.0		30	7.0
80	30	17,838	-56.6		32	4.3
70	30	18,687	-55.8		34	2.6
60	29	19,670	-54.4		03	2.0
50	29	20,842	-52.9		06	3.5
40	29	22,287	-51.3		07	5.0
30	29	24,166	-49.1		08	7.7
25	28	25,370	-47.3		09	9.7
20	28	26,854	-45.0		09	10.4
15	28	28,793	-41.2		09	11.7
10	24	31,568	-36.7		09	13.6
7	21	34,070	-31.5		09	15.1
5	16	36,468	-27.5		09	15.2
4	10	38,021	-26.0			

JACKSON, MISS. 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	20.6	18.9	15	.8
1000	26	130	21.4	17.0	15	1.0
950	30	571	22.2	15.7	23	1.3
900	30	1,041	19.8	12.8	28	2.2
850	30	1,531	16.7	9.0	29	2.9
800	30	2,046	13.8	3.7	30	3.2
750	30	2,587	11.2	-2.4	30	3.8
700	30	3,160	7.7	-8.1	30	5.1
650	30	3,767	3.8	-9.3	30	5.5
600	30	4,412	-.4	-12.5	30	5.6
550	30	5,103	-4.6	-18.0	30	6.0
500	30	5,846	-9.2	-25.6	30	6.6
450	30	6,654	-14.0	-32.8	30	7.0
400	30	7,538	-20.0	-38.5	30	8.4
350	30	8,517	-27.1	-44.2	31	9.0
300	30	9,606	-35.5	-51.2	30	11.4
250	30	10,850	-45.1		31	11.4
200	30	12,307	-55.4		31	14.9
175	30	13,149	-60.4		30	16.3
150	30	14,098	-64.8		30	16.0
125	30	15,201	-68.2		30	14.7
100	30	16,535	-69.2		31	8.5
80	30	17,877	-66.5		01	4.2
70	30	18,692	-63.7		06	4.7
60	30	19,644	-61.2		08	6.5
50	30	20,784	-58.2		08	8.2
40	29	22,203	-55.3		09	9.3
30	27	24,060	-51.6		09	9.7
25	26	25,251	-50.1		08	9.4
20	25	26,716	-48.4		08	10.5
15	24	28,629	-44.5		09	11.9
10	16	31,386	-39.8		08	14.3
7						

JOHN F. KENNEDY INT. AP NY 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	17.5	13.5	20	.6
1000	28	116	16.7	12.5	25	1.7
950	30	542	15.9	10.3	24	2.6
900	30	1,000	13.5	7.9	23	3.5
850	30	1,479	10.4	5.7	23	4.8
800	30	1,983	7.8	3.1	25	6.5
750	30	2,513	4.8	-.2	25	7.8
700	30	3,072	1.3	-5.6	26	8.2
650	30	3,666	-1.5	-11.2	26	8.9
600	30	4,300	-4.6	-17.2	25	10.3
550	30	4,980	-8.7	-22.9	26	10.7
500	30	5,713	-13.1	-28.1	25	11.2
450	30	6,507	-18.4	-31.7	25	11.1
400	30	7,376	-24.5	-38.4	26	13.4
350	30	8,338	-31.3	-44.9	26	15.1
300	30	9,410	-38.8	-49.5	26	16.2
250	30	10,639	-47.5		26	16.3
200	29	12,092	-54.9		27	17.0
175	27	12,935	-57.5		27	16.0
150	27	13,906	-58.7		28	12.3
125	27	15,048	-59.6		28	9.5
100	27	16,444	-59.7		28	5.2
80	27	17,842	-58.6		30	.9
70	27	18,685	-56.9		16	.6
60	26	19,660	-56.0		11	2.2
50	26	20,823	-54.9		10	5.1
40	26	22,256	-53.1		09	7.4
30	25	24,120	-50.4		09	9.0
25	25	25,315	-48.7		09	9.3
20	24	26,787	-46.0		09	10.6
15	22	28,719	-42.3		09	12.6
10	10	31,540	-36.8			
7						

JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	26.0	22.2	09	7.6
1000	30	122	24.5	21.2	08	8.1
950	30	570	20.9	18.8	09	9.2
900	30	1,037	18.0	15.2	09	9.5
850	30	1,525	15.0	12.2	08	8.3
800	30	2,038	12.6	8.4	08	6.4
750	30	2,578	11.0	-.8	09	4.2
700	30	3,152	8.9	-7.2	08	1.8
650	30	3,762	5.6	-11.8	16	1.1
600	30	4,412	1.7	-14.7	22	1.3
550	30	5,107	-2.6	-17.0	24	1.9
500	30	5,857	-7.1	-22.8	27	3.0
450	30	6,671	-12.0	-28.6	27	4.4
400	30	7,562	-18.1	-32.7	27	6.4
350	30	8,550	-25.0	-40.7	28	8.6
300	30	9,648	-33.4	-47.2	27	12.1
250	30	10,903	-43.2		27	16.8
200	30	12,367	-55.1		27	19.3
175	30	13,207	-61.6		27	20.2
150	30	14,146	-68.6		27	21.6
125	27	15,225	-73.8		27	18.7
100	27	16,515	-76.2		27	10.7
80	25	17,818	-71.4		36	2.4
70	25	18,614	-68.2		08	5.8
60	23	19,548	-65.5		08	9.0
50	23	20,666	-62.0		09	11.1
40	23	22,055	-59.2		09	14.8
30	23	23,878	-54.6		09	18.7
25	23	25,052	-52.0		09	21.1
20	23	26,507	-49.3		09	24.0
15	22	28,409	-45.8		09	27.6
10	19	31,142	-41.4		09	31.0
7	6	33,577	-39.2			

KEY WEST, FLA. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	24	3	25.7	23.1	15	1.2
1000	24	113	25.4	23.5	14	1.8
950	24	564	22.4	20.4	16	3.8
900	24	1,034	19.9	14.9	16	4.8
850	24	1,525	17.1	11.0	16	4.8
800	24	2,041	14.3	7.5	17	4.7
750	24	2,584	11.2	4.3	18	4.5
700	24	3,158	8.1	2.3	18	4.0
650	24	3,767	4.9	-1.9	20	3.8
600	24	4,416	1.3	-6.0	21	3.0
550	24	5,112	-2.8	-11.4	22	2.1
500	24	5,862	-7.0	-19.2	25	2.3
450	24	6,676	-12.1	-24.9	26	4.1
400	24	7,568	-17.9	-29.2	26	5.8
350	24	8,555	-25.1	-36.3	27	7.2
300	24	9,653	-33.6	-45.2	27	10.1
250	24	10,906	-43.7		27	12.6
200	24	12,367	-55.3		28	15.6
175	24	13,207	-61.7		29	17.9
150	24	14,147	-67.9		29	17.6
125	24	15,229	-72.9		31	14.0
100	24	16,535	-73.0		35	5.9
80	24	17,855	-68.9		05	5.2
70	24	18,661	-65.6		07	7.2
60	23	19,605	-63.4		08	8.9
50	23	20,737	-59.0		09	11.2
40	23	22,148	-55.7		09	11.7
30	23	23,997	-52.0		09	11.6
25	20	25,182	-49.6		09	11.0
20	15	26,634	-47.5		08	10.0
15	14	28,539	-45.7			
10	7	31,258	-42.9			
7						

+ KOROR, CAROLINE IS. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	27.8	24.6	27	1.3
1000	30	83	27.0	24.3	26	1.7
950	30	536	23.7	21.7	26	2.6
900	30	1,009	20.8	18.4	27	2.2
850	30	1,502	17.9	15.2	28	2.1
800	30	2,021	15.4	12.2	28	1.1
750	30	2,567	12.8	8.9	08	1.0
700	30	3,145	9.7	5.1	08	2.1
650	30	3,758	6.5	.6	08	3.0
600	30	4,412	2.9	-3.0	09	3.8
550	30	5,112	-.9	-10.0	09	4.6
500	30	5,867	-5.2	-16.1	09	4.6
450	30	6,688	-9.9	-21.4	09	4.8
400	30	7,588	-15.3	-28.5	09	4.7
350	30	8,586	-22.3	-35.5	08	3.6
300	30	9,698	-30.4	-42.9	09	3.3
250	30	10,967	-40.6	-49.8	10	3.2
200	30	12,446	-53.0		08	3.2
175	30	13,294	-60.1		07	3.8
150	30	14,238	-67.8		06	5.5
125	30	15,317	-74.7		07	6.5
100	30	16,597	-78.8		07	6.4
80	30	17,878	-74.7		04	2.5
70	30	18,662	-71.3		05	1.7
60	30	19,584	-67.2		09	3.3
50	29	20,692	-64.1		09	9.5
40	26	22,066	-61.2		09	18.6
30	24	23,873	-56.3		09	26.8
25	23	25,040	-52.9		09	29.3
20	22	26,492	-49.8		09	31.1
15	22	28,387	-46.7		09	32.5
10	19	31,115	-41.7		09	37.6
7	8	33,573	-37.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	27.3	24.1	08	4.1
1000	30	89	26.7	23.7	08	4.8
950	30	542	23.7	21.2	09	5.7
900	30	1,014	20.7	17.9	09	5.4
850	30	1,508	18.1	14.5	09	4.7
800	30	2,027	15.7	11.2	09	4.7
750	30	2,573	12.9	7.6	09	4.3
700	30	3,151	9.7	3.4	10	4.1
650	30	3,764	6.5	-.4	10	3.7
600	30	4,417	2.7	-4.4	11	3.5
550	30	5,117	-1.2	-7.3	10	4.0
500	30	5,872	-5.3	-11.3	10	3.6
450	30	6,693	-10.0	-17.8	10	4.3
400	30	7,592	-15.9	-24.2	10	3.9
350	30	8,586	-22.4	-32.6	09	3.3
300	30	9,700	-30.8	-41.2	10	3.1
250	30	10,966	-41.3	-50.7	08	2.4
200	30	12,440	-54.1	-62.1	06	1.5
175	30	13,283	-61.3		07	.9
150	29	14,221	-68.8		09	1.5
125	27	15,293	-76.2		28	.7
100	21	16,563	-81.4		26	2.2
80	21	17,828	-75.7		26	2.9
70	19	18,609	-71.1		10	.3
60	18	19,529	-68.0		08	4.2
50	18	20,636	-63.7		08	9.7
40	17	22,017	-60.4		09	19.3
30	17	23,828	-56.3		09	26.5
25	17	24,992	-53.7		09	29.1
20	16	26,441	-50.5		09	31.5
15	16	28,331	-47.1		09	33.2
10	11	31,038	-42.0			
7						

LAKE CHARLES, LA.
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	22.6	21.5	36	.3
1000	30	113	24.3	20.5	20	.7
950	30	562	22.6	15.8	19	3.0
900	30	1,032	19.8	12.9	18	3.0
850	30	1,523	17.4	5.5	18	2.7
800	30	2,039	15.1	.6	19	2.3
750	30	2,583	12.2	-4.6	22	1.8
700	30	3,157	8.4	-6.5	25	1.4
650	30	3,765	4.4	-8.4	28	1.3
600	30	4,412	.2	-11.7	30	1.5
550	30	5,104	-4.2	-15.3	34	1.6
500	30	5,849	-8.9	-21.8	33	2.5
450	30	6,658	-13.5	-28.5	32	4.0
400	30	7,544	-19.2	-36.5	31	5.9
350	30	8,526	-26.3	-42.7	31	7.3
300	30	9,619	-34.8	-49.8	30	9.7
250	30	10,866	-44.3		30	12.2
200	30	12,329	-54.3		29	16.1
175	30	13,175	-59.4		29	16.4
150	30	14,129	-64.4		29	15.8
125	29	15,236	-69.3		30	14.0
100	29	16,556	-72.2		31	7.4
80	29	17,878	-69.3		02	4.9
70	29	18,683	-65.3		06	5.6
60	29	19,629	-62.4		08	7.7
50	29	20,765	-58.7		09	9.0
40	29	22,177	-55.8		09	9.7
30	29	24,024	-52.1		08	9.9
25	28	25,206	-50.4		08	10.5
20	27	26,672	-47.7		08	11.8
15	24	28,582	-44.4		09	10.8
10	17	31,322	-40.7		08	14.1
7						

LANDER, WYO.
829 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,697	11.7	3.6	23	2.0
1000						
950						
900						
850						
800	30	1,996	13.7	.6	24	.9
750	30	2,537	11.0	-2.7	28	2.7
700	30	3,109	7.2	-5.1	27	5.0
650	30	3,714	2.7	-7.1	27	7.7
600	30	4,357	-1.8	-10.5	26	10.0
550	30	5,043	-6.7	-15.1	26	11.0
500	30	5,780	-11.7	-22.2	26	10.9
450	30	6,583	-17.0	-28.6	26	11.4
400	30	7,452	-23.3	-34.8	25	12.9
350	30	8,418	-30.7	-42.9	26	15.4
300	30	9,490	-39.4	-48.8	25	18.7
250	30	10,714	-48.8		25	19.8
200	30	12,153	-56.6		25	21.1
175	30	12,995	-58.8		25	19.8
150	30	13,960	-60.1		25	15.4
125	30	15,096	-60.8		25	12.2
100	30	16,483	-61.5		25	6.0
80	30	17,869	-60.6		23	1.6
70	30	18,703	-59.3		11	1.1
60	30	19,672	-58.1		08	3.4
50	29	20,828	-56.3		09	4.9
40	29	22,254	-54.0		09	7.0
30	29	24,113	-51.1		08	9.6
25	29	25,302	-49.9		08	10.5
20	28	26,766	-47.4		09	11.9
15	24	28,673	-44.5		09	13.4
10	18	31,428	-39.4		09	16.7
7	6	33,864	-37.8			

* LIHUE KAUAI, HAWAII
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	23.2	19.8	05	3.1
1000	30	149	22.7	19.3	06	4.2
950	30	595	19.1	17.8	07	6.3
900	30	1,058	15.9	14.5	08	6.4
850	30	1,543	13.1	11.3	08	5.7
800	30	2,052	10.7	3.7	09	4.9
750	30	2,589	9.5	-6.7	10	2.7
700	30	3,159	7.4	-15.3	13	.8
650	30	3,765	4.3	-17.1	23	1.7
600	30	4,411	.4	-20.3	24	3.1
550	30	5,104	-3.5	-25.3	25	4.3
500	30	5,851	-8.3	-28.6	25	6.5
450	30	6,660	-13.9	-31.8	25	9.0
400	30	7,544	-20.2	-36.4	26	11.4
350	30	8,522	-27.3	-43.5	26	14.0
300	30	9,611	-35.4	-50.1	25	18.4
250	30	10,854	-45.2		25	24.7
200	30	12,308	-56.5		25	30.6
175	30	13,143	-62.4		25	32.5
150	30	14,082	-68.0		26	30.9
125	28	15,170	-70.7		25	21.9
100	28	16,495	-70.3		25	10.2
80	27	17,827	-67.7		17	1.0
70	27	18,634	-65.9		09	4.6
60	27	19,576	-63.5		09	7.0
50	27	20,703	-60.9		09	10.2
40	23	22,104	-57.8		09	12.1
30	23	23,939	-53.2		09	15.6
25	22	25,119	-51.0		09	15.9
20	22	26,581	-48.3		09	17.3
15	20	28,487	-45.8		09	19.4
10	20	31,212	-41.7		09	19.5
7	14	33,637	-38.2			

LITTLE ROCK, ARK.
1004 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	20.1	16.1	26	.3
1000	29	123	21.7	15.5	[illegible]	.4
950	30	564	22.7	13.3	21	1.0
900	30	1,033	19.7	11.6	27	2.1
850	30	1,523	16.4	8.9	28	3.2
800	30	2,037	13.4	4.5	29	3.7
750	30	2,578	10.2	-.1	29	4.1
700	30	3,149	6.8	-4.3	29	4.6
650	30	3,754	3.4	-9.6	30	4.8
600	30	4,399	-.8	-13.9	29	5.5
550	30	5,088	-5.0	-20.4	29	5.8
500	30	5,831	-9.1	-27.5	30	6.7
450	30	6,639	-14.3	-31.0	31	7.0
400	29	7,521	-20.6	-37.0	31	6.6
350	29	8,498	-27.7	-43.1	31	8.7
300	29	9,585	-36.1	-50.1	31	10.3
250	29	10,826	-45.8		31	12.8
200	29	12,277	-56.0		30	16.9
175	29	13,117	-60.8		30	17.3
150	29	14,066	-64.6		30	16.1
125	29	15,174	-66.7		30	13.5
100	29	16,518	-67.7		31	8.9
80	29	17,868	-64.9		35	3.6
70	29	18,688	-62.5		04	3.9
60	29	19,644	-60.2		07	6.1
50	28	20,791	-57.6		09	8.0
40	27	22,209	-54.8		09	8.6
30	26	24,066	-52.0		09	8.9
25	26	25,254	-49.6		08	10.0
20	26	26,726	-46.6		08	11.4
15	24	28,653	-43.0		09	11.9
10	14	31,402	-38.3			
7						

MCGRATH, ALASKA
995 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	103	9.5	5.6	22	.7
1000	6	136	8.7	2.0		
950	28	491	9.7	1.9	22	2.0
900	28	938	6.9	-.1	19	2.5
850	28	1,405	3.5	-2.3	18	2.5
800	28	1,894	.0	-4.1	16	3.5
750	28	2,408	-3.5	-7.1	16	4.1
700	28	2,951	-6.6	-11.8	17	4.4
650	28	3,526	-9.9	-17.5	15	5.5
600	28	4,139	-13.7	-21.1	15	5.5
550	28	4,796	-17.4	-27.5	16	5.3
500	28	5,504	-22.0	-33.6	15	5.5
450	28	6,271	-27.0	-37.6	16	5.6
400	28	7,110	-33.0	-44.0	16	5.9
350	28	8,039	-39.8	-45.8	16	5.0
300	28	9,073	-47.0		16	4.9
250	28	10,268	-51.1		17	4.8
200	28	11,726	-48.7		18	4.7
175	28	12,608	-46.9		18	4.1
150	28	13,631	-46.5		16	3.4
125	27	14,837	-47.1		15	2.9
100	27	16,313	-47.6		14	2.8
80	27	17,787	-47.6		14	3.2
70	27	18,670	-47.6		12	2.9
60	26	19,688	-47.3		12	3.7
50	25	20,891	-47.1		10	5.1
40	25	22,372	-46.4		10	5.7
30	24	24,283	-45.6		09	6.7
25	22	25,502	-44.6		09	8.5
20	22	27,002	-42.8		09	9.3
15	20	28,942	-39.8		09	10.7
10	11	31,706	-35.5			
7						
5						

+ MAJURO, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	29.0	24.5	08	3.1
1000	30	94	27.6	21.9	08	3.8
950	30	547	24.1	19.9	09	5.0
900	30	1,020	21.3	16.6	09	5.0
850	30	1,514	18.6	12.7	09	4.6
800	30	2,033	16.1	9.8	09	4.2
750	30	2,581	13.5	6.6	10	4.4
700	30	3,159	10.6	2.8	09	3.9
650	30	3,774	7.2	-1.2	09	3.7
600	30	4,429	3.4	-4.1	10	3.5
550	30	5,130	-.3	-9.3	10	3.6
500	30	5,888	-4.6	-13.2	10	3.9
450	30	6,711	-9.1	-19.9	10	5.2
400	30	7,613	-14.6	-26.6	09	4.9
350	30	8,615	-21.1	-33.4	08	4.2
300	30	9,732	-29.3	-41.6	08	4.7
250	30	11,007	-39.7	-51.4	08	4.3
200	30	12,491	-52.4		08	3.2
175	30	13,342	-59.3		09	2.7
150	30	14,291	-66.7		11	1.5
125	30	15,373	-74.1		10	.7
100	30	16,657	-78.8		27	2.4
80	30	17,937	-74.1		28	6.4
70	29	18,727	-68.9		28	2.9
60	29	19,657	-65.6		11	2.2
50	29	20,774	-62.9		09	9.3
40	29	22,160	-59.3		09	18.8
30	29	23,987	-53.5		09	25.8
25	29	25,167	-50.7		09	27.9
20	29	26,633	-47.6		09	29.9
15	26	28,549	-43.3		09	31.5
10	22	31,308	-38.4		09	37.0
7	5	33,804	-33.2			
5						

* MEDFORD, OREG.
968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	10.8	7.6	36	.3
1000						
950	30	561	13.2	7.5	31	.7
900	30	1,016	12.6	5.5	30	.8
850	30	1,495	11.0	2.7	10	.5
800	30	2,000	9.6	-4.4	14	.4
750	30	2,533	7.4	-8.8	23	2.3
700	30	3,097	4.0	-13.7	24	4.4
650	30	3,696	.4	-17.1	25	5.0
600	30	4,333	-3.5	-21.0	25	6.4
550	30	5,015	-7.8	-25.4	26	7.9
500	30	5,749	-13.1	-29.4	26	9.2
450	30	6,544	-18.5	-35.1	26	10.2
400	30	7,411	-25.2	-38.0	26	11.4
350	30	8,369	-32.5	-44.2	25	11.9
300	30	9,434	-41.0	-52.9	25	12.1
250	30	10,649	-50.6		26	12.6
200	30	12,076	-57.9		25	12.4
175	30	12,916	-58.1		25	12.3
150	30	13,891	-57.5		25	11.7
125	30	15,039	-58.8		25	9.4
100	30	16,439	-58.8		24	5.9
80	30	17,840	-58.7		22	1.9
70	30	18,680	-58.3		15	1.3
60	29	19,654	-57.0		11	2.2
50	29	20,814	-55.3		09	4.1
40	27	22,245	-53.7		09	6.5
30	27	24,106	-51.3		09	7.9
25	27	25,296	-49.1		09	9.7
20	26	26,771	-46.1		09	11.6
15	23	28,697	-42.7		09	12.9
10	22	31,461	-37.7		09	14.7
7	22	33,950	-32.4		09	16.2
5	13	36,346	-28.1			

MERIDA, MEXICO
1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	23.4	22.9	09	.6
1000	30	89	24.2	22.8	11	2.7
950	30	539	23.2	20.1	12	5.4
900	30	1,011	21.3	15.5	12	5.0
850	30	1,505	18.7	11.5	12	4.0
800	30	2,024	16.0	8.7	12	3.6
750	30	2,571	13.1	4.8	11	2.8
700	30	3,148	9.8	.7	11	3.1
650	30	3,761	6.3	-3.0	10	2.1
600	30	4,413	2.5	-7.2	07	1.6
550	30	5,112	-1.3	-12.9	02	1.7
500	30	5,867	-5.6	-19.2	01	2.7
450	30	6,686	-10.5	-23.6	36	3.6
400	30	7,582	-16.3	-31.6	33	3.8
350	30	8,576	-23.1	-38.7	31	4.2
300	30	9,684	-31.4	-44.9	28	5.3
250	30	10,950	-41.0	-54.4	28	7.7
200	30	12,429	-52.7		28	9.7
175	30	13,279	-59.0		28	10.6
150	30	14,230	-66.1		29	10.7
125	30	15,318	-72.9		31	7.9
100	30	16,607	-77.3		35	6.4
80	30	17,900	-72.2		04	6.6
70	30	18,697	-66.9		07	7.1
60	30	19,636	-64.1		08	8.6
50	30	20,763	-60.0		09	10.0
40	30	22,168	-56.7		09	11.0
30	30	24,011	-52.4		09	11.2
25	30	25,197	-50.0		09	12.5
20	30	26,665	-47.1		08	14.4
15	29	28,578	-45.1		08	16.7
10	20	31,312	-40.1		09	18.6
7	6	33,728	-38.5			
5						

MIAMI, FLA.
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	4	24.3	22.5	13	1.1
1000	29	119	25.1	22.7	17	1.2
950	29	569	22.4	19.3	19	3.4
900	29	1,039	19.7	15.7	19	4.1
850	29	1,530	16.9	11.7	20	3.5
800	29	2,046	14.2	7.3	20	3.4
750	29	2,589	11.3	3.6	21	3.3
700	29	3,162	8.0	-.2	21	3.1
650	29	3,771	4.3	-5.0	22	2.6
600	29	4,418	.6	-8.7	24	3.0
550	29	5,112	-3.2	-13.7	26	3.2
500	29	5,860	-7.8	-19.5	26	3.9
450	29	6,672	-12.4	-24.5	26	5.4
400	29	7,563	-18.1	-30.7	27	6.7
350	29	8,550	-25.1	-37.6	28	7.4
300	29	9,648	-33.7	-43.6	27	9.0
250	29	10,900	-43.8		27	10.8
200	29	12,362	-55.2		28	14.6
175	29	13,202	-61.3		29	16.3
150	29	14,144	-67.6		29	17.9
125	29	15,229	-72.3		31	14.7
100	29	16,538	-72.7		34	6.7
80	29	17,860	-68.8		05	4.5
70	29	18,666	-65.6		07	5.5
60	29	19,609	-63.3		08	8.5
50	29	20,739	-59.5		08	11.8
40	28	22,147	-55.7		09	13.0
30	26	23,995	-51.8		10	12.8
25	26	25,184	-49.6		09	12.6
20	25	26,655	-46.7		08	12.8
15	24	28,574	-44.9		09	12.0
10	17	31,310	-41.1		08	12.8
7	5	33,728	-36.5			
5						

MIDLAND, TEXAS
914 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	19.6	16.3	16	2.5
1000						
950						
900	30	1,007	20.8	15.1	17	4.4
850	30	1,503	21.2	7.7	20	6.3
800	30	2,026	18.3	4.2	21	2.3
750	30	2,576	14.8	-.5	24	.6
700	30	3,154	10.5	-2.9	27	1.8
650	30	3,767	5.9	-6.8	28	1.9
600	30	4,416	1.0	-11.2	28	2.0
550	30	5,110	-3.5	-17.6	28	2.8
500	30	5,857	-8.0	-25.9	27	3.7
450	30	6,668	-13.2	-31.9	27	4.3
400	30	7,554	-19.4	-35.9	27	5.6
350	30	8,536	-26.7	-42.1	28	7.3
300	30	9,627	-35.1	-49.6	27	8.8
250	30	10,872	-44.9		27	12.1
200	30	12,329	-54.8		27	15.5
175	30	13,174	-59.4		27	16.3
150	29	14,129	-64.2		27	15.9
125	28	15,239	-68.8		27	13.1
100	25	16,563	-71.4		27	8.4
80	25	17,889	-68.5		34	.5
70	25	18,697	-64.7		08	3.5
60	24	19,645	-61.5		09	6.2
50	24	20,784	-58.6		10	7.8
40	23	22,195	-55.7		09	9.4
30	23	24,042	-52.6		09	9.5
25	22	25,226	-50.5		08	10.0
20	22	26,692	-47.8		08	10.8
15	20	28,616	-44.0		09	10.9
10	17	31,344	-39.5		08	13.2
7						

MONTERREY, MEXICO
961 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	22.0	21.7	12	.6
1000						
950	30	551	21.8	21.1	12	1.6
900	30	1,020	19.7	17.8	13	4.7
850	30	1,513	17.8	12.1	14	6.1
800	30	2,031	16.4	4.9	13	5.0
750	30	2,578	13.6	.4	12	3.1
700	30	3,156	10.1	-5.5	10	1.5
650	30	3,768	6.5	-8.9	36	1.8
600	30	4,420	2.4	-13.0	35	2.8
550	30	5,118	-1.9	-18.6	36	2.0
500	30	5,869	-6.5	-25.2	02	2.2
450	30	6,684	-11.6	-31.9	01	2.5
400	30	7,576	-17.8	-36.2	32	1.5
350	30	8,564	-24.7	-42.1	28	2.7
300	30	9,664	-33.2	-49.7	27	5.7
250	30	10,920	-43.0		26	9.3
200	30	12,368	-53.7		26	11.8
175	29	13,241	-59.3		26	12.8
150	29	14,191	-65.7		26	11.4
125	29	15,284	-71.5		27	6.6
100	29	16,586	-75.3		34	1.6
80	28	17,887	-72.2		06	5.6
70	28	18,682	-67.9		07	7.2
60	26	19,617	-64.0		08	8.9
50	26	20,744	-60.3		09	10.7
40	26	22,148	-56.5		08	11.5
30	26	23,991	-52.1		08	13.4
25	26	25,176	-50.6		08	14.1
20	26	26,639	-47.8		08	13.9
15	25	28,544	-45.1		08	13.3
10	16	31,277	-40.6			
7						

MONETT, MO.
964 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	438	17.9	14.3	16	2.0
1000						
950	30	561	20.3	13.0	19	2.4
900	30	1,029	19.2	9.8	24	4.3
850	30	1,519	16.3	6.5	26	4.4
800	29	2,033	13.4	3.0	28	4.0
750	29	2,573	10.0	-.6	30	3.4
700	29	3,143	6.2	-4.2	31	4.1
650	28	3,747	2.9	-11.3	31	4.8
600	28	4,391	-.9	-17.6	31	5.7
550	28	5,079	-5.3	-21.7	31	5.2
500	28	5,821	-9.6	-27.8	30	6.3
450	28	6,627	-14.8	-33.8	29	7.1
400	28	7,508	-20.9	-39.9	30	7.7
350	28	8,484	-27.9	-45.0	30	9.9
300	28	9,570	-36.3	-50.9	30	11.4
250	28	10,809	-46.0		30	12.6
200	28	12,259	-56.2		30	14.5
175	28	13,098	-61.1		30	14.2
150	28	14,046	-64.9		30	14.5
125	28	15,155	-66.1		30	12.6
100	28	16,509	-65.9		30	6.8
80	28	17,868	-63.8		33	3.3
70	28	18,691	-62.3		03	2.3
60	27	19,648	-59.5		06	3.4
50	27	20,797	-57.0		08	4.6
40	27	22,218	-54.6		09	6.0
30	25	24,069	-52.1		09	7.8
25	24	25,255	-50.3		08	9.0
20	23	26,722	-47.3		09	9.7
15	23	28,642	-43.5		09	10.7
10	19	31,403	-38.2		09	13.1
7						

MONTGOMERY, ALA.
1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	57	20.0	17.1	03	.3
1000	28	126	21.0	16.7	11	.7
950	30	565	21.1	14.4	30	.2
900	30	1,032	18.4	11.5	32	1.5
850	30	1,520	15.5	7.5	32	2.3
800	30	2,033	12.8	3.4	31	3.3
750	30	2,573	10.2	-2.1	31	4.6
700	30	3,144	7.1	-8.2	30	5.5
650	30	3,749	3.5	-12.4	31	5.7
600	30	4,394	-.6	-16.0	31	6.2
550	30	5,084	-4.8	-21.0	30	6.0
500	30	5,827	-9.6	-26.2	30	7.4
450	30	6,633	-14.3	-31.4	30	8.4
400	30	7,517	-20.2	-37.4	30	9.6
350	29	8,495	-27.4	-44.2	31	11.8
300	29	9,583	-35.7	-50.0	30	13.1
250	29	10,826	-45.3		31	13.8
200	29	12,279	-56.0		30	14.3
175	29	13,118	-61.2		30	15.5
150	29	14,065	-65.4		30	16.5
125	29	15,167	-67.8		30	13.8
100	29	16,505	-68.6		32	8.0
80	29	17,850	-65.9		36	3.8
70	29	18,666	-63.3		05	4.0
60	29	19,619	-60.8		07	5.7
50	29	20,760	-58.3		09	6.7
40	27	22,179	-55.0		09	9.3
30	25	24,030	-51.2		09	9.1
25	25	25,219	-49.9		08	8.4
20	25	26,685	-48.0		08	9.7
15	22	28,600	-44.4		08	11.4
10	17	31,358	-39.1		09	13.6
7	5	33,817	-35.4			

NASHVILLE, TENN.
993 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	17.2	14.8	20	.4
1000						
950	30	562	19.1	11.3	25	1.8
900	30	1,026	16.6	8.4	27	3.8
850	30	1,511	13.9	4.6	29	5.2
800	30	2,021	11.4	-.4	31	6.3
750	30	2,557	8.4	-4.3	32	7.0
700	30	3,124	5.2	-8.1	30	7.9
650	30	3,726	1.8	-13.2	30	8.7
600	30	4,367	-1.8	-17.9	30	9.8
550	30	5,054	-5.7	-23.7	30	10.1
500	30	5,794	-10.3	-28.4	30	11.5
450	30	6,598	-15.2	-33.5	30	12.2
400	30	7,477	-21.6	-38.6	30	13.3
350	30	8,451	-28.5	-44.8	30	14.7
300	30	9,534	-36.8	-51.1	30	15.5
250	30	10,771	-46.3		30	17.2
200	30	12,222	-56.0		30	18.3
175	30	13,061	-60.5		30	17.5
150	30	14,013	-63.6		30	16.3
125	30	15,128	-65.3		31	12.7
100	30	16,485	-65.6		31	6.8
80	30	17,849	-63.5		34	3.7
70	30	18,673	-61.4		05	3.3
60	29	19,634	-59.2		07	4.6
50	29	20,783	-57.2		08	6.3
40	28	22,201	-55.0		09	7.4
30	27	24,051	-51.8		09	8.4
25	26	25,241	-50.2		08	9.0
20	23	26,702	-47.6		08	10.0
15	[illegible]	28,612	-43.9		09	12.6
10	18	31,373	-39.0		09	14.5
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	* NOME, ALASKA 1007 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	5.9	2.4	01	1.3
1000	26	78	7.3	2.4	04	1.3
950	30	482	5.8	.7	12	2.2
900	30	923	3.4	-1.6	14	2.7
850	30	1,384	.5	-3.7	14	3.0
800	30	1,869	-2.2	-6.0	15	3.5
750	30	2,379	-4.9	-9.3	15	4.7
700	30	2,919	-7.8	-13.9	15	6.3
650	30	3,493	-10.9	-17.1	15	6.2
600	30	4,104	-14.4	-20.4	16	6.4
550	30	4,759	-18.1	-25.3	16	6.1
500	30	5,465	-22.5	-29.8	17	6.6
450	30	6,231	-27.6	-35.9	17	6.9
400	30	7,067	-33.7	-39.9	17	8.1
350	30	7,993	-40.7	-43.3	17	7.9
300	30	9,024	-47.2		18	7.7
250	30	10,219	-50.8		18	7.1
200	30	11,683	-47.0		19	4.5
175	30	12,570	-46.1		17	4.2
150	30	13,596	-45.9		17	3.4
125	30	14,806	-46.8		17	2.8
100	30	16,287	-46.8		16	2.5
80	30	17,764	-47.1		13	2.4
70	30	18,649	-46.9		13	3.1
60	30	19,671	-46.8		12	3.2
50	30	20,882	-46.3		10	4.8
40	29	22,369	-45.5		10	5.0
30	29	24,292	-44.6		09	7.4
25	28	25,514	-43.6		09	8.0
20	28	27,021	-41.7		09	9.9
15	26	28,975	-39.0		09	10.7
10	19	31,743	-34.5		09	10.9
7	16	34,253	-29.5		09	13.4
5	9	36,643	-27.7			

Standard pressure surface (mb)	NORTH PLATTE, NEBR. 916 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	847	13.8	11.0	12	1.5
1000						
950						
900	30	998	17.0	9.5	17	1.7
850	30	1,488	18.0	5.2	22	4.5
800	30	2,005	15.4	2.7	23	5.0
750	30	2,549	11.9	.3	25	5.3
700	30	3,122	7.6	-1.7	26	5.6
650	30	3,729	3.2	-5.1	27	6.3
600	30	4,373	-1.4	-9.9	28	7.3
550	30	5,060	-5.9	-15.6	28	8.3
500	30	5,800	-10.8	-23.1	28	9.7
450	30	6,603	-15.5	-29.4	27	10.0
400	30	7,482	-21.8	-35.7	27	10.5
350	30	8,454	-29.0	-41.3	27	12.0
300	30	9,534	-37.7	-46.9	27	12.7
250	30	10,765	-47.7		26	15.9
200	30	12,206	-57.0		26	16.9
175	30	13,046	-60.1		27	16.8
150	30	14,003	-61.9		27	15.7
125	30	15,129	-62.5		27	11.8
100	30	16,504	-62.9		28	6.1
80	30	17,882	-61.6		29	1.4
70	30	18,713	-59.7		05	1.2
60	30	19,681	-57.9		07	3.2
50	30	20,836	-55.8		08	4.8
40	30	22,266	-53.1		09	7.4
30	30	24,131	-50.8		09	8.7
25	29	25,322	-49.0		09	9.9
20	29	26,797	-46.6		09	10.6
15	24	28,713	-42.9		09	12.8
10	7	31,445	-38.7			
7						
5						

Standard pressure surface (mb)	OAKLAND, CALIF. 1013 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	6	12.4	10.5	27	1.9
1000	29	112	12.0	9.9	27	2.2
950	29	542	13.5	4.0	27	2.8
900	29	1,002	18.1	-6.9	29	3.2
850	29	1,489	16.5	-10.8	28	2.1
800	29	2,002	13.9	-14.4	23	1.3
750	29	2,542	10.8	-16.7	23	2.3
700	29	3,112	7.0	-18.0	22	2.8
650	29	3,716	3.0	-20.9	22	3.3
600	29	4,359	-1.3	-24.8	22	3.5
550	29	5,046	-6.0	-28.4	23	4.8
500	29	5,785	-11.3	-31.0	23	6.0
450	29	6,584	-17.1	-36.9	23	6.7
400	29	7,456	-23.6	-42.9	24	7.6
350	29	8,421	-31.1	-47.5	24	8.5
300	29	9,491	-40.0	-54.2	24	8.9
250	29	10,711	-49.6		24	9.9
200	29	12,141	-58.1		24	13.0
175	29	12,980	-58.9		24	14.2
150	29	13,947	-59.6		24	12.6
125	29	15,084	-61.4		24	10.3
100	29	16,465	-62.3		23	6.7
80	29	17,844	-61.5		22	2.3
70	29	18,675	-60.3		13	1.4
60	29	19,639	-59.0		10	3.2
50	29	20,787	-57.4		09	5.1
40	29	22,203	-55.6		09	6.9
30	29	24,051	-52.5		08	8.7
25	29	25,234	-50.7		08	9.7
20	26	26,696	-47.7		09	10.5
15	26	28,611	-44.1		09	12.4
10	12	31,375	-38.9			
7						
5						

Standard pressure surface (mb)	OMAHA, NEBR. 966 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	16.4	12.8	14	.8
1000						
950	30	546	18.6	11.8	19	2.0
900	30	1,011	18.3	9.0	22	4.2
850	30	1,499	15.9	6.9	25	4.1
800	30	2,012	13.1	3.3	28	4.9
750	30	2,552	9.8	.7	28	6.0
700	30	3,122	5.9	-2.4	28	6.3
650	30	3,725	2.3	-8.5	29	6.9
600	30	4,367	-1.7	-13.2	30	7.5
550	30	5,055	-5.9	-18.7	30	9.2
500	30	5,795	-10.2	-26.8	29	9.6
450	30	6,600	-15.3	-30.6	29	10.5
400	30	7,478	-21.6	-34.8	29	12.3
350	30	8,452	-28.7	-42.1	29	14.1
300	30	9,534	-37.1	-48.8	29	15.2
250	30	10,769	-46.8		29	18.3
200	30	12,215	-56.5		29	18.1
175	30	13,056	-60.1		29	17.9
150	30	14,011	-62.3		28	15.1
125	30	15,137	-62.5		28	11.9
100	30	16,513	-62.6		29	7.5
80	29	17,891	-61.3		33	3.2
70	29	18,723	-60.0		01	2.9
60	29	19,690	-57.7		06	3.3
50	29	20,846	-55.7		08	5.1
40	29	22,275	-53.5		09	6.0
30	28	24,136	-51.1		08	7.7
25	26	25,325	-49.5		08	9.6
20	26	26,795	-47.3		09	10.0
15	24	28,723	-43.0		08	12.7
10	16	31,492	-37.5		09	14.8
7						
5						

Standard pressure surface (mb)	+ PAGO PAGO, AMERICAN SAMOA 1012 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	28.9	23.8	10	2.8
1000	30	108	26.9	22.8	10	3.8
950	30	561	23.2	20.7	09	5.3
900	30	1,032	19.9	17.6	08	4.7
850	30	1,524	17.0	13.3	07	4.3
800	30	2,041	15.5	7.7	07	3.5
750	30	2,587	12.9	2.5	06	2.4
700	30	3,164	9.9	-3.2	07	1.1
650	30	3,776	6.4	-8.2	34	.7
600	30	4,429	2.9	-14.1	34	2.4
550	30	5,129	-1.1	-19.0	33	2.4
500	30	5,883	-5.1	-25.5	32	3.7
450	30	6,705	-9.8	-27.8	31	4.6
400	30	7,604	-15.9	-34.8	29	5.3
350	30	8,601	-22.5	-40.2	28	6.1
300	30	9,711	-31.3	-46.6	27	7.2
250	29	10,975	-41.4	-55.5	27	9.7
200	29	12,454	-52.9		26	11.8
175	28	13,299	-59.5		26	10.9
150	27	14,243	-66.8		26	9.5
125	26	15,321	-74.2		27	8.5
100	26	16,602	-78.8		27	8.7
80	26	17,873	-77.5		27	6.3
70	26	18,649	-71.9		28	5.0
60	26	19,571	-66.0		27	2.3
50	26	20,693	-60.7		07	.8
40	24	22,096	-57.3		08	4.7
30	23	23,926	-54.5		09	8.4
25	23	25,100	-52.3		09	10.1
20	21	26,549	-49.3		09	11.1
15	19	28,457	-44.1		09	12.2
10	18	31,201	-40.3		10	12.0
7	8	33,644	-37.4			
5						

Standard pressure surface (mb)	* PEORIA, ILL. 991 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	14.9	10.3	03	.5
1000						
950	30	556	17.3	9.4	29	1.9
900	30	1,017	15.5	6.0	31	4.0
850	30	1,499	12.8	3.1	32	5.5
800	30	2,007	10.2	1.0	31	6.5
750	30	2,541	7.3	-4.3	31	6.8
700	30	3,106	4.3	-10.0	31	8.0
650	30	3,706	1.1	-13.4	31	9.2
600	30	4,346	-2.7	-16.5	31	9.5
550	30	5,031	-6.5	-21.7	31	9.8
500	30	5,769	-11.0	-27.3	31	10.9
450	30	6,571	-16.2	-30.6	31	11.7
400	30	7,447	-22.5	-37.8	31	13.3
350	30	8,416	-29.6	-44.2	31	14.3
300	30	9,494	-38.1	-51.0	31	16.5
250	30	10,724	-47.5		30	20.2
200	30	12,169	-56.1		30	21.0
175	30	13,009	-60.0		30	19.3
150	30	13,967	-61.8		30	17.2
125	30	15,097	-61.9		30	11.9
100	29	16,476	-62.5		31	7.2
80	29	17,856	-61.2		33	3.4
70	29	18,688	-59.8		02	2.6
60	28	19,653	-57.9		06	3.6
50	28	20,809	-55.7		08	5.4
40	28	22,239	-53.1		08	6.9
30	27	24,102	-51.1		09	7.9
25	27	25,293	-49.1		09	8.9
20	27	26,766	-46.6		08	10.9
15	25	28,693	-43.1		09	13.0
10	25	31,458	-37.7		09	15.6
7	19	33,939	-33.1		09	16.8
5	8	36,335	-29.4			
4						

Standard pressure surface (mb)	* PITTSBURGH, PA. 970 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	359	14.2	11.3	25	1.6
1000						
950	29	537	14.7	10.4	25	3.5
900	29	993	12.2	7.2	28	6.3
850	29	1,471	9.9	3.2	29	6.7
800	29	1,973	7.4	.2	29	6.6
750	29	2,502	4.6	-4.1	29	7.2
700	29	3,062	1.5	-7.5	29	7.9
650	29	3,656	-1.8	-12.0	29	9.6
600	29	4,289	-4.9	-18.8	30	11.3
550	29	4,968	-8.8	-22.2	30	12.5
500	29	5,701	-13.2	-29.6	30	12.9
450	29	6,495	-18.4	-34.3	30	13.1
400	29	7,364	-24.5	-41.0	30	12.9
350	29	8,325	-31.5	-45.6	30	14.6
300	29	9,396	-39.3	-50.7	29	15.5
250	29	10,622	-47.9		29	16.6
200	29	12,067	-55.6		30	18.2
175	28	12,914	-57.7		29	16.7
150	27	13,890	-59.6		30	13.2
125	27	15,026	-61.0		30	9.6
100	27	16,412	-61.1		30	5.9
80	27	17,802	-59.8		33	2.4
70	27	18,639	-58.9		02	1.6
60	27	19,610	-57.5		06	2.7
50	26	20,769	-55.9		08	4.8
40	26	22,196	-54.0		09	6.9
30	24	24,053	-51.3		09	7.3
25	24	25,242	-49.6		08	9.0
20	24	26,712	-47.1		09	10.6
15	22	28,629	-43.4		09	13.5
10	19	31,396	-38.2		09	15.0
7	15	33,883	-33.7			
5						
4						

Standard pressure surface (mb)	+ PONAPE, CAROLINE IS. 1004 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	29.1	24.5	05	.9
1000	28	73	27.5	23.3	05	1.8
950	30	524	24.0	21.2	11	1.7
900	30	997	20.8	18.2	11	2.2
850	30	1,490	18.3	13.5	11	2.1
800	30	2,009	15.9	10.1	11	1.8
750	30	2,556	13.2	6.9	11	1.7
700	30	3,134	9.8	4.5	09	2.6
650	30	3,747	6.6	.6	10	3.7
600	30	4,401	3.1	-3.4	11	4.5
550	30	5,102	-.8	-6.8	11	4.9
500	30	5,858	-5.0	-12.5	10	4.5
450	30	6,680	-9.5	-19.6	09	5.5
400	30	7,581	-14.9	-27.3	10	5.9
350	30	8,581	-21.6	-34.3	09	4.2
300	30	9,696	-29.9	-42.5	11	4.4
250	30	10,967	-40.2	-51.6	09	4.0
200	30	12,448	-53.0		11	3.4
175	30	13,296	-60.0		12	4.0
150	30	14,240	-67.6		13	3.7
125	30	15,319	-74.6		11	3.9
100	30	16,598	-79.4		16	1.7
80	30	17,875	-74.6		27	5.3
70	30	18,659	-70.8		27	3.2
60	30	19,581	-67.4		10	1.9
50	30	20,688	-64.4		09	8.6
40	30	22,063	-61.2		09	18.7
30	30	23,874	-55.4		09	26.4
25	28	25,046	-52.3		09	28.5
20	27	26,499	-49.5		09	29.7
15	25	28,396	-46.5		09	32.2
10	23	31,107	-41.9		09	37.2
7	13	33,545	-36.4			
5						
4						

Standard pressure surface (mb)	PORTLAND, MAINE 1010 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	13.5	11.8	13	.6
1000	28	113	13.7	11.5	19	.6
950	30	540	14.2	9.6	21	2.5
900	30	996	12.5	7.0	21	3.5
850	30	1,473	9.5	4.3	22	4.1
800	30	1,975	6.8	.7	23	4.8
750	30	2,502	3.8	-4.5	23	6.3
700	30	3,060	.6	-10.0	24	7.6
650	30	3,652	-2.0	-16.2	24	8.1
600	30	4,285	-5.2	-22.0	24	8.6
550	30	4,963	-9.3	-27.2	25	10.0
500	30	5,693	-14.1	-32.2	24	11.0
450	30	6,485	-19.4	-35.7	24	12.2
400	30	7,350	-25.5	-39.5	24	13.6
350	30	8,308	-32.6	-45.1	25	14.6
300	30	9,374	-40.1	-50.5	25	15.8
250	30	10,598	-48.0		25	17.2
200	30	12,049	-53.6		26	16.0
175	30	12,904	-55.3		26	14.4
150	30	13,885	-56.7		26	11.2
125	30	15,037	-58.3		26	8.4
100	30	16,442	-58.3		26	4.9
80	30	17,849	-57.3		25	2.2
70	30	18,696	-56.1		21	1.0
60	30	19,678	-55.3		11	1.5
50	30	20,844	-54.4		09	3.7
40	27	22,273	-52.7		09	5.5
30	27	24,141	-50.3		09	7.9
25	26	25,336	-48.7		09	8.7
20	25	26,816	-46.0		09	10.5
15	24	28,752	-42.5		09	12.9
10	17	31,527	-37.6		09	14.8
7						
5						
4						

Standard pressure surface (mb)	* QUILLAYUTE, WASH. 1010 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	9.8	8.5	08	.2
1000	30	141	10.2	9.4	30	.2
950	30	568	9.0	6.0	27	1.6
900	30	1,015	7.8	2.0	26	2.7
850	30	1,486	6.4	-1.8	26	3.5
800	30	1,982	4.2	-6.4	26	4.6
750	30	2,505	2.1	-9.3	27	5.9
700	30	3,059	-.4	-12.5	27	6.6
650	30	3,649	-3.6	-16.6	27	7.6
600	30	4,277	-7.2	-18.5	26	9.2
550	30	4,950	-11.2	-23.0	26	10.1
500	30	5,676	-15.5	-27.8	26	11.3
450	30	6,463	-20.9	-32.3	26	11.6
400	30	7,323	-27.4	-38.8	26	12.5
350	30	8,273	-34.4	-44.0	25	13.9
300	30	9,330	-42.6	-49.8	25	13.9
250	30	10,539	-50.7		25	15.1
200	30	11,971	-56.0		25	13.9
175	30	12,823	-54.9		25	12.2
150	30	13,810	-54.5		25	10.7
125	30	14,978	-54.8		24	8.3
100	30	16,403	-55.4		23	5.3
80	30	17,826	-55.4		22	2.4
70	30	18,678	-55.3		16	1.3
60	30	19,664	-54.7		12	1.5
50	30	20,833	-53.7		09	3.5
40	30	22,272	-52.4		09	5.9
30	29	24,137	-50.0		09	7.2
25	29	25,333	-48.4		08	8.7
20	29	26,811	-45.6		08	10.3
15	28	28,741	-42.7		08	11.9
10	24	31,502	-38.0		09	13.5
7	18	33,967	-33.9		08	15.4
5	12	36,360	-28.9			
4	5	37,977	-26.4			

Standard pressure surface (mb)	RAPID CITY, S. DAK. 903 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	13.2	10.8	30	.5
1000						
950						
900	24	1,004	13.8	9.9	31	.5
850	30	1,477	16.4	4.8	23	2.6
800	30	1,992	14.2	2.6	24	3.3
750	30	2,534	10.9	-1.8	25	4.3
700	30	3,105	6.8	-4.8	26	4.9
650	30	3,709	2.2	-6.1	27	6.0
600	30	4,350	-2.4	-9.7	27	7.6
550	30	5,036	-6.7	-16.0	26	8.7
500	30	5,774	-11.6	-22.3	26	9.7
450	30	6,573	-16.8	-30.0	26	10.6
400	30	7,447	-23.3	-36.3	26	12.0
350	30	8,413	-30.5	-43.3	26	12.8
300	30	9,486	-39.5	-50.0	26	15.4
250	30	10,709	-48.6		26	16.9
200	30	12,147	-57.3		26	18.4
175	30	12,987	-59.7		26	18.2
150	29	13,948	-60.4		26	15.2
125	29	15,084	-60.6		27	10.4
100	29	16,472	-61.2		27	5.5
80	29	17,861	-60.2		27	1.7
70	29	18,696	-59.0		05	.5
60	29	19,668	-57.4		08	2.4
50	28	20,828	-55.1		08	4.1
40	28	22,260	-53.3		08	5.7
30	28	24,122	-51.0		08	9.0
25	28	25,314	-49.0		09	9.9
20	27	26,789	-46.5		09	10.9
15	26	28,715	-43.6		09	12.5
10	13	31,471	-37.9			
7						

Standard pressure surface (mb)	ST CLOUD, MINN. 978 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	11.8	9.7	01	.5
1000						
950	30	557	15.3	7.9	14	.5
900	30	1,016	14.4	5.9	28	1.4
850	30	1,497	12.2	2.4	31	2.6
800	30	2,003	9.5	-2.8	31	3.6
750	30	2,536	6.8	-8.8	31	4.8
700	30	3,099	3.8	-11.7	30	5.9
650	30	3,698	.5	-16.1	29	6.3
600	30	4,335	-3.7	-18.7	29	7.6
550	30	5,017	-8.0	-23.2	29	8.0
500	30	5,751	-12.6	-28.6	29	8.0
450	30	6,547	-18.0	-34.4	29	9.3
400	30	7,416	-24.2	-38.9	30	10.9
350	30	8,379	-31.3	-44.8	30	12.1
300	30	9,450	-39.6	-47.3	30	15.0
250	30	10,672	-48.8		30	19.9
200	30	12,111	-56.6		30	22.1
175	30	12,953	-59.1		29	19.4
150	30	13,917	-59.6		29	15.3
125	30	15,060	-59.3		29	10.5
100	30	16,456	-59.5		30	6.5
80	30	17,853	-58.9		32	3.9
70	30	18,694	-57.8		36	2.6
60	29	19,669	-56.3		04	2.9
50	28	20,834	-54.1		07	3.7
40	27	22,268	-52.6		07	5.2
30	27	24,136	-50.7		08	8.1
25	27	25,329	-48.7		08	9.5
20	24	26,810	-45.6		08	10.7
15	23	28,745	-42.1		09	12.7
10	15	31,513	-37.4		08	14.7
7						

Standard pressure surface (mb)	* ST PAUL IS., ALASKA 1006 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	2.0	1.6	01	1.2
1000	23	96	1.6	1.3	33	1.5
950	30	471	1.9	-.4	10	1.6
900	30	907	.8	-2.0	10	1.6
850	30	1,365	-.9	-3.2	10	1.6
800	30	1,848	-2.9	-6.1	11	1.5
750	29	2,362	-5.1	-9.6	08	1.1
700	29	2,902	-7.2	-13.4	36	.8
650	29	3,477	-9.9	-17.4	34	1.7
600	29	4,091	-13.3	-21.7	34	1.6
550	29	4,749	-17.0	-26.7	33	1.7
500	29	5,458	-21.5	-29.9	31	3.3
450	29	6,227	-26.6	-35.0	29	3.6
400	29	7,067	-32.6	-41.8	29	5.3
350	29	7,998	-38.9	-45.4	28	7.8
300	29	9,039	-44.9		28	5.9
250	29	10,244	-48.9		28	6.9
200	29	11,716	-47.1		26	6.3
175	29	12,601	-46.8		25	4.7
150	29	13,622	-47.5		26	3.7
125	29	14,824	-48.7		25	2.4
100	29	16,288	-49.4		20	1.5
80	28	17,749	-49.8		11	1.0
70	28	18,623	-49.6		11	1.9
60	28	19,633	-49.4		11	3.0
50	28	20,828	-49.4		10	4.9
40	28	22,292	-48.8		10	5.9
30	28	24,189	-47.4		09	7.9
25	28	25,399	-46.0		09	9.0
20	28	26,890	-44.2		09	10.3
15	28	28,833	-41.1		09	10.4
10	24	31,601	-36.4		09	11.3
7	13	34,043	-33.6			

Standard pressure surface (mb)	SALEM, ILL. 993 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	15.7	12.9	14	.5
1000						
950	30	554	18.9	10.0	28	2.2
900	30	1,018	16.6	6.7	30	4.0
850	30	1,502	13.6	3.3	30	5.6
800	30	2,011	11.3	-.9	31	7.2
750	30	2,548	8.4	-4.2	31	8.0
700	30	3,115	5.1	-8.1	31	8.9
650	30	3,716	1.6	-12.2	31	9.7
600	30	4,356	-2.4	-16.0	31	10.3
550	30	5,042	-6.1	-23.1	31	10.9
500	30	5,782	-10.5	-29.7	31	12.0
450	30	6,585	-15.8	-35.2	31	13.6
400	30	7,462	-22.1	-40.0	31	14.2
350	30	8,434	-29.0	-45.0	31	15.3
300	30	9,515	-37.4	-50.3	31	17.2
250	30	10,747	-47.1		31	18.7
200	30	12,194	-56.3		30	18.6
175	30	13,034	-60.7		30	18.0
150	30	13,985	-63.5		30	17.5
125	30	15,106	-63.5		31	12.5
100	30	16,472	-64.2		31	7.2
80	30	17,843	-62.1		34	3.7
70	30	18,672	-60.8		02	3.7
60	30	19,636	-58.7		06	4.4
50	30	20,787	-56.4		08	6.2
40	29	22,209	-54.3		09	7.2
30	29	24,066	-51.5		09	8.4
25	29	25,255	-49.8		08	8.8
20	29	26,724	-47.2		08	10.6
15	28	28,648	-43.7		09	12.8
10	26	31,404	-38.1		09	15.5
7	5	33,909	-34.7			

Standard pressure surface (mb)	SALEM, OREG. 1009 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	10.1	6.8	23	.7
1000	28	142	12.2	8.9	31	.5
950	30	565	11.2	6.9	01	2.2
900	30	1,017	10.2	3.5	33	1.5
850	30	1,491	8.5	-1.4	29	2.2
800	30	1,991	6.8	-5.6	28	3.4
750	30	2,519	4.5	-9.6	28	4.8
700	30	3,078	2.0	-13.8	28	6.0
650	30	3,673	-1.3	-16.4	27	6.7
600	30	4,306	-5.2	-19.9	27	7.4
550	30	4,984	-9.5	-23.5	26	8.5
500	30	5,713	-14.5	-29.5	26	9.8
450	30	6,503	-20.1	-34.6	26	11.1
400	30	7,365	-26.5	-39.9	26	10.9
350	30	8,320	-33.3	-45.9	26	11.9
300	30	9,381	-41.8	-52.8	26	12.4
250	30	10,593	-50.6		27	12.8
200	29	12,016	-57.1		26	12.6
175	29	12,861	-56.5		25	12.8
150	29	13,842	-55.5		25	12.2
125	29	15,002	-56.4		25	9.0
100	29	16,414	-57.3		24	5.4
80	29	17,825	-57.2		22	2.4
70	29	18,671	-56.8		16	1.1
60	29	19,649	-56.3		11	1.6
50	29	20,811	-54.9		09	3.9
40	29	22,243	-53.1		10	6.2
30	29	24,107	-50.8		09	8.1
25	29	25,299	-49.0		09	9.7
20	28	26,769	-46.5		09	10.9
15	26	28,705	-43.5		09	12.9
10	19	31,460	-37.7		09	14.4
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH
870 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	16.3	6.3	15	2.8
1000						
950						
900						
850	30	1,488	18.2	3.4	15	2.7
800	30	2,005	15.7	-.2	18	2.3
750	30	2,550	11.9	-2.3	22	3.0
700	30	3,122	7.6	-4.6	24	5.0
650	30	3,728	3.0	-6.3	25	7.3
600	31	4,371	-2.0	-9.0	24	9.1
550	31	5,057	-7.0	-13.3	24	9.7
500	30	5,793	-12.0	-21.4	25	9.8
450	30	6,592	-17.2	-28.2	25	10.6
400	31	7,465	-23.2	-35.4	25	11.6
350	31	8,431	-30.7	-43.5	25	12.5
300	31	9,502	-39.7	-50.5	24	15.0
250	30	10,722	-49.4		24	17.2
200	31	12,153	-58.5		24	18.9
175	31	12,989	-60.2		24	19.1
150	31	13,951	-60.1		24	15.7
125	31	15,085	-61.2		25	12.0
100	30	16,470	-61.5		25	6.4
80	31	17,851	-61.3		21	1.9
70	31	18,682	-59.9		14	1.5
60	30	19,648	-58.3		10	2.8
50	31	20,802	-56.1		09	4.5
40	29	22,227	-54.1		08	6.5
30	29	24,084	-51.4		09	8.7
25	29	25,272	-49.9		06	9.7
20	29	26,743	-46.6		09	12.1
15	29	28,669	-43.0		09	12.4
10	23	31,415	-37.9		09	15.3
7	8	33,925	-33.4			
5						
4						

SAN DIEGO, CALIF.
997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	16.2	14.3	30	.5
1000	5	128	16.2	13.6		
950	30	535	14.5	10.3	35	.7
900	31	996	18.4	.9	02	1.3
850	30	1,485	18.4	-3.4	06	.2
800	31	2,002	15.5	-5.7	17	1.9
750	31	2,545	12.2	-8.3	17	2.9
700	31	3,119	8.4	-12.6	17	3.7
650	31	3,727	5.0	-18.4	17	3.9
600	31	4,375	.8	-22.5	19	4.5
550	30	5,067	-3.8	-27.0	21	5.1
500	30	5,812	-9.2	-31.4	22	6.2
450	30	6,617	-15.0	-36.7	22	8.7
400	31	7,497	-21.4	-42.0	23	10.1
350	30	8,470	-28.8	-47.6	23	12.2
300	31	9,552	-37.4	-52.6	23	15.6
250	31	10,785	-47.1		23	18.7
200	31	12,229	-56.7		24	21.5
175	29	13,071	-59.8		24	21.5
150	29	14,029	-62.2		24	19.6
125	29	15,148	-65.0		24	15.4
100	28	16,500	-67.3		23	8.0
80	29	17,846	-66.6		21	1.8
70	28	18,659	-64.1		10	3.1
60	28	19,611	-61.0		10	5.4
50	28	20,754	-58.5		09	7.0
40	27	22,167	-55.7		09	8.9
30	26	24,012	-52.0		09	9.7
25	26	25,197	-50.7		08	10.3
20	26	26,660	-47.7		09	11.4
15	25	28,577	-44.5		08	11.4
10	23	31,325	-38.4		09	12.2
7	11	33,735	-34.5			
5						
4						

SAN JUAN, P. R.
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	26.6	21.3	11	2.8
1000	30	144	25.0	21.4	10	4.7
950	31	594	22.1	18.9	12	7.2
900	31	1,063	19.1	15.6	12	7.5
850	30	1,553	16.4	10.9	12	8.1
800	31	2,069	14.5	4.6	11	7.1
750	31	2,612	11.8	-.4	11	5.8
700	31	3,186	8.2	-4.4	11	5.4
650	30	3,794	4.4	-5.5	11	3.8
600	31	4,441	.4	-9.5	12	2.6
550	31	5,134	-3.5	-16.7	15	1.6
500	30	5,882	-7.9	-20.8	21	1.1
450	31	6,693	-12.9	-26.3	25	1.9
400	30	7,582	-18.8	-29.9	26	2.8
350	30	8,566	-25.9	-37.2	28	3.8
300	30	9,660	-34.4	-45.8	30	5.4
250	31	10,908	-44.7		30	7.2
200	31	12,362	-56.8		31	8.6
175	31	13,196	-63.2		32	9.1
150	31	14,128	-70.0		32	10.9
125	30	15,199	-74.6		32	11.3
100	30	16,494	-74.3		33	4.6
80	31	17,812	-69.2		05	3.8
70	30	18,616	-66.3		07	6.5
60	29	19,554	-63.7		08	9.5
50	29	20,681	-60.6		09	12.8
40	27	22,078	-57.9		09	15.0
30	27	23,910	-53.8		09	17.3
25	26	25,088	-51.3		09	19.9
20	25	26,550	-48.2		09	23.3
15	23	28,462	-44.2		09	25.6
10	16	31,203	-39.5		09	26.9
7						
5						
4						

* SAULT STE MARIE, MICH.
987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	10.3	6.5	04	1.4
1000						
950	30	535	11.4	5.8	36	1.2
900	30	987	10.9	2.7	32	1.5
850	31	1,463	8.9	.0	30	2.3
800	30	1,963	6.5	-3.7	31	3.7
750	31	2,490	3.9	-8.2	31	4.7
700	30	3,048	1.1	-12.5	31	6.0
650	30	3,641	-1.7	-18.1	31	7.2
600	30	4,274	-5.2	-23.0	31	8.1
550	30	4,952	-9.2	-28.1	32	9.2
500	31	5,683	-14.0	-31.5	32	10.0
450	30	6,475	-19.5	-35.2	32	10.3
400	30	7,339	-25.7	-39.7	31	11.1
350	30	8,296	-32.8	-45.6	31	12.3
300	30	9,360	-40.9	-47.1	30	13.8
250	31	10,577	-49.6		30	12.6
200	31	12,014	-56.0		30	13.4
175	31	12,864	-55.7		30	14.5
150	31	13,846	-56.0		30	12.6
125	30	15,004	-56.7		30	9.3
100	30	16,416	-57.5		30	6.7
80	30	17,827	-56.9		32	3.8
70	30	18,675	-56.1		33	1.7
60	31	19,658	-54.8		03	2.2
50	30	20,828	-53.3		06	3.4
40	29	22,268	-51.8		08	5.4
30	28	24,142	-50.0		08	7.7
25	27	25,342	-48.1		08	9.4
20	27	26,822	-45.5		08	11.4
15	26	28,744	-42.6		09	12.4
10	23	31,513	-37.5		09	15.3
7	21	34,004	-33.0		09	16.6
5	17	36,417	-28.8		08	19.6
4	7	38,041	-26.3			

* SHEMYA, ALASKA
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	5.5	3.5	28	2.9
1000	[illegible]	143	4.8	3.3	28	4.1
950	29	517	3.8	1.4	27	5.9
900	27	955	2.6	-1.6	27	5.8
850	[illegible]	1,417	1.7	-4.3	28	6.0
800	27	1,905	.4	-7.3	27	6.2
750	29	2,421	-1.8	-9.8	27	6.8
700	27	2,967	-4.4	-11.9	27	7.5
650	27	3,548	-7.5	-17.5	27	8.5
600	27	4,168	-10.7	-21.6	27	8.8
550	29	4,832	-14.5	-25.9	28	9.6
500	[illegible]	5,548	-18.7	-30.1	28	11.0
450	27	6,326	-23.8	-34.2	27	12.1
400	27	7,176	-29.7	-38.2	27	13.5
350	24	8,118	-36.5	-42.3	27	14.3
300	24	9,167	-44.0	-47.0	27	17.0
250	[illegible]	10,378	-50.4		27	20.1
200	23	11,827	-52.0		28	17.1
175	24	12,692	-52.2		28	14.4
150	21	13,688	-51.3		28	11.0
125	[illegible]	14,870	-52.5		28	8.4
100	27	16,310	-52.9		27	5.5
80	[illegible]	17,747	-52.5		27	2.6
70	25	18,605	-51.9		25	1.3
60	25	19,605	-51.6		12	.4
50	24	20,791	-50.9		10	2.6
40	[illegible]	22,247	-50.0		09	3.9
30	[illegible]	24,133	-48.5		09	6.8
25	19	25,340	-46.4		09	7.8
20	[illegible]	26,827	-44.8		09	9.7
15	[illegible]	28,768	-41.2		09	10.6
10	14	31,559	-36.8		09	12.7
7	[illegible]	34,085	-31.6			
5	7	36,482	-28.4			
4						

* SHREVEPORT, LA.
1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	21.6	19.8	18	1.3
1000	28	116	22.6	19.1	19	1.4
950	30	562	22.8	17.0	21	3.9
900	30	1,032	20.6	12.9	21	2.9
850	30	1,524	17.3	10.0	24	2.1
800	31	2,040	14.6	4.8	25	2.6
750	30	2,583	11.6	.2	25	3.1
700	30	3,157	8.0	-4.4	25	3.2
650	30	3,764	4.2	-8.8	26	3.2
600	30	4,411	.1	-12.1	26	3.4
550	30	5,102	-4.5	-16.7	28	3.1
500	30	5,847	-8.8	-23.7	30	3.6
450	30	6,656	-13.7	-29.9	31	4.7
400	30	7,540	-19.8	-36.6	31	6.3
350	30	8,521	-26.5	-42.3	31	7.8
300	30	9,613	-35.1	-49.1	31	9.0
250	30	10,858	-45.0		30	11.4
200	29	12,315	-55.1		30	14.0
175	28	13,160	-59.9		30	14.4
150	28	14,112	-64.8		29	15.3
125	29	15,214	-68.4		30	14.0
100	28	16,543	-70.3		30	8.2
80	27	17,880	-67.6		01	3.5
70	27	18,691	-64.1		05	4.6
60	27	19,641	-61.8		08	6.9
50	26	20,778	-58.6		09	8.3
40	24	22,192	-55.3		09	8.8
30	26	24,039	-52.8		08	9.4
25	25	25,221	-50.6		08	10.3
20	24	26,686	-47.4		09	10.5
15	23	28,597	-44.0		09	10.8
10	15	31,336	-40.3		09	14.7
7	12	33,793	-34.5		10	18.7

SPOKANE, WASH.
930 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	11.3	6.2	19	2.3
1000						
950						
900	30	993	13.2	5.3	21	3.7
850	30	1,473	10.9	1.9	24	4.4
800	30	1,976	7.6	-.5	25	4.5
750	30	2,505	4.2	-3.9	25	5.0
700	30	3,063	.7	-7.4	24	6.7
650	30	3,654	-2.9	-12.2	24	7.7
600	30	4,284	-6.8	-16.0	25	8.9
550	30	4,958	-10.7	-21.7	25	10.3
500	30	5,685	-15.2	-25.6	25	10.5
450	30	6,473	-20.7	-30.9	25	10.8
400	30	7,333	-27.1	-36.7	25	12.2
350	30	8,285	-34.0	-44.3	25	12.8
300	30	9,344	-41.8	-50.9	25	14.2
250	30	10,557	-49.9		25	14.1
200	30	11,994	-55.7		25	15.0
175	30	12,845	-54.9		24	13.2
150	30	13,833	-54.5		24	10.6
125	30	14,999	-55.3		24	8.2
100	30	16,420	-56.3		24	4.8
80	30	17,837	-56.3		22	2.4
70	30	18,686	-55.6		12	.6
60	29	19,672	-54.7		09	2.6
50	29	20,843	-53.2		09	4.2
40	28	22,283	-51.8		09	5.4
30	28	24,160	-48.9		08	8.0
25	27	25,360	-47.1		08	9.5
20	27	26,848	-44.0		08	11.1
15	23	28,781	-41.5		09	12.5
10	11	31,583	-36.6			
7						

* SWAN ISLAND, W. I.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	27.2	24.2	12	4.8
1000	30	89	27.0	24.4	12	5.7
950	30	543	23.7	22.1	12	8.8
900	30	1,015	20.8	18.0	13	8.6
850	30	1,509	18.0	13.5	13	7.8
800	30	2,027	15.7	9.2	13	7.1
750	30	2,573	13.1	3.6	13	6.2
700	30	3,151	9.8	.2	13	5.0
650	30	3,763	6.2	-4.1	13	4.5
600	30	4,415	2.4	-7.8	13	3.2
550	30	5,114	-1.6	-11.6	14	2.9
500	30	5,866	-6.3	-16.0	17	2.3
450	30	6,684	-10.8	-22.5	18	1.7
400	30	7,580	-16.5	-27.4	23	1.2
350	30	8,573	-23.3	-33.8	29	1.6
300	30	9,681	-31.4	-41.3	33	4.8
250	30	10,945	-41.5		33	6.0
200	30	12,419	-53.8		32	8.8
175	30	13,263	-60.7		32	9.3
150	30	14,205	-68.4		33	9.2
125	29	15,283	-74.6		35	9.9
100	27	16,565	-78.2		02	7.7
80	27	17,855	-72.7		05	7.0
70	27	18,649	-68.0		07	7.9
60	27	19,580	-65.6		08	8.9
50	27	20,700	-61.4		09	11.3
40	25	22,096	-58.4		09	15.1
30	25	23,927	-53.8		09	19.0
25	25	25,106	-51.1		09	20.8
20	24	26,565	-48.2		09	22.8
15	22	28,476	-45.2		08	25.8
10	10	31,223	-40.3			
7						

TAMPA, FLA.
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	23.7	21.2	18	.4
1000	30	121	23.6	21.8	16	.7
950	30	569	21.5	18.4	20	1.8
900	31	1,038	19.0	14.1	22	2.5
850	30	1,528	16.3	10.2	22	2.5
800	30	2,042	13.7	5.0	23	2.7
750	30	2,584	10.9	.9	23	2.3
700	30	3,156	7.9	-5.6	25	2.4
650	30	3,764	4.3	-9.7	25	2.6
600	30	4,411	.4	-14.1	27	2.8
550	31	5,103	-3.7	-17.9	28	3.3
500	30	5,850	-8.6	-21.8	28	3.7
450	30	6,660	-13.0	-27.9	28	4.9
400	30	7,547	-18.9	-33.3	28	6.7
350	30	8,531	-25.8	-40.0	28	8.8
300	30	9,626	-34.4	-47.3	28	10.8
250	30	10,875	-44.3		28	12.1
200	30	12,334	-55.4		29	13.7
175	30	13,174	-61.2		29	15.3
150	30	14,118	-66.8		30	15.7
125	30	15,209	-70.8		30	13.3
100	30	16,525	-71.2		33	7.7
80	30	17,853	-67.9		03	4.2
70	30	18,664	-64.6		06	5.2
60	30	19,610	-62.3		08	8.3
50	30	20,745	-58.9		09	11.2
40	30	22,158	-55.4		09	11.7
30	30	24,011	-51.5		09	11.1
25	29	25,201	-49.5		09	10.7
20	29	26,672	-47.0		08	10.9
15	27	28,586	-44.8		09	12.1
10	19	31,317	-40.6		09	14.8
7						

TOPEKA, KANS.
982 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	17.1	14.2	16	1.0
1000						
950	30	554	20.3	12.0	21	3.1
900	30	1,021	19.2	8.8	24	5.2
850	30	1,510	16.6	5.9	26	4.8
800	30	2,025	13.6	4.5	27	4.6
750	30	2,565	10.0	2.0	28	4.8
700	30	3,136	6.5	-3.1	28	5.7
650	31	3,740	2.8	-8.0	28	6.2
600	30	4,383	-1.2	-12.8	29	7.1
550	30	5,072	-5.5	-17.9	28	7.3
500	30	5,814	-9.8	-24.6	29	8.5
450	31	6,619	-15.0	-29.8	29	9.1
400	31	7,499	-21.4	-35.5	29	10.1
350	30	8,473	-28.2	-42.5	29	11.9
300	30	9,557	-36.6	-49.6	29	15.2
250	30	10,796	-46.2		29	17.5
200	30	12,244	-56.4		29	17.9
175	30	13,084	-60.6		29	17.1
150	30	14,036	-63.2		29	15.7
125	31	15,155	-64.2		29	12.7
100	30	16,521	-64.0		30	7.6
80	29	17,885	-62.6		33	2.5
70	29	18,713	-60.7		03	2.7
60	29	19,679	-58.0		07	4.0
50	29	20,833	-56.1		08	5.6
40	29	22,259	-54.0		09	7.4
30	29	24,117	-51.6		09	8.3
25	28	25,305	-49.8		09	9.4
20	27	26,773	-46.9		08	10.1
15	24	28,695	-43.3		09	13.1
10	14	31,470	-37.5		09	14.1
7						

+ TRUK, CAROLINE IS.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	28.6	24.8	35	.5
1000	30	84	27.6	24.3	05	.5
950	30	538	24.0	22.0	12	.9
900	30	1,011	21.1	18.0	13	.8
850	30	1,505	18.5	14.7	11	.7
800	30	2,025	16.1	11.5	11	.7
750	30	2,573	13.5	7.7	12	.7
700	30	3,151	10.3	4.3	11	1.2
650	30	3,766	6.9	1.2	10	1.7
600	30	4,420	3.1	-1.5	10	2.4
550	31	5,121	-.8	-7.4	10	2.7
500	30	5,877	-4.8	-12.6	11	2.6
450	30	6,699	-9.6	-18.6	11	3.4
400	30	7,600	-14.9	-26.1	12	3.8
350	30	8,601	-21.5	-33.7	11	3.0
300	30	9,716	-29.8	-40.5	11	2.8
250	30	10,988	-40.3	-49.6	12	3.1
200	30	12,469	-52.9		11	3.3
175	30	13,317	-59.8		10	4.8
150	30	14,263	-67.4		10	5.4
125	30	15,341	-75.0		10	5.8
100	30	16,617	-79.4		08	1.9
80	30	17,898	-74.0		29	1.6
70	30	18,685	-70.3		03	.2
60	30	19,608	-67.1		10	3.1
50	31	20,719	-63.6		10	9.5
40	28	22,101	-60.3		09	19.3
30	27	23,919	-55.2		09	26.8
25	25	25,094	-52.7		09	29.4
20	22	26,545	-49.7		09	31.7
15	21	28,441	-46.4		09	33.6
10	15	31,163	-41.1		09	41.1
7						
5						

* TUCSON, ARIZ.
922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	20.8	8.3	14	2.9
1000						
950						
900	30	998	23.9	7.1	15	2.5
850	30	1,495	21.8	4.4	16	1.0
800	30	2,018	18.1	2.9	20	1.6
750	30	2,567	14.4	-.3	21	2.8
700	30	3,145	9.9	-3.0	21	4.4
650	30	3,756	5.4	-7.5	21	5.7
600	30	4,405	.7	-12.2	20	6.6
550	30	5,098	-3.9	-19.5	22	7.3
500	30	5,843	-8.6	-27.1	23	7.2
450	30	6,652	-14.1	-32.8	24	8.0
400	30	7,535	-20.4	-37.0	24	9.1
350	30	8,512	-27.6	-44.5	24	10.7
300	30	9,598	-36.4	-51.1	25	12.2
250	30	10,836	-46.3		24	14.6
200	30	12,286	-56.1		24	16.5
175	30	13,127	-59.9		25	18.3
150	30	14,082	-63.3		25	18.3
125	28	15,188	-67.5		25	14.6
100	28	16,527	-68.7		24	6.8
80	24	17,859	-67.6		23	.4
70	24	18,669	-64.8		09	3.0
60	24	19,617	-61.6		09	6.1
50	24	20,756	-58.3		09	7.2
40	24	22,171	-55.5		09	9.2
30	24	24,017	-53.3		09	9.5
25	24	25,198	-50.8		08	10.6
20	23	26,660	-47.5		09	11.0
15	21	28,574	-44.1		09	10.5
10	18	31,330	-39.3		09	15.3
7	15	33,807	-33.3		09	15.9
5	5	36,222	-32.1			

* VANDENBERG AFB, CALIF.
1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	11.4	10.5	33	1.0
1000	21	122	11.3	10.4	34	1.5
950	30	541	14.0	8.3	01	2.2
900	30	1,002	18.4	4.1	03	2.0
850	30	1,491	17.0	.5	05	1.3
800	30	2,005	14.5	-3.0	11	.6
750	30	2,547	11.3	-5.2	18	.7
700	30	3,119	7.5	-8.9	18	.9
650	30	3,725	3.6	-12.7	20	.8
600	30	4,371	-.3	-17.7	23	2.0
550	30	5,060	-5.0	-22.7	23	3.4
500	30	5,802	-10.6	-27.7	23	4.7
450	30	6,603	-16.5	-32.3	23	5.3
400	30	7,477	-23.2	-37.6	23	6.9
350	30	8,443	-30.6	-43.6	24	8.0
300	30	9,517	-39.0	-48.7	23	10.0
250	30	10,742	-48.4		24	13.3
200	30	12,181	-57.0		24	16.6
175	30	13,020	-59.8		24	16.0
150	30	13,980	-61.2		24	14.2
125	30	15,107	-63.1		24	10.7
100	30	16,474	-64.5		23	6.6
80	30	17,838	-64.1		22	1.4
70	30	18,659	-62.3		11	2.3
60	[illegible]	19,616	-60.3		10	4.0
50	30	20,758	-58.4		10	5.1
40	30	22,171	-55.8		09	6.6
30	30	24,014	-53.1		09	8.2
25	[illegible]	25,194	-51.2		09	9.2
20	[illegible]	26,651	-48.5		09	10.0
15	[illegible]	28,565	-44.7		09	10.1
10	[illegible]	31,310	-39.3		09	12.9
7	[illegible]	33,783	-34.5		09	15.3
5	[illegible]	36,127	-31.6			

VICTORIA, TEXAS
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	33	22.5	21.4	10	.3
1000	30	105	24.1	22.6	16	1.3
950	30	554	22.1	18.5	17	5.7
900	30	1,024	20.5	9.7	18	6.8
850	30	1,517	18.3	4.8	18	6.0
800	30	2,034	16.1	-1.3	17	4.7
750	30	2,580	13.2	-5.8	17	3.4
700	30	3,156	9.4	-6.1	17	2.1
650	30	3,766	5.2	-6.8	14	1.6
600	30	4,415	1.0	-11.1	08	2.0
550	30	5,109	-3.1	-15.6	04	2.0
500	30	5,858	-7.5	-23.9	34	2.6
450	30	6,671	-12.4	-31.0	31	4.5
400	30	7,561	-18.3	-38.4	30	5.6
350	30	8,547	-25.5	-43.3	29	6.7
300	30	9,644	-34.0	-51.1	29	9.6
250	29	10,892	-43.7		29	12.1
200	29	12,358	-54.0		28	14.3
175	29	13,205	-59.3		28	15.5
150	28	14,158	-64.7		28	15.6
125	28	15,258	-69.8		29	11.2
100	28	16,574	-72.9		30	6.3
80	28	17,889	-70.2		03	3.6
70	28	18,690	-66.6		04	5.7
60	28	19,632	-63.0		08	8.7
50	27	20,765	-59.5		10	9.4
40	27	22,173	-56.4		09	9.8
30	26	24,018	-52.5		09	11.7
25	24	25,196	-50.2		09	11.9
20	[illegible]	26,673	-47.2		09	12.0
15	[illegible]	28,587	-44.7		08	12.3
10	13	31,310	-41.3		06	13.7
7	5	33,751	-37.2			
5						

* WAKE IS., PACIFIC AREA
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	26.8	23.8	09	5.9
1000	30	122	25.5	22.7	09	6.7
950	30	573	22.0	20.5	10	8.0
900	30	1,042	19.4	16.6	10	7.6
850	30	1,533	16.5	13.2	10	7.1
800	30	2,049	14.4	8.2	10	6.9
750	30	2,593	11.9	2.3	11	5.6
700	30	3,168	9.0	-2.5	11	5.0
650	30	3,778	5.7	-6.8	11	4.2
600	30	4,420	2.1	-11.5	11	3.7
550	30	5,126	-2.0	-15.5	10	3.2
500	30	5,878	-6.3	-19.9	10	2.1
450	30	6,695	-11.1	-24.7	07	1.6
400	30	7,590	-17.1	-30.8	03	.8
350	30	8,581	-24.1	-38.3	31	1.9
300	30	9,683	-32.8	-46.7	31	3.8
250	30	10,941	-42.6		29	6.9
200	30	12,409	-54.3		28	9.9
175	30	13,253	-60.8		28	10.9
150	[illegible]	14,196	-67.9		29	10.5
125	[illegible]	15,273	-74.4		31	8.1
100	[illegible]	16,558	-77.5		01	4.6
80	21	17,846	-73.1		07	6.6
70	[illegible]	18,637	-68.9		08	8.0
60	21	19,567	-65.1		08	9.5
50	[illegible]	20,688	-61.5		09	11.8
40	[illegible]	22,083	-58.1		09	13.9
30	[illegible]	23,915	-53.5		08	18.1
25	[illegible]	25,097	-50.8		09	20.9
20	[illegible]	26,561	-47.8		09	22.5
15	[illegible]	28,491	-44.2		09	25.0
10						
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

	* WALLOPS IS., VA. NASA 1012 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	17.6	14.9	23	1.7
1000	28	118	18.2	13.6	23	3.0
950	30	545	16.9	10.5	25	5.2
900	30	1,004	14.2	8.1	24	5.0
850	30	1,485	11.5	5.1	26	5.5
800	30	1,990	8.5	2.1	26	6.5
750	30	2,521	5.6	-3.2	26	7.3
700	30	3,083	2.8	-8.0	26	7.5
650	30	3,680	-.1	-13.0	26	8.3
600	30	4,317	-3.5	-16.9	27	9.7
550	30	5,000	-7.3	-21.0	27	11.6
500	30	5,736	-11.8	-25.7	27	11.1
450	30	6,535	-16.8	-30.9	27	12.0
400	30	7,409	-23.2	-37.8	27	12.5
350	30	8,376	-30.3	-43.7	27	13.8
300	30	9,451	-38.6	-49.4	27	14.7
250	30	10,679	-48.0		27	15.9
200	30	12,121	-56.4		28	15.4
175	29	12,967	-59.3		28	14.2
150	29	13,927	-61.6		28	12.3
125	29	15,054	-62.8		28	8.9
100	29	16,431	-62.3		29	3.9
80	29	17,816	-60.6		34	.3
70	29	18,650	-59.5		09	1.9
60	29	19,618	-58.3		09	3.9
50	29	20,789	-56.8		09	5.8
40	29	22,191	-54.6		09	7.7
30	27	24,046	-51.6		09	9.0
25	27	25,235	-49.7		09	9.6
20	24	26,712	-47.1		08	10.3
15	22	28,621	-43.9		09	12.1
10	18	31,381	-38.8		09	15.3
7	14	33,865	-33.6			

	WASHINGTON DULLES INT. AP 1002 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	85	15.4	13.0	27	.7
1000	21	138	16.0	12.2	27	.9
950	30	544	16.3	9.9	29	3.9
900	30	1,003	13.9	8.0	30	5.3
850	30	1,483	11.2	4.3	29	5.2
800	30	1,987	8.5	1.2	28	6.0
750	30	2,519	5.7	-1.5	27	6.8
700	30	3,081	2.7	-5.8	27	7.1
650	30	3,678	.0	-11.4	27	8.4
600	30	4,316	-3.4	-16.5	28	10.0
550	30	4,999	-7.3	-21.0	28	10.5
500	30	5,735	-11.7	-26.9	28	11.1
450	30	6,535	-16.7	-31.6	28	12.0
400	30	7,410	-22.7	-38.6	28	12.5
350	30	8,379	-29.6	-44.3	28	14.1
300	30	9,457	-38.0	-49.4	28	15.1
250	30	10,687	-47.7		28	15.0
200	29	12,134	-55.7		29	17.5
175	29	12,980	-57.9		29	15.9
150	29	13,947	-60.0		29	12.1
125	29	15,081	-61.7		28	10.0
100	29	16,465	-60.8		30	5.8
80	29	17,855	-59.9		32	1.9
70	29	18,693	-58.4		04	1.1
60	29	19,665	-57.2		07	2.2
50	29	20,822	-56.0		08	5.0
40	28	22,241	-54.2		09	7.0
30	27	24,101	-50.7		09	8.3
25	27	25,294	-48.8		09	8.8
20	25	26,773	-46.8		08	9.8
15	24	28,696	-43.5		09	12.2
10	19	31,453	-38.0		09	15.3
7	5	33,925	-33.9			

	WAYCROSS, GA. 1008 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	44	19.2	17.3	36	.2
1000	28	122	20.5	17.3	06	.4
950	30	558	19.9	13.4	28	.5
900	30	1,023	18.1	8.9	31	1.5
850	30	1,511	15.7	3.5	31	2.5
800	30	2,024	13.4	-1.2	30	2.9
750	30	2,564	10.7	-5.0	29	3.7
700	30	3,136	7.6	-10.7	29	4.8
650	30	3,742	4.0	-14.1	29	6.6
600	30	4,388	-.1	-18.3	30	7.4
550	30	5,079	-4.3	-21.0	29	7.9
500	30	5,824	-8.9	-28.0	28	8.0
450	30	6,633	-13.7	-33.0	28	8.8
400	30	7,518	-19.8	-39.0	29	9.8
350	30	8,498	-26.7	-43.5	29	10.7
300	30	9,589	-35.0	-50.1	29	11.9
250	30	10,835	-45.0		29	14.2
200	30	12,291	-55.6		29	16.2
175	30	13,131	-61.1		29	17.2
150	30	14,078	-65.4		30	15.4
125	30	15,180	-67.8		30	12.5
100	30	16,521	-67.9		31	6.9
80	30	17,869	-65.2		36	3.4
70	30	18,686	-63.3		06	4.3
60	30	19,641	-60.5		08	6.3
50	29	20,781	-58.1		08	8.7
40	29	22,196	-54.9		09	10.6
30	29	24,051	-51.4		09	9.6
25	29	25,241	-49.8		09	8.9
20	28	26,706	-47.9		08	9.1
15	26	28,617	-44.9		08	10.2
10	20	31,342	-40.2		08	11.7
7						

	WINNEMUCCA, NEV. 869 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,312	13.3	3.1	05	.9
1000						
950						
900						
850	30	1,497	16.6	2.2	05	1.4
800	30	2,012	14.3	-.2	36	.5
750	30	2,553	10.5	-2.7	27	1.7
700	30	3,123	6.2	-5.1	26	3.7
650	30	3,726	1.7	-7.0	25	6.1
600	30	4,365	-2.9	-12.2	24	7.5
550	30	5,049	-7.5	-18.7	24	9.1
500	30	5,785	-12.3	-25.7	24	9.3
450	30	6,581	-17.8	-30.1	25	9.7
400	30	7,451	-24.4	-36.4	24	10.2
350	30	8,412	-31.9	-43.2	24	11.2
300	30	9,479	-40.5	-50.6	24	12.0
250	30	10,696	-50.3		24	13.3
200	30	12,122	-58.7		24	14.9
175	30	12,959	-59.7		24	14.7
150	30	13,925	-59.2		24	12.8
125	30	15,064	-60.5		24	10.4
100	30	16,453	-60.9		24	6.3
80	30	17,840	-60.6		22	2.5
70	30	18,673	-59.7		14	.7
60	30	19,641	-58.2		10	2.6
50	29	20,788	-56.8		10	4.2
40	29	22,209	-55.1		09	5.9
30	28	24,056	-52.4		09	7.7
25	28	25,241	-50.2		08	9.4
20	27	26,709	-47.6		09	11.0
15	25	28,622	-44.3		09	12.9
10	5	31,419	-37.2			
7						

	WINSLOW, ARIZ. 851 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,487	15.0	5.9	20	1.7
1000						
950						
900						
850	24	1,503	15.9	5.1	20	1.8
800	30	2,016	17.7	3.6	24	4.0
750	30	2,564	14.1	.4	24	4.2
700	30	3,141	9.6	-3.1	23	4.8
650	30	3,752	4.9	-6.0	23	5.9
600	30	4,399	.1	-10.2	23	6.1
550	30	5,090	-4.9	-16.1	23	6.3
500	30	5,832	-9.9	-23.3	23	7.8
450	30	6,637	-15.0	-30.3	23	8.5
400	30	7,517	-21.5	-36.4	24	10.4
350	30	8,491	-28.5	-42.7	25	12.4
300	30	9,573	-37.0	-49.1	25	14.5
250	29	10,807	-46.8		25	15.6
200	29	12,254	-56.8		25	17.7
175	29	13,093	-60.4		25	19.2
150	29	14,047	-63.0		25	16.5
125	29	15,162	-65.5		25	13.2
100	29	16,513	-67.5		25	7.5
80	29	17,858	-66.3		21	1.7
70	29	18,672	-63.8		10	1.9
60	29	19,624	-61.0		09	4.4
50	29	20,764	-58.6		09	5.7
40	29	22,175	-55.9		09	7.4
30	28	24,018	-52.9		09	8.9
25	28	25,198	-51.3		09	10.0
20	27	26,654	-48.6		09	10.6
15	25	28,559	-45.7		09	10.7
10	16	31,278	-40.4		09	13.1
7						

	YAKUTAT, ALASKA 1013 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	6.9	5.5	06	1.6
1000	30	119	7.1	5.1	09	1.7
950	30	540	5.2	2.2	14	1.9
900	30	980	2.6	.0	15	2.4
850	30	1,440	.5	-3.3	16	2.1
800	30	1,926	-1.5	-7.1	15	2.4
750	30	2,438	-3.9	-10.7	14	2.8
700	30	2,980	-6.6	-13.5	14	4.0
650	30	3,556	-9.6	-17.1	14	4.6
600	30	4,170	-13.1	-22.4	14	4.8
550	30	4,828	-17.3	-25.5	13	4.9
500	30	5,536	-21.7	-31.4	14	5.6
450	30	6,304	-26.9	-36.6	14	6.3
400	30	7,143	-33.0	-41.3	15	5.5
350	30	8,072	-39.5	-48.5	16	5.4
300	30	9,110	-45.9		16	4.3
250	30	10,313	-48.9		18	3.9
200	29	11,780	-48.8		20	4.4
175	28	12,663	-48.3		20	4.1
150	28	13,679	-48.0		20	3.3
125	27	14,876	-48.4		18	3.0
100	27	16,344	-49.1		16	2.6
80	26	17,806	-49.3		15	2.7
70	25	18,680	-49.0		12	2.5
60	24	19,690	-49.0		10	3.2
50	24	20,889	-48.3		10	5.0
40	23	22,362	-47.3		09	6.3
30	21	24,266	-45.9		09	8.5
25	19	25,478	-45.0		09	9.2
20	19	26,976	-43.3		09	9.7
15	16	28,928	-40.1		09	10.8
10	10	31,721	-34.6			
7						

	+ YAP, CAROLINE IS. 1007 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	28.4	24.6	06	.8
1000	30	78	27.0	24.1	06	.8
950	30	532	23.8	21.4	07	1.5
900	30	1,004	21.0	18.0	07	1.9
850	30	1,498	18.0	15.0	07	1.6
800	30	2,017	15.7	11.8	08	1.7
750	30	2,564	13.0	7.7	08	2.1
700	30	3,142	9.9	3.7	08	2.8
650	30	3,755	6.7	-.4	08	3.6
600	30	4,409	3.0	-4.6	08	4.2
550	30	5,109	-.8	-12.4	08	4.5
500	30	5,864	-5.2	-17.2	08	4.4
450	30	6,686	-9.6	-23.0	08	4.6
400	30	7,586	-15.4	-30.7	07	4.9
350	30	8,583	-22.3	-35.6	07	4.0
300	30	9,694	-30.7	-43.8	09	2.5
250	30	10,963	-40.7	-49.2	10	2.4
200	30	12,442	-53.1		10	1.9
175	30	13,289	-60.0		06	2.3
150	30	14,234	-67.6		05	4.7
125	30	15,313	-74.4		07	7.2
100	30	16,594	-78.9		07	8.5
80	30	17,869	-75.6		07	6.6
70	30	18,651	-70.9		08	5.2
60	30	19,574	-67.1		09	6.5
50	29	20,684	-63.7		09	11.2
40	29	22,063	-60.3		09	17.6
30	29	23,877	-55.7		09	26.0
25	29	25,046	-52.9		09	28.4
20	29	26,499	-49.2		09	30.3
15	27	28,396	-46.9		09	33.1
10	25	31,123	-41.0		09	38.8
7	6	33,546	-37.8			

	YUCCA FLAT, NEV. 879 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,198	15.1	4.1	31	.8
1000						
950						
900						
850	30	1,482	20.4	4.5	25	1.3
800	30	2,003	17.5	1.5	21	4.4
750	30	2,550	13.4	-1.4	21	4.9
700	30	3,126	8.7	-4.3	20	4.1
650	30	3,734	4.1	-7.0	18	3.3
600	30	4,379	-.8	-10.7	18	3.9
550	30	5,068	-5.6	-16.9	20	4.4
500	30	5,808	-10.5	-22.5	22	5.8
450	30	6,611	-15.9	-28.5	23	7.6
400	30	7,487	-22.7	-34.5	23	8.4
350	30	8,455	-30.1	-41.7	23	10.3
300	30	9,530	-38.9	-50.0	23	12.7
250	30	10,756	-48.5		23	16.4
200	30	12,193	-57.6		24	18.4
175	29	13,031	-59.9		24	17.4
150	29	13,990	-61.2		24	15.8
125	28	15,118	-62.4		24	12.0
100	27	16,487	-64.3		24	7.4
80	23	17,852	-63.0		20	1.8
70	23	18,677	-61.6		12	2.2
60	23	19,637	-59.8		11	3.4
50	23	20,782	-57.8		09	4.7
40	22	22,193	-55.7		09	6.8
30	22	24,038	-52.7		09	8.2
25	21	25,216	-50.5		09	9.7
20	21	26,679	-48.1		09	11.0
15	19	28,594	-44.2		09	11.1
10	11	31,345	-39.2			
7						

Note: All observations scheduled at 1200, G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
June									
1------	0.74	0.83	0.94	1.10	1.30	1.02	0.87	----	----
2------	.74	.82	.95	1.11	1.32	----	(0.91)	(0.76)	----
3------	.78	.87	.97	1.15	1.29	----	----	----	----
4------	.65	.72	.84	1.00	1.25	----	----	----	----
5------	.63	----	----	----	1.31	1.04	(0.66)	----	----
8------	----	----	----	1.11	1.30	----	----	----	----
9------	.79	.86	.96	1.11	1.34	----	----	----	----
10-----	.73	.78	----	1.09	1.31	1.13	.99	.89	.83
11-----	(.61)	(.62)	(.78)	(.93)	(1.24)	----	----	----	----
13-----	----	----	----	1.08	1.32	(1.13)	----	----	----
14-----	----	----	----	1.06	----	----	----	----	----
15-----	.72	.80	.94	1.07	1.32	1.18	----	----	----
17-----	.64	.70	.85	1.02	----	----	----	----	----
18-----	.83	.91	1.03	1.17	----	----	----	----	----
19-----	----	----	----	----	1.41	1.27	1.16	1.04	.96
20-----	.89	.97	1.07	(1.21)	1.38	(1.15)	(.98)	----	----
21-----	(.70)	(.74)	----	(1.13)	(1.30)	----	----	----	----
22-----	----	----	(.96)	(1.14)	(1.33)	----	----	----	----
23-----	----	.88	1.00	1.10	1.30	----	----	----	----
24-----	----	----	----	1.24	1.41	1.22	1.08	.97	.91
25-----	----	----	----	1.31	1.44	1.26	1.14	1.03	.97
26-----	1.03	1.09	1.19	1.30	1.45	1.27	1.13	1.02	.94
27-----	.95	1.01	1.12	1.23	1.39	1.20	1.05	.94	.87
28-----	.86	.93	1.05	1.18	1.36	1.12	.99	.86	.78
29-----	.73	.83	.92	1.10	1.31	----	----	----	----
30-----	.79	.85	.96	1.07	1.27	1.07	.92	.81	.75
Averages	0.78	0.87	0.99	1.13	1.34	1.16	1.04	0.95	0.88

TUCSON, ARIZ.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.56	3.67	2.71	1.83	*	1.83	2.71	[illegible]	[illegible]
June									
1-----	0.65	0.76	0.89	1.04	1.31	[illegible]	----	[illegible]	[illegible]
2-----	.69	.78	.91	1.07	1.29	----	----	----	----
3-----	----	.72	.85	----	1.25	----	----	----	----
6-----	----	----	----	----	1.33	----	----	----	----
7-----	----	.89	.99	1.15	1.38	----	----	----	----
8-----	.77	.87	1.01	1.17	1.36	----	----	----	----
10----	.71	.82	.94	1.10	1.35	1.07	.88	[illegible]	[illegible]
11----	.79	.87	.99	1.13	1.35	----	----	----	----
12----	----	.64	.78	1.00	1.14	----	----	----	----
13----	.59	----	.84	.96	1.27	----	----	----	----
14----	.70	.79	.90	----	1.30	1.08	.86	----	.67
15----	.82	.92	1.03	1.18	1.36	1.06	.91	.79	.66
16----	.77	.86	.98	1.13	1.36	1.23	1.09	.98	.89
17----	.82	.91	1.04	1.16	1.38	1.22	----	----	----
18----	.87	.97	----	1.20	----	----	1.06	----	----
19----	.82	.91	1.04	1.17	1.35	1.16	1.03	.92	.82
20----	.74	.84	.97	1.12	1.31	----	----	----	----
21----	.64	.74	.88	1.03	1.23	----	----	----	----
22----	.57	.68	.81	1.00	----	.94	----	----	----
23----	.61	----	.86	1.14	1.42	1.28	1.14	1.04	.94
24----	.90	1.00	1.11	1.27	1.46	1.32	1.18	1.09	.99
25----	.95	1.05	1.15	1.28	1.45	1.29	1.14	[illegible]	.96
26----	.99	1.07	1.17	1.29	1.45	1.27	1.14	1.04	.93
27----	.95	1.05	1.15	1.27	1.48	1.27	1.13	1.01	.89
28----	.93	1.04	1.15	1.28	1.48	1.26	1.09	.97	.86
29----	.74	.85	.99	1.15	1.39	1.16	.99	.87	.76
30----	.66	.77	.43	1.09	1.37	1.12	.94	.84	.72
Averages	0.77	0.87	0.97	1.14	1.35	1.17	1.04	[illegible]	0.81

OMAHA, NEBR.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
June									
1-----	0.58	0.67	----	0.96	----	----	----	----	----
8-----	----	----	----	----	HM1.08	----	----	----	----
9-----	----	----	----	HM .79	HM1.14	----	----	----	----
14----	----	----	----	----	----	1.10	0.97	0.70	0.33
15----	----	----	----	----	1.24	----	----	----	----
21----	.80	.88	1.03	1.18	----	----	.84	----	----
22----	----	.88	1.00	----	----	1.11	.91	.78	.66
23----	.69	.79	.93	1.09	----	----	----	----	----
28----	----	----	1.00	1.12	----	----	----	----	----
29----	.72	.83	.90	1.09	----	----	----	----	----
30----	.74	.83	.95	1.10	----	----	----	----	----
Averages	0.71	0.81	0.97	1.10	1.15	1.11	0.91	0.74	0.50

MADISON, WIS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
June									
1-----	M 0.52	M 0.64	M 0.77	M 0.97	S 1.23	----	----	----	----
6-----	----	----	----	----	S 1.29	----	----	----	----
7-----	----	M .62	----	M .98	----	----	----	----	----
10----	S .89	S .99	S 1.20	S 1.24	S 1.36	S 1.19	----	----	----
15----	----	----	----	----	----	S 1.16	S 1.00	----	----
17----	S .83	S .92	S 1.02	S 1.15	----	----	----	----	----
18----	----	----	----	S .97	----	S .94	[illegible] .64	----	----
19----	----	----	H .34	H .52	----	----	----	----	----
21----	S .84	S .96	S 1.06	S 1.21	S 1.38	----	----	----	----
22----	S .77	S .87	S 1.00	S 1.19	S 1.31	S 1.20	----	----	----
23----	----	----	----	S 1.11	S 1.38	S [illegible]	----	----	----
25----	I .47	I .59	M .73	M .92	----	----	----	----	----
30----	S .67	S .76	S .90	S 1.07	S 1.31	S 1.06	----	----	----
Averages	0.71	0.79	0.88	1.03	1.32	1.12	0.82	----	----

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	754	733	702	589	773	473	274	659	703	746	628	233	728	566	702	663	502	753	817	786	637	630	630	792	805	810	795	739	699	724		668
AMES IOWA	740	663	667	391	431	680	326	592	608	741	679	636	430	183	705	280	237	652	211	458	704	788	797	727	523	599	601	574	716	752		570
ANNETTE ALASKA	406	204	641	126	455	410	378	633	500	569	162	182	190	377	431	527	502	570	381	442	363	701	695	425	424	117	253	428	287	615		413
APALACHICOLA FLORIDA	632	665	587	618	649	643	576	586	588	475	598	617	613	603	655	681	647	145	79	---	648	519	655	364	235	599	613	624	452	648		552
ARGONNE NAT. LAB.	700	591	576	644	256	665	620	409	104	759	728	213	547	446	662	719	687	698	501	423	520	711	537	385	458	510	624	135	236	644		524
ASTORIA OREGON	723	720	431	603	---	---	---	---	88	708	564	215	705	402	324	514	577	732	550	328	223	297	423	256	321	317	480	400	561	708		468
ATLANTA GEORGIA	677	635	610	581	586	554	583	562	546	485	623	399	504	535	548	514	484	432	100	77	658	662	682	647	350	435	137	345	460	490		497
BARROW ALASKA	339	361	436	242	377	432	518	559	628	622	445	653	658	374	661	556	553	425	428	340	384	407	309	381	449	695	692	571	440	697		488
BETHEL ALASKA	108	268	---	331	567	---	332	---	---	---	446	430	---	605	705	654	458	475	---	324	438	207	256	229	---	469	487	726	762	634		450
BISMARCK N.DAK.	753	692	760	563	679	793	687	585	469	279	739	722	775	772	699	786	377	597	196	857	---	591	385	477*	613	581	401	772	797	785		627
BLUE HILL MASS.	126	599	662	567	300	466	224	201	439	452	623	614	299	491	516	320	286	182	143	406	483	127	312	410	463	328	608	520	582	111		395
BOISE IDAHO	697	672	665	792	702	425	469	391	473	322	822	822	806	631	633	581	792	814	765	787	810	752	626	779	606	758	784	795	773	803		685
BROOKINGS SOUTH DAK.	668	369	507	176	515	597	231	572	539	642	431	591	359	523	682	490	268	241	199	641	679	657	631	206	603	526	421	590	676	606		494
BROWNSVILLE TEXAS	313	392	377	510	484	601	316	258	294	369	152	310	---	---	---	544	651	672	734	752	732	755	730	730	728	729	603	726	701	601		547
BURLINGTON VERMONT	227	198	692	129	700	512	232	170	275	128	781	378	618	421	533	480	719	673	502	572	261	319	228	147	185	454	298	680	461	592		419
CAPE HATTERAS N.C.	485	731	714	725	618	672	549	735	661	216	764	734	753	690	682	689	714	679	436	188	227	721	672	625	685	477	665	652	547	629		611
CARIBOU MAINE	70	246	350	---	628	491	132	545	64	42	---	---	551	437	330	426	549	626	539	544	325	257	367	97	128	161	371	372	566	546		362
CHARLESTON S.C.	708	703	682	643	626	645	561	674	621	473	729	635	700	678	650	620	622	439	---	108	558	704	716	715	476	440	510	379	468	658		591
CLEVELAND OHIO	468	476	378	660	725	330	739	712	332	613	649	436	421	---	247	---	537	661	573	381	62	61	184	59	206	534	---	390	313	275		423
COLUMBIA MISSOURI	767	734	690	439	610	624	630	678	695	469	795	642	571	298	697	591	729	715	543	601	758	809	787	781	764	563	688	755	760	757		665
DAVIS CALIFORNIA	725	527	563	669	713	440	701	697	239	602	781	726	754	752	757	770	761	749	756	758	773	782	544	751	751	750	738	752	742	739		692
DODGE CITY KANSAS	804	842	817	829	823	833	835	694	759	283	749	---	382	---	814	728	709	810	807	781	799	769	725	790	819	803	673	672	544	679		735
EL CENTRO CALIF. NPF	648	646	633	650	495	551	428	677	666	673	677	673	670	660	653	663	665	664	686	629	611	675	682	690	703	709	712	689	687	667		651
EL PASO TEXAS	715	715	606*	680	225	225	247	599	714	702	537	387	714	679	706	616	676	696	730	693	661	682	614	719	738	718	710	756	748	715		631
ELY NEVADA	395	442	387	391	706	293	445	380	657	741	738	713	600	684	727	679	542	520	---	593	474	194	563	588	714	689	742	735	739	623		576
EPPLEY NEWPORT R.I.	140	678	682	570	460	524	---	---	388	424	683	576	289	266	496	535	122	89	96	426	424	312	123	---	563	554	580	598	597	226		423
FAIRBANKS ALASKA	366	340	526*	343	666	284	592	681	469	707	668	500	600	661	612	591	577	182	512	578	332	425	378	547	649	645	524	443	489	548		515
FLAMING GORGE UTAH	459	441	319	393	461	734	565	458	422	792	719	704	545	532	402	564	360	445	809	697	534	626	616	765	587	524	820	793	808	766		589
FORT WORTH TEXAS	664	593	633	654	628	566*	581	364	548	520	527	430	552	549	305	629	587	524	653	638	331	---	534	626	645	662	661	640	422	579		560
FRESNO CALIFORNIA	623	595	683	655	694	312	618	571	481	611	759	730	714	735	737	746	747	731	732	712	708	700	739	743	744	736	730	724	717	706		681
GENEVA NEW YORK	284	635	566	457	761	476	787	258	258	597	735	169	146	569	525	440	655	651	501	591	97	93	110	280	335	451	696	726	312	145		443
GLASGOW MONTANA	685	725	653	725	722	---	---	---	132	565	605	656	656	712	608	719	622	686	529	768	336	670	245	629	568	518	683	718	744	716		615
GLOUCESTER POINT VA	515	738	728	739	726	544	779	760	634	269	784	771	635	405	656	752	438	700	490	278	183	407	204	737	724	722	608	553	310	703		583
GRAND JUNCTION COLO.	703	556	510	571	609	666	603	404	561	718	724	502	570	645	700	661	525	650	685	697	690	415	530	773	638	745	703	733	710	---		628
GREAT FALLS MONTANA	686	765	509	755	791	---	---	---	504	637	704	600	793	739	582	613	773	319	721	542	418	714	250	632	718	617	605	781	710	689		636
GREENSBORO N.C.	754	729	711	642	653	539	697	684	458	392	755	744	648	660	668	605	457	591	358	130	217	681	385	388	715	649	669	359	557	494		566
INDIANAPOLIS INDIANA	701	650	527	631	485	394	682	184	203	754	737	503	153	522	334	695	503	603	624	495	586	541	492	272	411	523	656	327	377	635		507
ITHACA NEW YORK	272	508	537	286	710	361	745	272	109	354	702	252	227	480	533	294	477	372	455	512	78	58	164	223	299	601	614	596	292	202		386
LAKE CHARLES LA.	654	410	645	653	593	598	572	531	361	306	515	396	408	570	378	229	586	652	662	637	444	502	564	568	631	683	566	529	479	446		526
LAKELAND FLORIDA	439	540	534	514	598	604	566	534	405	481	353	409	460	484	589	506	446	55	391	476	412	488	468	313	355	493	516	570	603	531		471
LANDER WYOMING	563	619	508	497	465	626	582	533	551	638	644	704	745	748	459	---	570	577	494	754	772	498	515	453	665	628	764	756	764	770		616
LAS VEGAS NEVADA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
LITTLE ROCK ARKANSAS	689	677	658	536	631	578	551	502	307	603	587	600	481	269	614	653	654	578	602	575	700	600	452	350	535	400	451	---	---	488		547
LOS ANGELES CALIF.	---	---	---	---	---	---	---	---	247	703	665	692	642	654	651	594	386	493	501	---	---	---	---	---	---	---	---	---	---	---		---
LOS ANGELES CALIF U	617	562	504	380	573	649	244	155	222	626	690	694	644	707	720	669	495	604	567	259	674	160	469	467	601	647	718	685	676	582		542
MADISON WISCONSIN	723	642	667	689	240	729	615	682	236	789	757	556	654	335	743	274	713	740	565	298	786	778	775	544	457	525	611	246	482	721		586
MANHATTAN KANSAS	724	734	689	671	694	680	696	693	656	580	526	670	415	371	747	684	640	674	695	454	384	665	623	658	736	677	580	744	705	677		638
MATANUSKA ALASKA	251	164	363	293	415	299	620	704	688	574	349	643	289	465	554	125	554	---	619	649	440	458	212	561	563	---	311	163	286	144		420
MEDFORD OREGON	704	584	736	657	683	418	460	451	184	409	679	750	722	704	617	673	745	759	741	730	747	723	631	743	689	715	743	713	727	728		652
MIAMI FLORIDA	196	184	265	387	303	568	628	543	440	527	386	300	330	300	236	362	302	89	420	442	641	612	625	623	410	592	570	632	546	478		431
MIDLAND TEXAS	742	738	718	642	643	683	530	550	586	664	379	283	696	675	722	532	566	690	757	732	713	710	712	642	575	736	753	740	515	590		640
NASHVILLE TENNESSEE	703	649	611	621	569	519	467	699	---	---	714	450	589	597	256	486	303	388	492	362	522	687	732	725	566	517	470	423	627	616		549
NEW YORK CENTRAL PK	349	483	609	538	449	240	664	545	530	485	722	422	240	89	483	147	325	36	80	333	58	12	66	279	115	82	511	506	207	353		332
NORTH OMAHA NEBRASKA	738	608	469	345	657	699	532	707	643	637	442	718	343	471	772	343	613	538	497	662	776	700	729	460	677	378	568	708	732	714		596
OAK RIDGE TENNESSEE	690	689	665	488	521	454	657	634	364	525	731	604	565	618	600	244	274	571	387	221	420	476	729	714	617	543	481	210	539	607		528

SOLAR RADIATION TOTALS– Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	673	663	668	621	645	634	642	560	554	461	673	361	465	543	314	626	578	602	619	637	628	650	183	411	590	653	548	608	465	583		562
PAGE ARIZONA	682	459	595	503	493	451	301	609	590	584	725	699	654	538	683	705	699	700	626	640	518	361	715	727	712	735	727	708	655	704		617
PALMER ALASKA	244	236	350	316	393	326	594	638	615	547	313	533	288	435	532	212	515	385	575	603	450	429	276	403	571	565	371	170	288	171		411
PHOENIX ARIZONA	648	669	563	459	602	485	380	672	555	671	696	667	667	667	671	641	691	656	691	668	647	442	701	703	716	714	720	705	686	670		637
PORTLAND MAINE	121	600	550	120	598	549	121	278	494	185	609	637	585	576	459	124	528	287	177	330	281	112	218	155	365	301	463	555	394	129		363
PROSSER WASHINGTON	748	725	470	644	720	595	508	586	551	322	504	638	735	617	630	716	683	711	713	664	640	620	461	358	---	570	723	759	747	687		622
RAPID CITY S.DAK.	539	494	367	419	574	489	528	645	451	386	656	509	614	436	506	184	539	372	259	659	397	622	628	597	448	551	359	549	572	345		490
RENO NEVADA	534	338	539	435	543	248	258	394	438	635	649	508	---	---	---	---	---	---	---	---	643	612	639	635	627	624	621	629	614	641		537
RICHLAND 25 NW WASH.	768	754	356	643	740	617	397	619	---	264	778	559	676	549	644	757	740	797	695	627	728	598	323	319	407	587	747	782	775	783		622
RIVERSIDE CALIFORNIA	714	595	692	722	433	495	544	380	327	576	674	658	661	607	629	642	532	549	644	287	598	181	497	569	617	578	669	660	634	617		566
RUSTON LOUISIANA	706	707	690	685	630	643	515	---	396	493	515	623	410	301	396	352	656	648	652	657	548	326	301	545	241	584	607	554	215	370		516
SAINT CLOUD MINN.	739	536	712	645	549	735	679	620	612	785	496	671	497	639	779	349	664	258	201	541	708	763	779	710	713	543	385	444	679	747		606
SALT LAKE CITY	621	430	522	325	499	451	399	561	591	725	749	743	761	743	642	574	410	540	770	747	718	533	661	594	632	659	749	---	---	719		610
SAN ANTONIO TEXAS	---	---	645	688	673	708	608	---	---	---	---	---	---	530	387	---	321	656	662	696	697	593	633	566	724	751	698	698	702	587		630
SANTA MARIA CALIF.	677	636	653	624	712	673	457	208	602	691	690	735	651	624	698	721	586	517	642	651	566	397	477	579	581	657	689	685	717	710		617
SAULT STE MARIE MICH	682	711	652	759	538	769	453	412	533	792	349	166	306	168	603	679	771	792	560	124	536	449	177	397	381	623	748	729	649	527		535
SEATTLE TACOMA WASH.	708	764	734	643	594	671	387	562	395	179	481	223	552	266	237	391	601	725	776	198	304	465	139	305	448	180	535	634	436	761		476
SEATTLE WASH. UNIV.	594	661	618	536	565	577	393	518	300	159	447	175	417	285	344	380	500	621	658	197	271	371	136	257	190	127	328	570	417	669		409
SPOKANE WASHINGTON	745	735	155	622	721	722	409	348	264	162	414	283	508	645	671	391	683	722	572	392	608	652	450	257	236	481	581	755	754	770		524
STERLING VIRGINIA	702	586	714	---	652	156	780	739	627	669	772	746	375	264	471	362	234	298	381	257	84	168	145	464	496	574	660	381	266	446		464
SWAN ISLAND W.I.	659	657	624	680	685	685	645	561	655	626	590	188	301	317	78	133	275	559	526	667	609	666	682	---	473	580*	582	707	620*	508		536
TALLAHASSEE FLA	---	---	---	---	---	---	---	661	643	487	374	419*	---	---	492*	713	582	244	76	274*	679	641	681	426	129	459	604	603	363	269		467
TAMPA FLORIDA	631	576	551	500	565	692	633	447	463	581	425	595	387	528	521	511	464	47	459	504	378	568	599	372	403	667	607	671	653	664		522
TUCSON ARIZONA	702	624	590	437	329	434	651	515	517	707	629	564	607	704	725	736	641	663	737	635	510	666	736	765	758	757	768	771	748	739		646
UPPER MARBORO MD.	614	626	696	663	572	171	754	719	597	468	774	721	360	350	544	498	177	154	566	267	110	161	189	433	537	589	626	403	215	392		465
WAKE ISLAND PACIFIC	644	543	308	413	388	462	635	610	613	665	345	624	624	[illegible]	681	684	684	[illegible]	662	676	674	261	680	652	658	---	645	636	665	659		591

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

U Indicates Urban sites.

Tucson is corrected by a factor of 1.2 from July 1971 on.

The solar radiation data in this table form the basis for the analyses in Charts VII. A, and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska. JUNE 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	82	80	151	130	237	209	324	327	334	285	157	317	109	287	358	42	313	[illegible]	308	358	252	255	166	234	342	395	230	71	189	82		226

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (· 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	16.57	19.13	18.89	11.94	14.14	19.13	10.11	16.82	16.57	20.60	20.11	18.40	13.40	8.28	20.23	10.60	10.11	19.13	7.07	13.65	19.50	22.79	23.03	21.82	15.35	17.18	16.45	18.40	20.84	21.33		16.71

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. **The data are presented in the code λs Ω Ω Ω** defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O3

Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. **The code λs** designates the type of measurement made.

SOLAR RADIATION TOTALS – LATE REPORTS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OCTOBER 1971																																
CHINA LAKE CAL.	491	485	477	466	461	452	444	438	434	429	425	421	417	412	411	427	404	406	395	338	394	373	367	336	195	372	364	183	373	359	357	396
NOVEMBER 1971																																
CHINA LAKE CAL.	355	351	352	333	337	333	322	312	263	271	164	317	296	321	318	305	310	173	298	228	171	292	282	284	261	273	196	276	---	---		286
DECEMBER 1971																																
CHINA LAKE CAL.	286	153	237	273	271	270	283	276	272	272	273	233	259	265	262	266	267	150	260	256	136	122	138	50	114	230	36	182	253	263	271	222
SEATTLE WASH. UNIV.	86	26	56	33	34	110	79	49	50	32	38	58	47	83	107	40	44	66	53	47	76	84	40	96	53	145	172	51	86	76	90	68
JANUARY 1972																																
GAINESVILLE FLORIDA	337	201	192	269	195	182	414	384	377	201	278	222	343	38	72	412	380	234	309	292	266	102	389	281	93	303	411	374	417	238	235	272
FEBRUARY 1972																																
FAIRBANKS ALASKA	24	23	48	---	---	---	59	46	46	88	45	77	58	---	---	147	---	---	---	---	170	42	54	155	95	119	151	149	160			88
LARAMIE WYOMING	207	344	305	317	293	293	226	298	95	375	364	329	241	336	252	326	349	267	337	260	228	398	326	189	303	245	255	406	311			296
MARCH 1972																																
GENEVA NEW YORK	149	170	243	335	371	440	282	356	424	435	245	142	154	66	331	166	152	266	503	406	204	107	165	256	409	567	331	549	498	135	515	303
PAGE ARIZONA	---	---	---	---	409	445	452	461	470	465	425	416	476	407	451	512	509	511	491	407	526	462	550	541	530	446	409	570	394	---	---	474
SWAN ISLAND W I	557	563*	551*	558*	515	541	586	528	577	497	514	564	275	333	588	608*	498	606*	613	619	601	622	500	529*	630	608	610	636	626	556	564	557
UPPER MARLBORO	383	301	76	330	323	471	344	234	475	359	440	282	347	35	276	358	106	377	398	377	314	239	414	420	307	572	376	566	395	160	222	335
APRIL 1972																																
LARAMIE WYOMING	441	228	586	358	497	454	504	573	---	457	522	468	521	410	670	665	547	547	313	436	461	356	685	684	422	279	379	680	464	541		488
MAY 1972																																
LOS ANGELES CALIF. U	634	646	563	375	249	314	428	538	634	538	632	646	670	679	628	622	463	214	229	360	727	690	647	242	284	559	455	600	643	655	554	523
PROSSER WASHINGTON	576	624	625	625	636	583	430	219	615	676	632	666	614	---	335	409	243	700	622	465	158	596	688	745	717	746	682	667	710	677	661	538
SEATTLE WASH. UNIV.	455	532	462	565	268	166	204	160	411	561	499	564	527	566	206	392	152	359	632	463	224	184	---	332	613	634	560	580	562	643	235	439

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

U Indicates Urban sites

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

TOTAL OZONE DATA — LATE REPORTS

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s ϱ ϱ ϱ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O3
NOVEMBER 1971																																
BISMARCK, N. DAK.	00289	00324	00315	04297	00325	36339	00283	00301	03298	35290	04292	00281	00311	34313	34297	34324	35289	35300	-	34306	00306	00320	34351	35305	35325	-	35336	-	00328	-		309
BOULDER, COLO.	00283	00309	00295	00276	05298	-	-	00309	05301	00268	04261	03259	-	-	04307	05328	-	03325	00291	-	-	04332	05350	00302	-	-	-	-	00331	00333		303
GREEN BAY, WIS.	04295	04294	00326	00314	00300	00350	00363	04323	00327	00314	06325	04327	04359	00311	02314	04308	05283	35294	-	35296	00361	00327	04341	34375	35328	-	00340	33348	-	00341		325
HUANCAYO, PERU	00276	00268	00261	00263	00265	00262	00271	00260	00260	00263	00268	00274	00277	00274	00271	00268	00268	00268	00263	00267	00269	00264	00270	00274	00272	00278	05280	00273	00262	00263		268
MAUNA LOA, HAWAII	00262	00275	04279	00279	00273	-	-	00267	00271	00274	00282	00284	-	-	00280	00295	00271	00271	00289	-	-	00280	06288	05262	-	00274	-	-	00274	00269		276
NASHVILLE, TENN.	00256	04274	00283	00315	00292	00286	00299	-	04306	00311	00308	00284	00275	00267	00267	00251	00248	00248	-	00260	00275	00297	-	-	-	-	-	00303	05324	05313		284
WALLOPS ISLAND, VA.	00250	00266	-	00289	00292	00281	00301	00301	00293	00332	00335	-	00297	00277	00292	00271	00256	00260	00256	00296	05304	00318	00309	04307	06314	00294	-	00291	-	00308		292
DECEMBER 1971																																
BISMARCK, N. DAK	00363	00344	-	35356	00365	-	-	00359	35310	00314	20377	20391	-	35311	35362	33357	-	00350	35363	35366	35341	35341	-	-	-	-	-	-	-	-	-	351
BOULDER, COLO.	05336	03325	02338	-	-	00314	05332	00347	00292	00336	-	-	00364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	332
GREEN BAY, WIS.	00347	00351	02354	04349	-	-	05345	35335	35331	-	02315	33331	33348	35379	-	34355	00365	34349	34341	36340	00348	-	35299	00307	35314	34309	-	00325	00313	-	00353	338
HUANCAYO, PERU	00259	00256	00259	00270	00264	00266	00259	00268	00265	00266	00270	00271	00271	00269	00265	00266	00271	00277	05278	05268	00274	00274	00275	-	00272	00273	00269	00270	00280	00272	00277	269
MAUNA LOA, HAWAII	00275	00285	00292	-	-	00286	00277	00269	00278	00279	-	-	00294	00277	00256	00283	00258	-	-	00261	00296	00304	00298	-	-	-	00281	00285	00307	00325	-	284
NASHVILLE, TENN.	00287	04269	-	-	-	35302	-	-	-	-	00256	-	00271	04287	00284	34276	34289	00307	35298	34296	04316	00312	35293	34301	35298	05285	05285	04290	04303	00289	00271	290
WALLOPS ISLAND, VA.	00311	00297	05291	-	00293	00270	052[illegible]9	05289	00260	00260	00259	00240	00270	00272	-	00284	-	00308	00297	-	04319	00310	-	-	00317	00307	00301	00302	00314	05301	00299	290

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded ϱ ϱ ϱ) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λ s designates the type of measurement made.

CORRECTIONS

Page 283: Oregon	Storm Summary: Tornadoes:	Number 1, Days 1.
Page 341: Oregon	Storm Summary: Tornadoes:	Number 1, Days 1, Damage 4.

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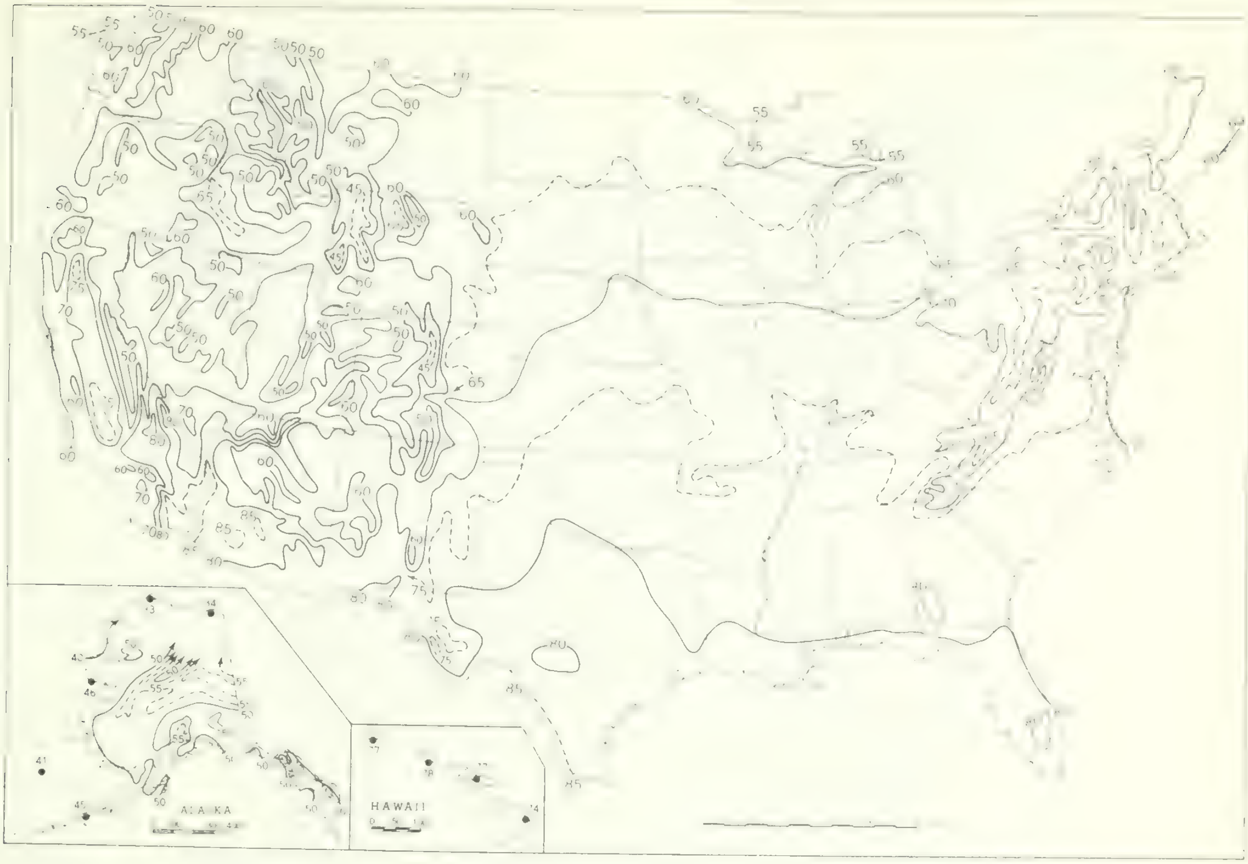
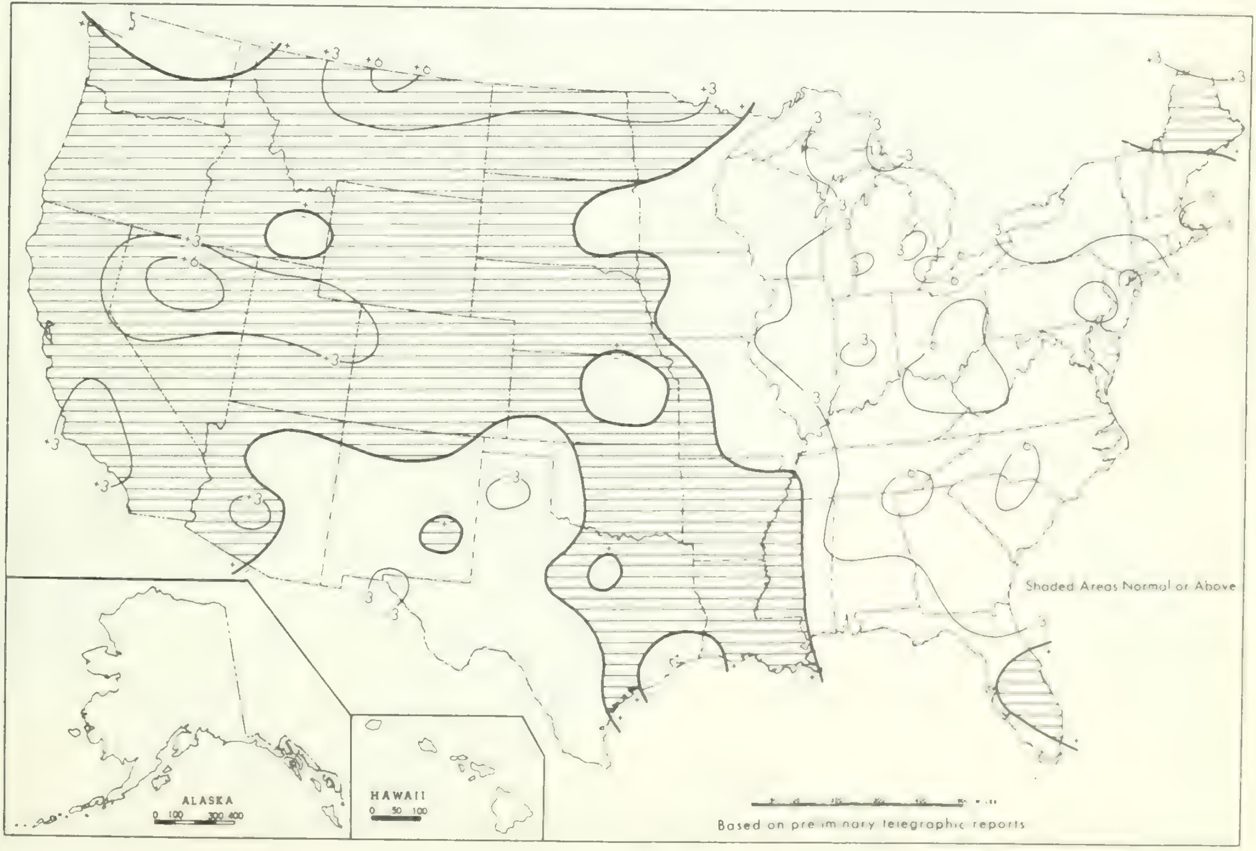
Hawaii	- Average No. Tornadoes - 0.
Iowa	- Total Tornadoes 483, Average 25. per 10,000 Square Miles - 452.
Tennessee	- Total Deaths - 23.
United States	- Tornadoes per 10,000 Square Miles - 182. Total Deaths - 2242.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), June.

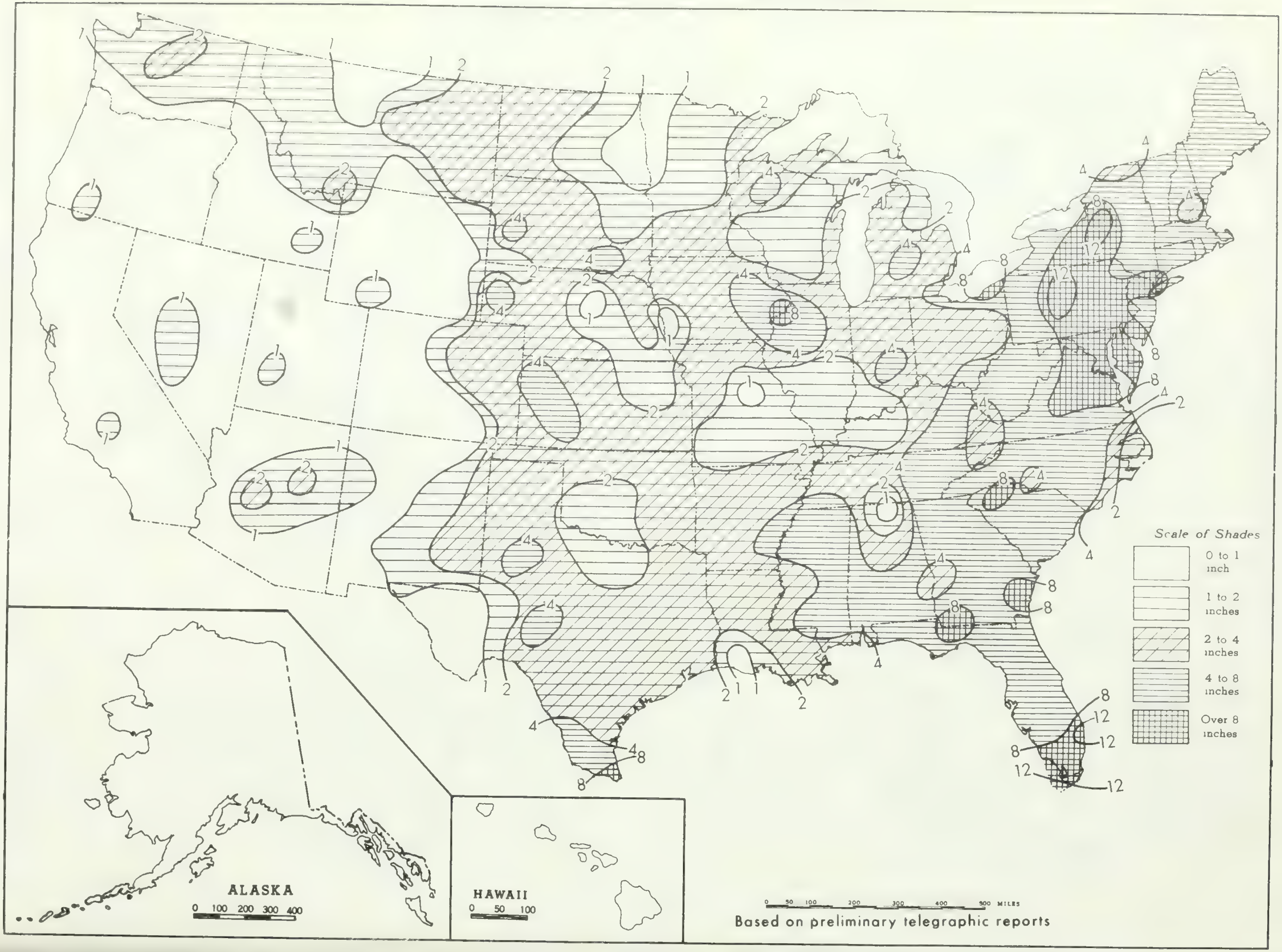


B. Temperature Departure from 30 - Year Mean (°F 1931-60), June 1972.



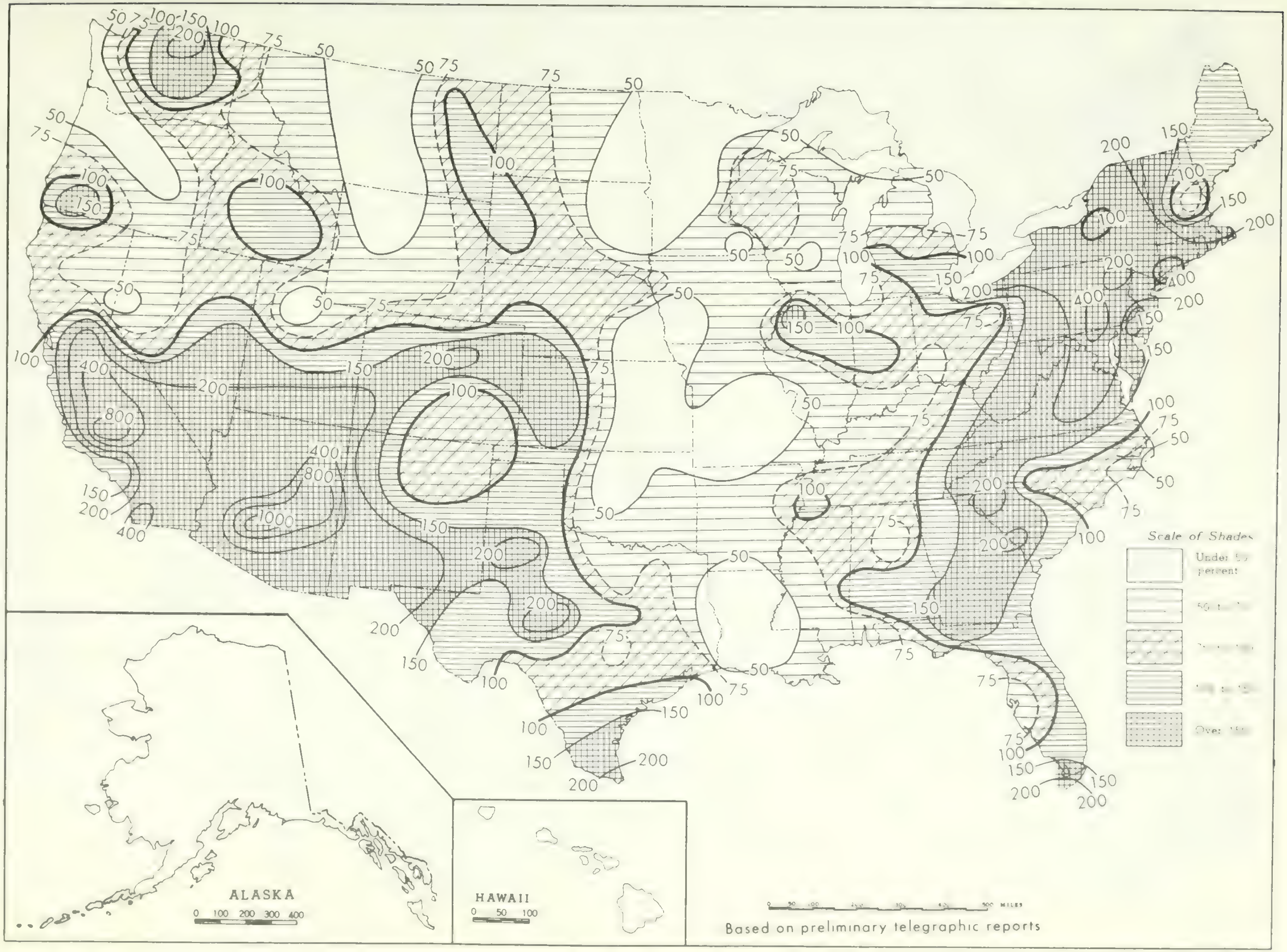
Based on preliminary telegraphic reports

Chart II. Total Precipitation (Inches), June 1972.



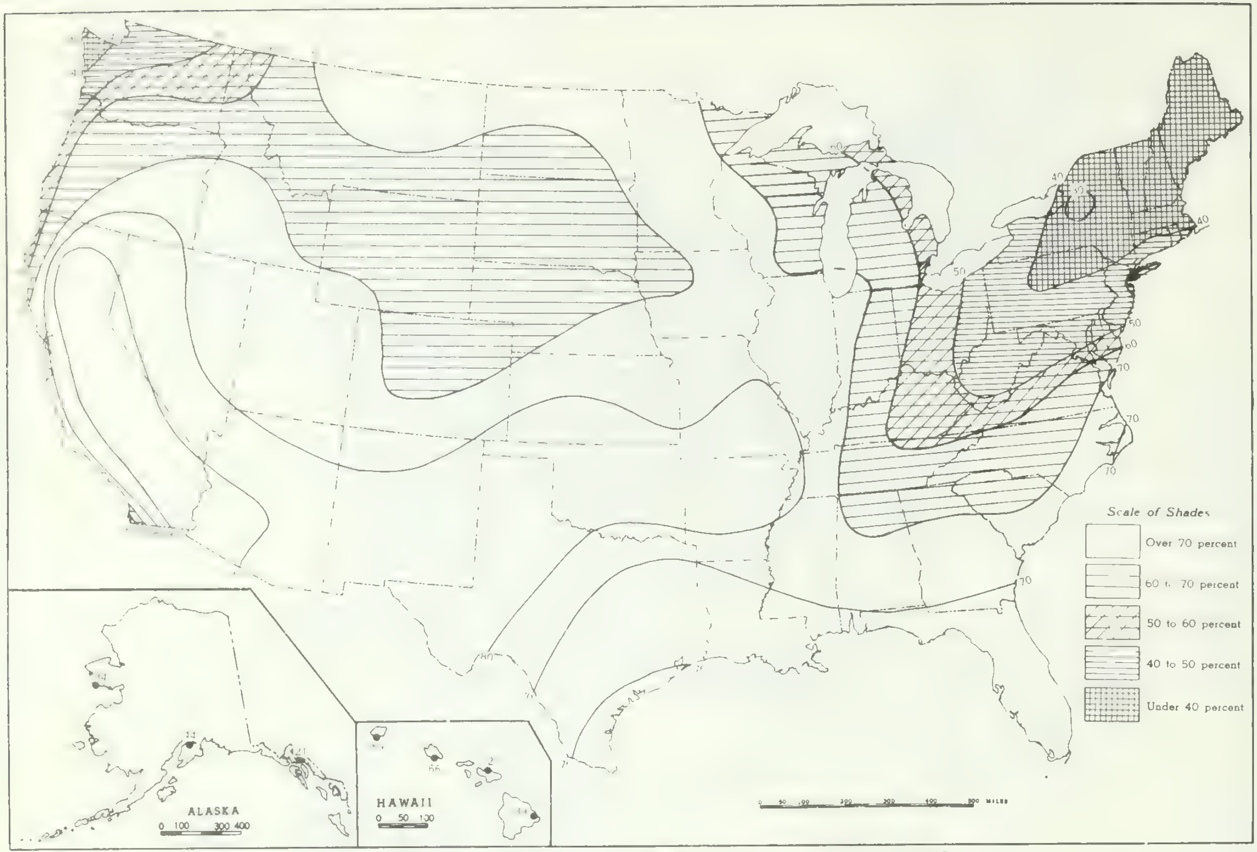
Based on preliminary telegraphic reports

Chart III. Percentage of Normal Precipitation, June 1972.

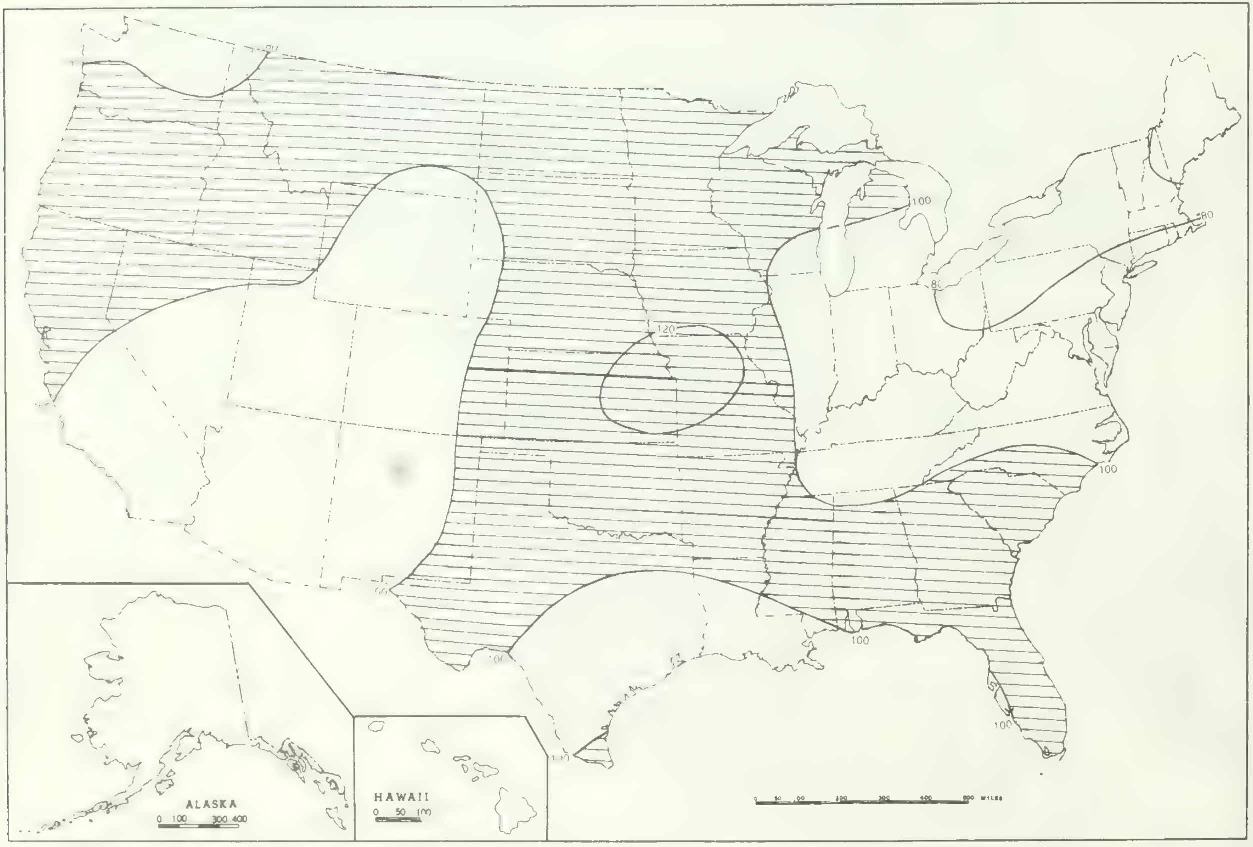


Based on preliminary telegraphic reports

Chart VI. A. Percentage of Possible Sunshine, June 1972.

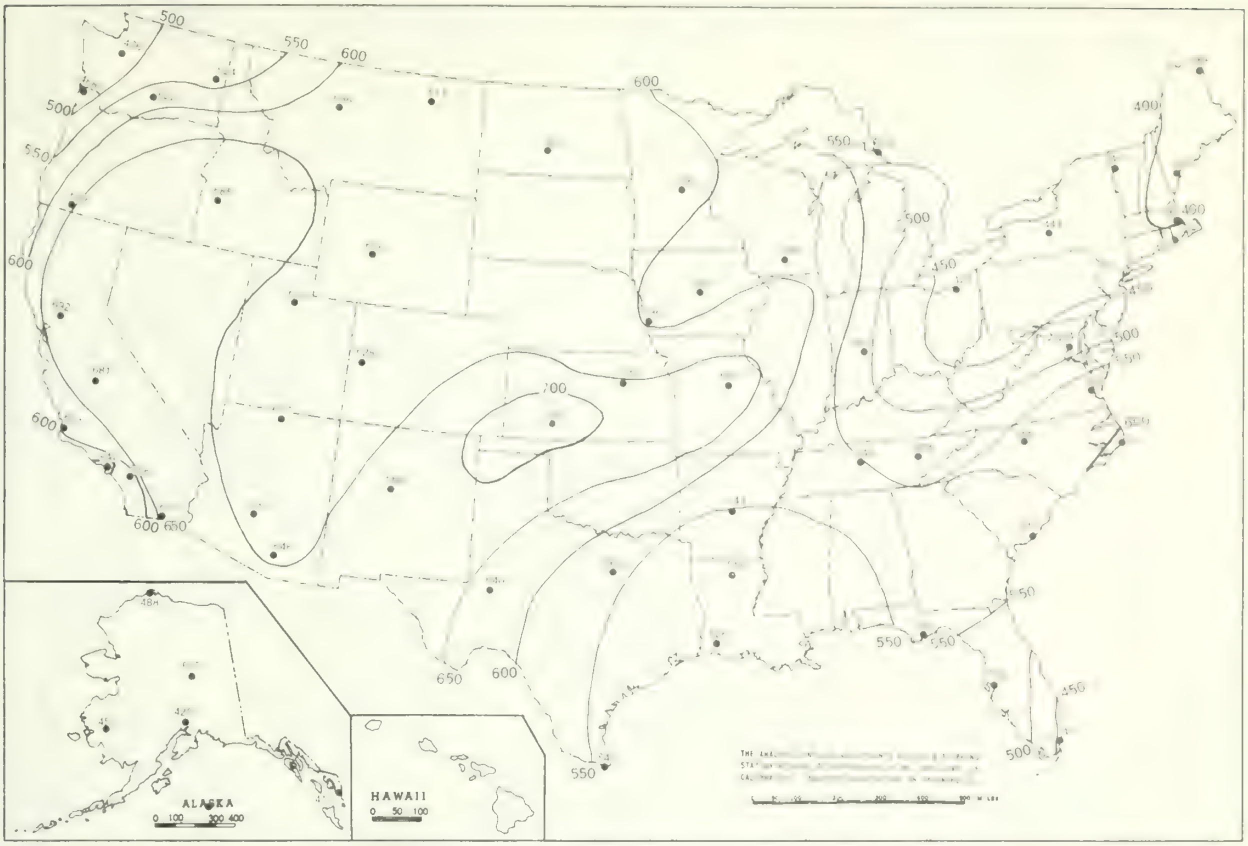


B. Percentage of Mean Monthly Sunshine, June 1972.

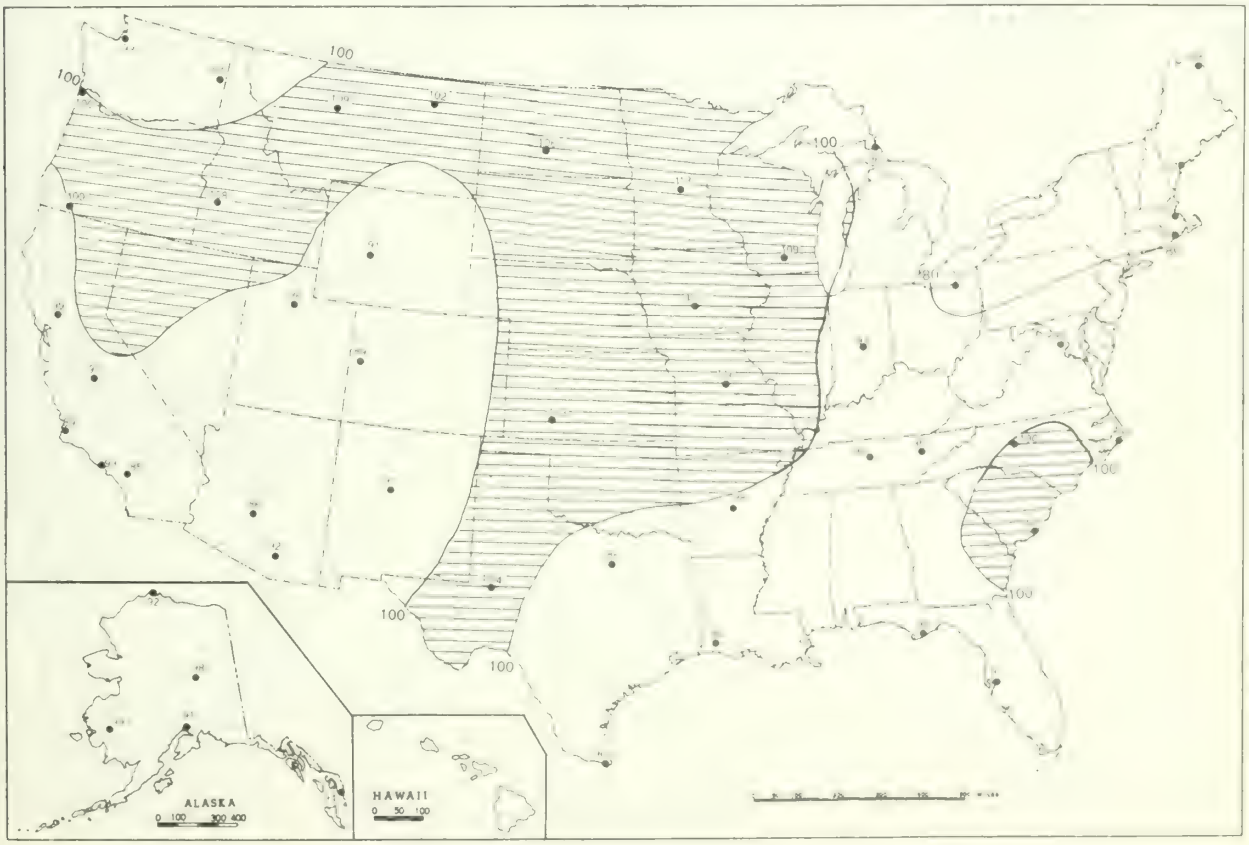


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, June 1972

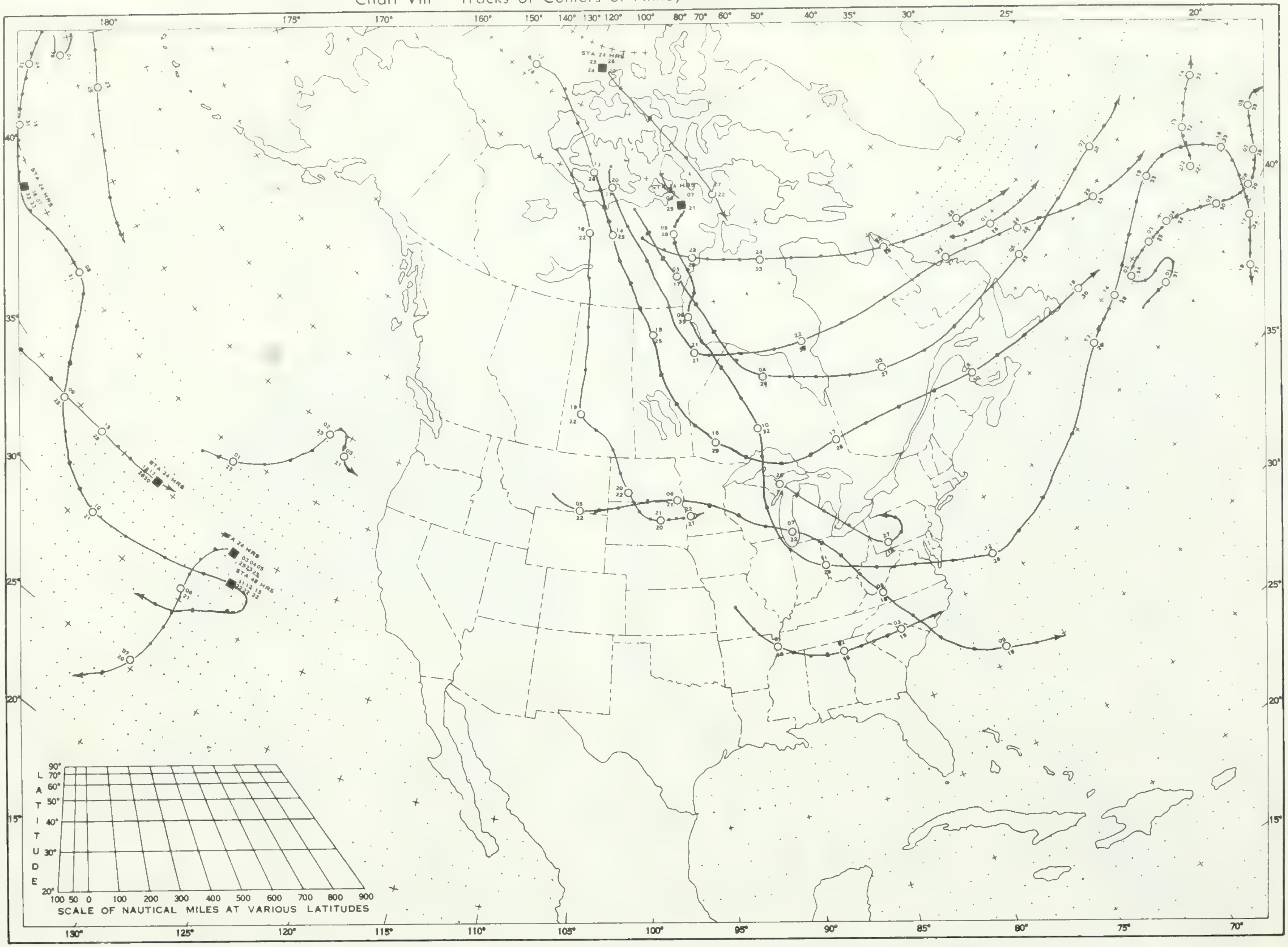


B. Percentage of Mean Daily Solar Radiation, June 1972



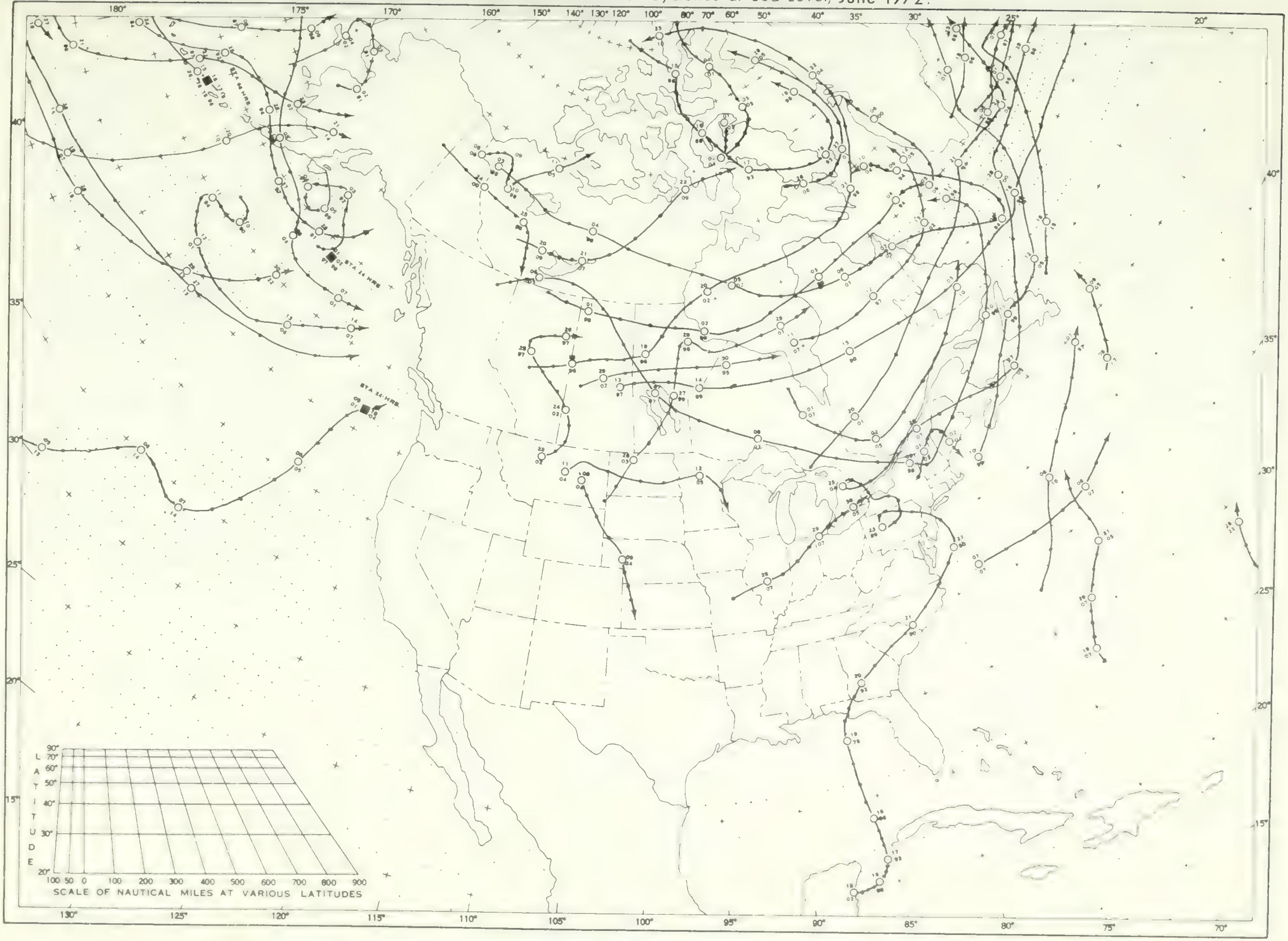
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, June 1972.



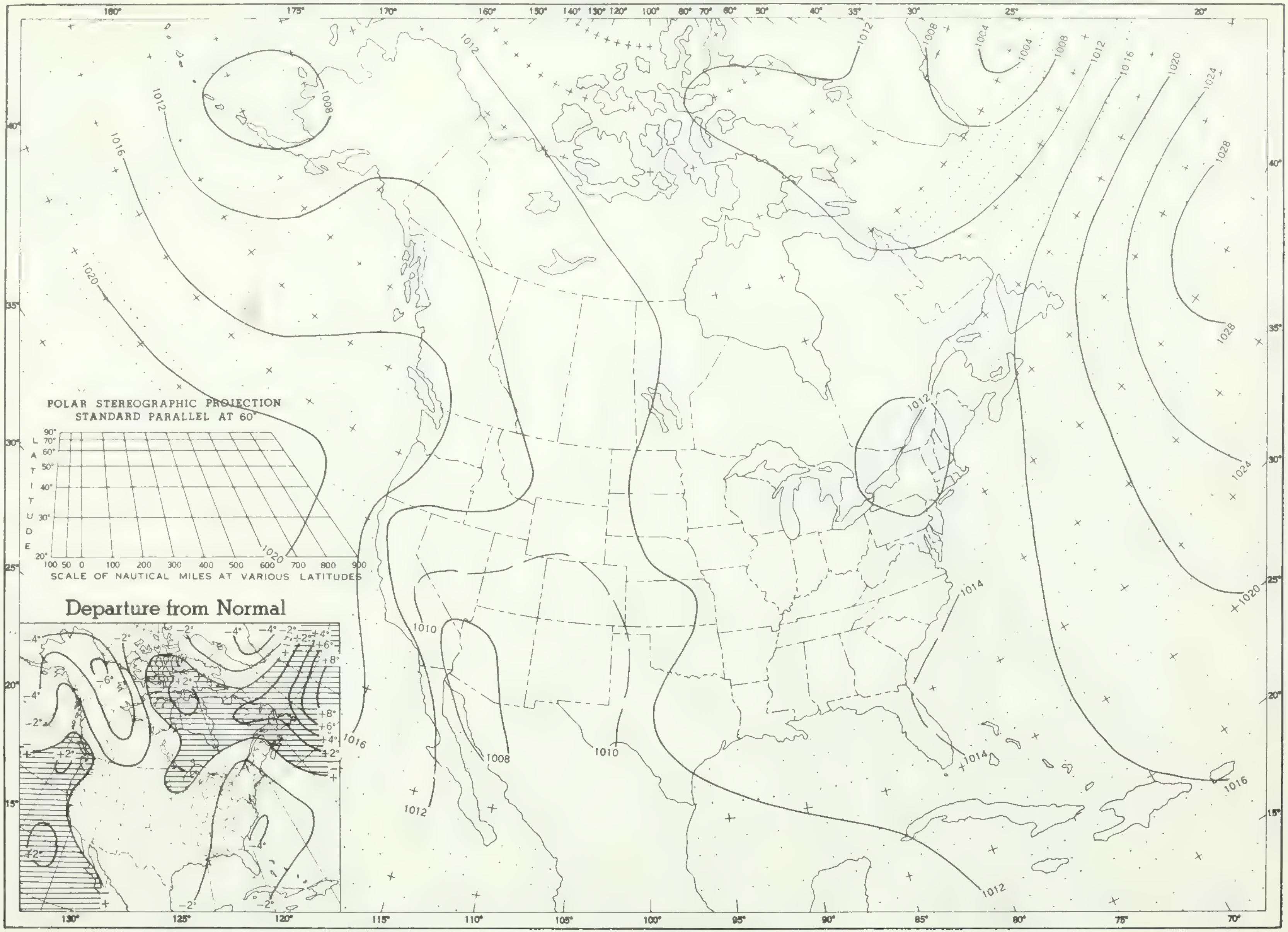
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, June 1972.



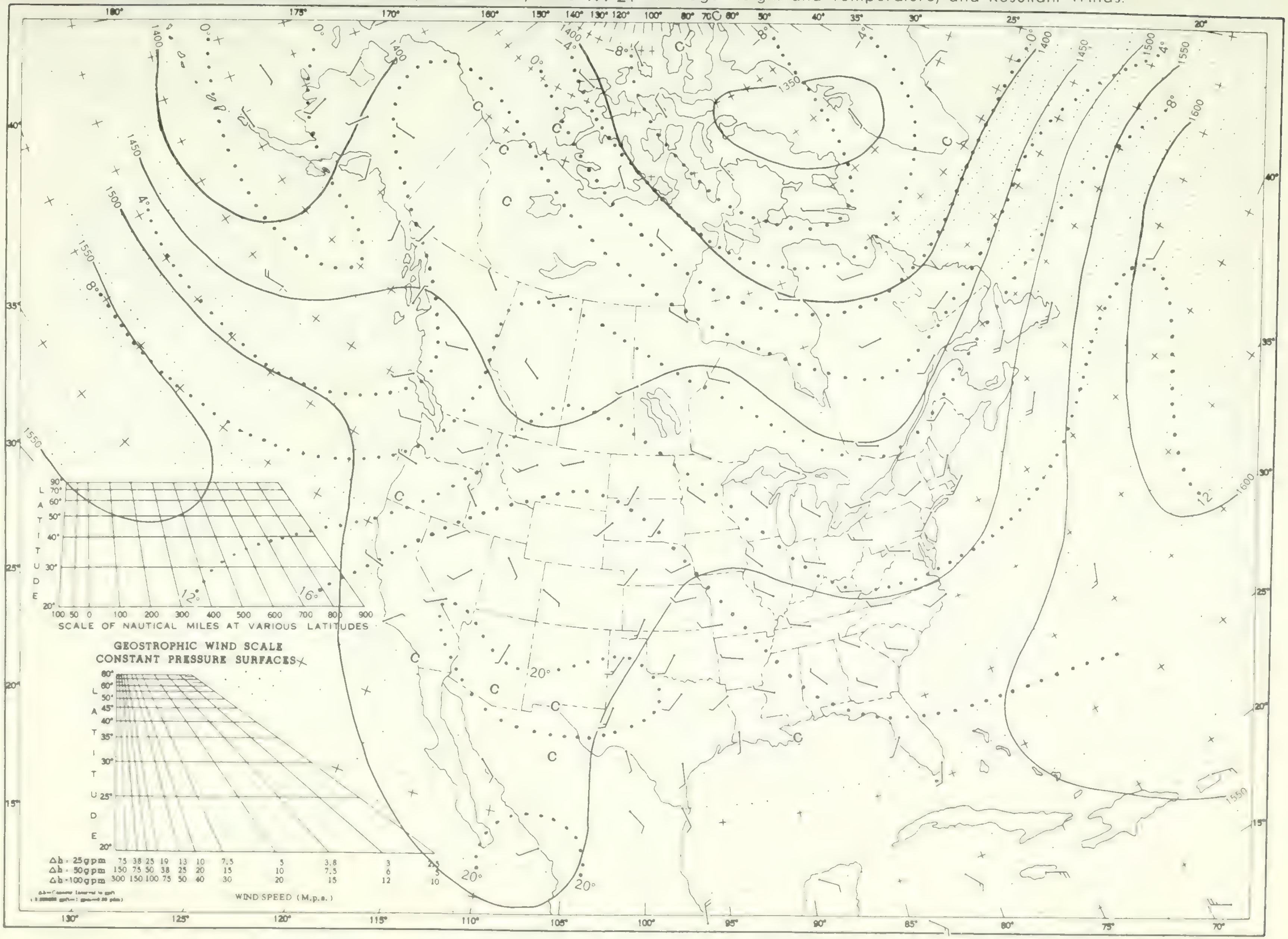
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, June 1972. Inset Departure of Average Pressure (mb) from Normal, June 1972.



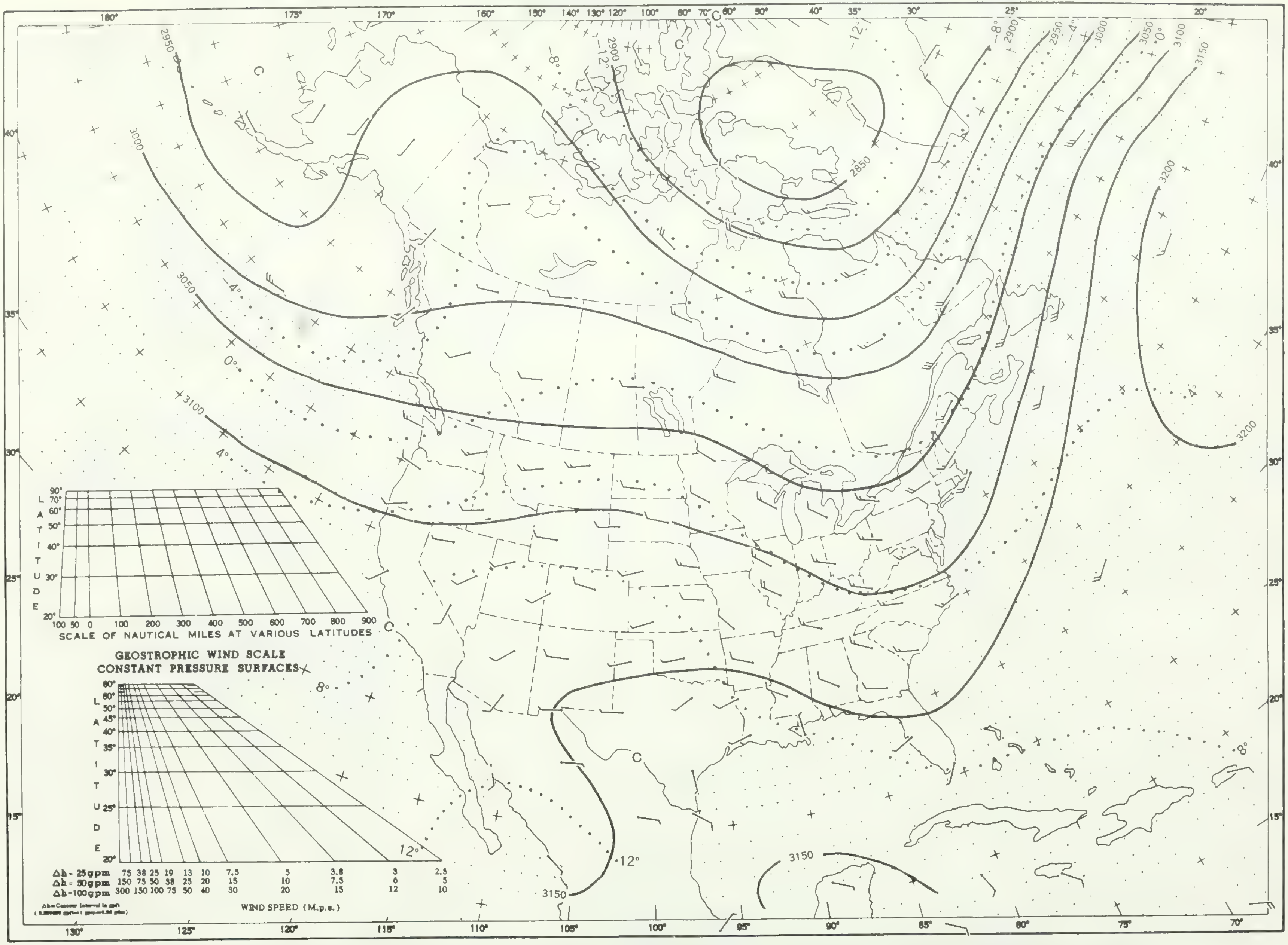
Average sea level pressures are obtained from eight daily 3-hourly observations. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 850-mb Surface, 1200 G.m.t., June 1972. Average Height and Temperature, and Resultant Winds.



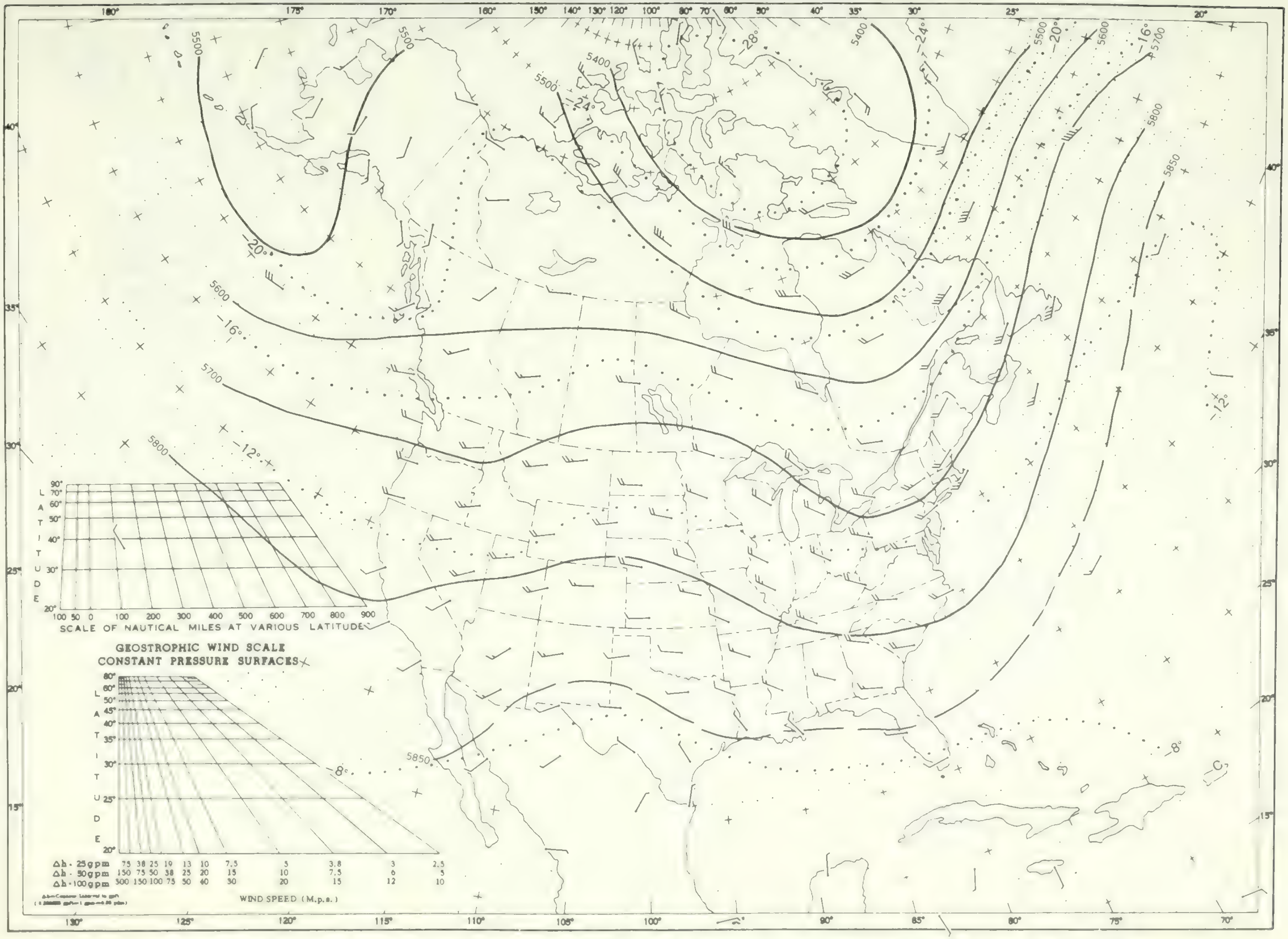
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb Surface, 1200 G.m.t., June 1972. Average Height and Temperature, and Resultant Winds.



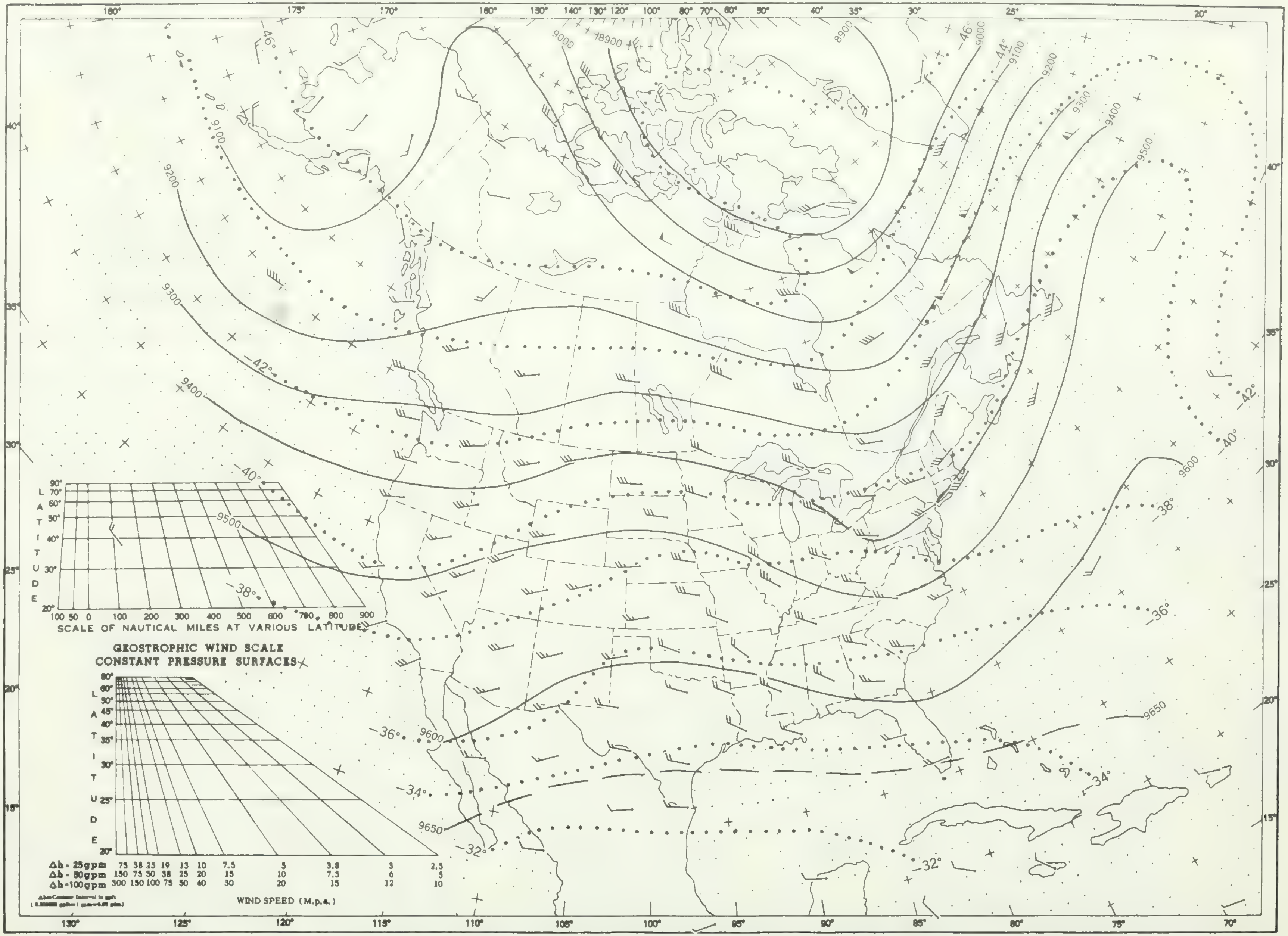
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., June 1972. Average Height and Temperature, and Resultant Winds.


5400
5500
5600
5700
5800
5850
-28°
-24°
-20°
-16°
-12°
-8°
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDE
LATITUDE
100 50 0 100 200 300 400 500 600 700 800 900
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
Δh · 25gpm 75 38 25 19 13 10 7.5 5 3.8 3 2.5
Δh · 50gpm 150 75 50 38 25 20 15 10 7.5 6 5
Δh · 100gpm 300 150 100 75 50 40 30 20 15 12 10
WIND SPEED (M.p.s.)

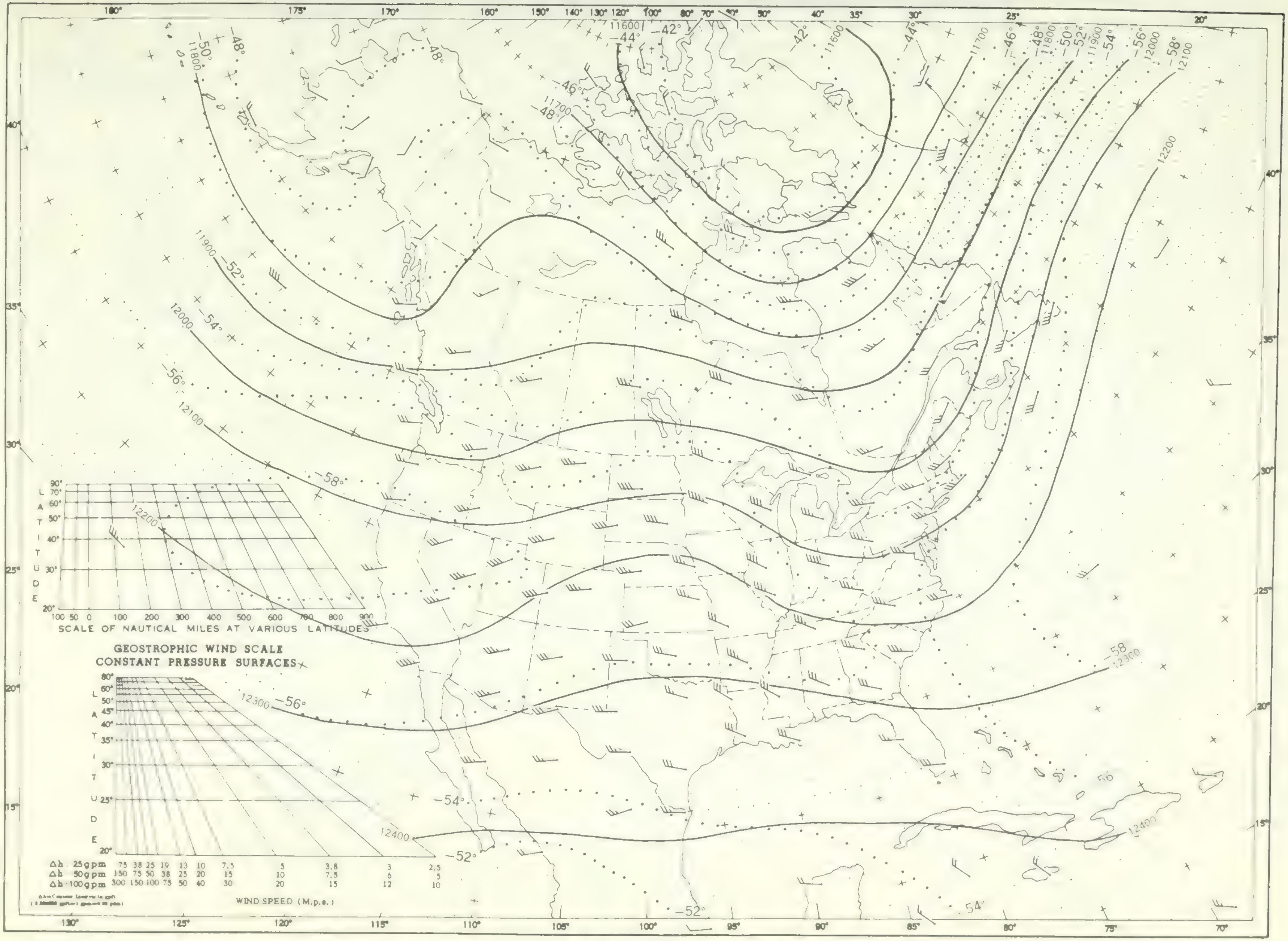
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 G.m.t., June 1972. Average Height and Temperature, and Resultant Winds



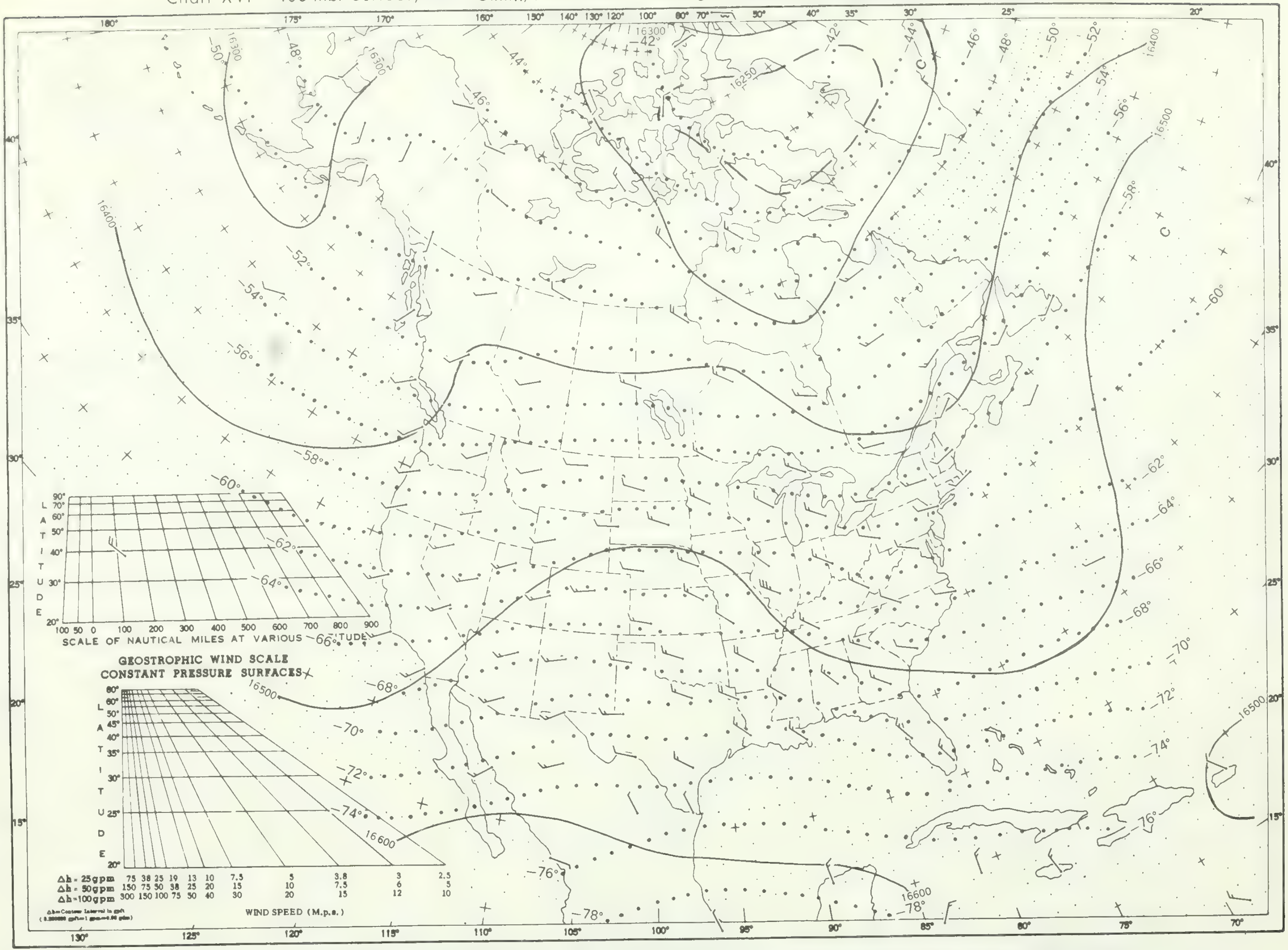
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb. Surface, 1200 G.m.t., June 1972. Average Height and Temperature, and Resultant Winds.



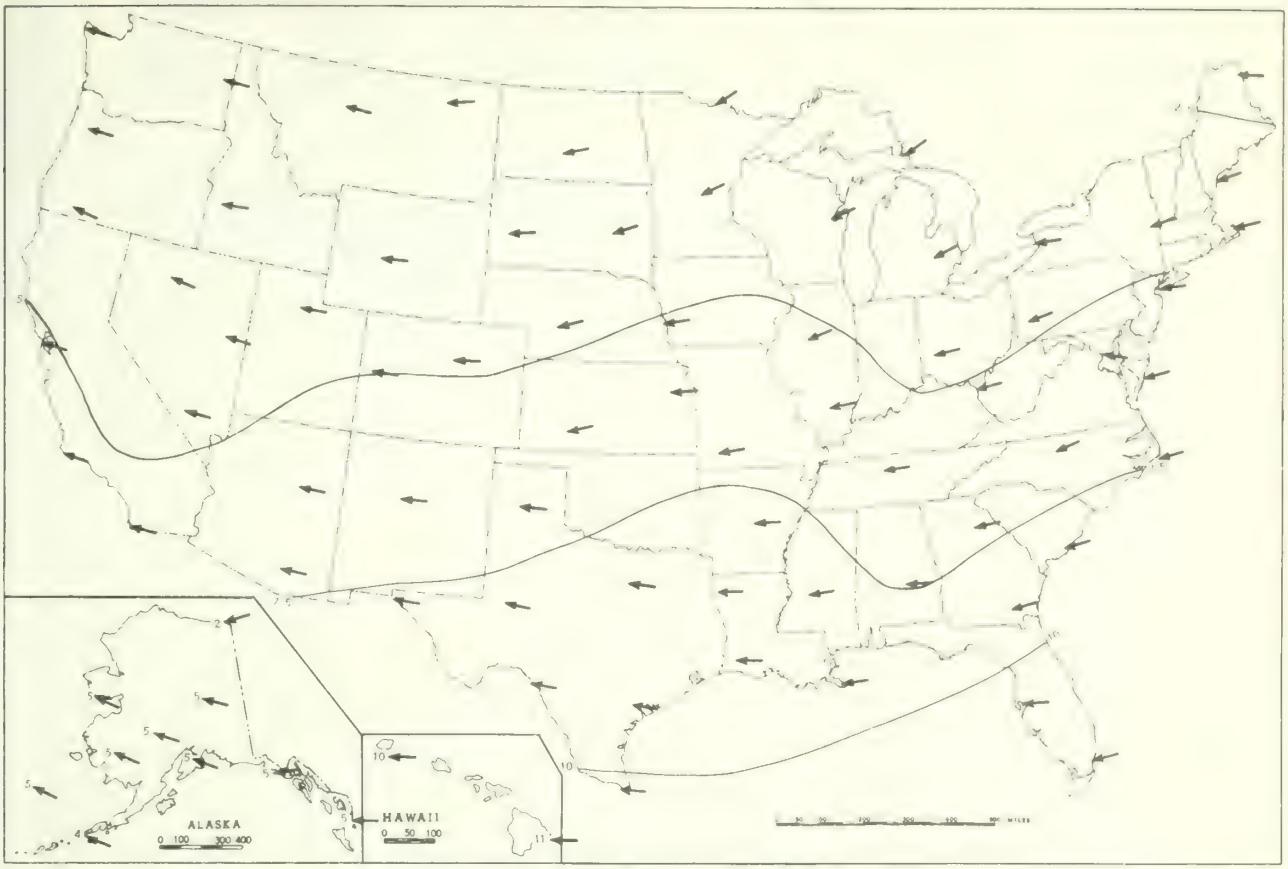
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100 mb. Surface, 1200 G.m.t., June 1972. Average Height and Temperature, and Resultant Winds

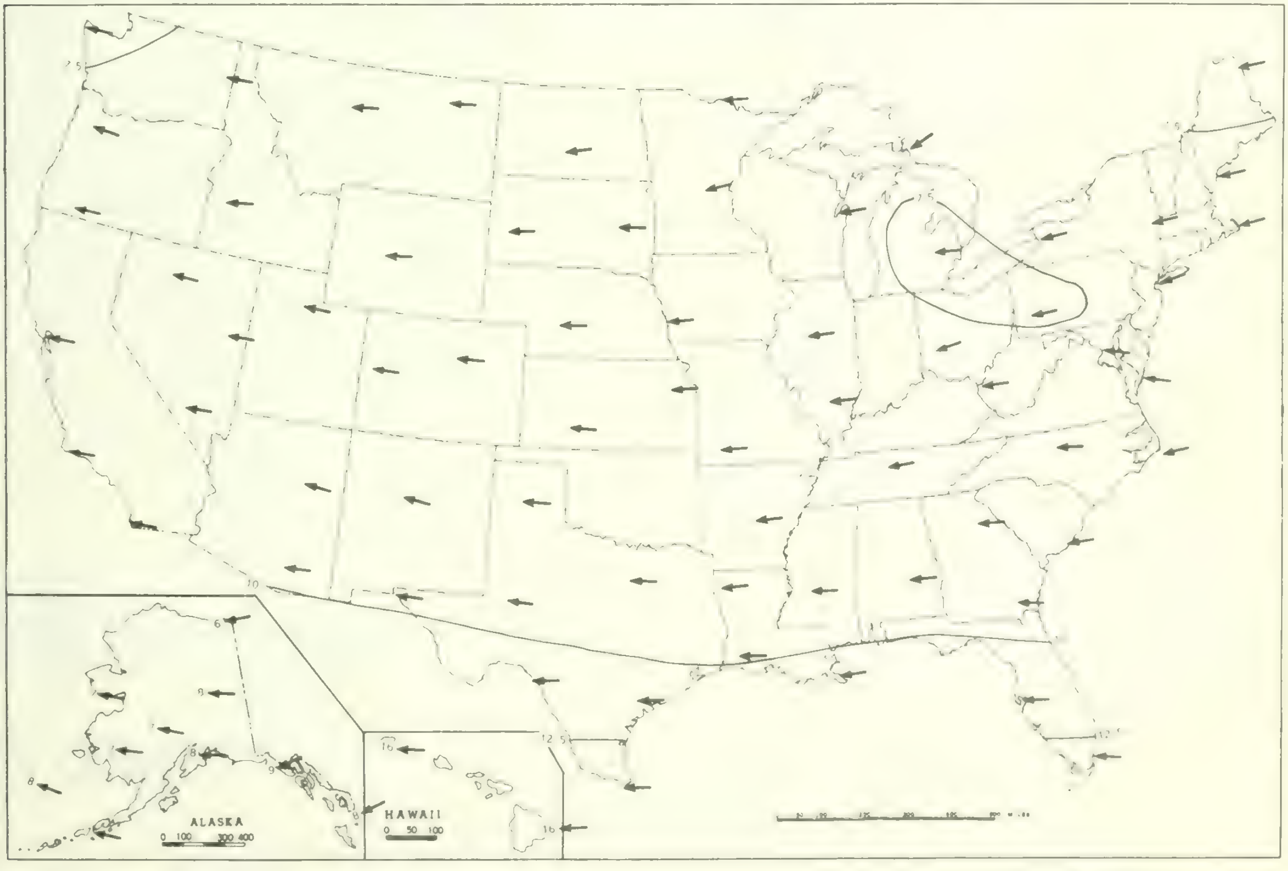


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., June 1972. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., June 1972. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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1973

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

NOTICE

Effective with the July 1972 issue of this publication, the Climatological Data tables in English Units are discontinued.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

° F. = $\frac{9}{5}$ x ° C + 32

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

Snowfall, sunshine, solar radiation, and pressure surface maps are also discontinued. See the explanatory page "Description of Charts," which appears in the July 1972 issue, and will be carried subsequently in the January and July issues.

Effective with the September 1972 issue, the Solar Radiation Totals Table is discontinued.

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

JULY 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Furnace Creek, Death Valley, Calif., warmed to 128° on the 14th and 15th. This is only 6° cooler than the warmest temperature of record for California (and the United States).
2. Record cold July temperatures occurred at some eastern cities on the 6th.
3. The Bermuda High moved westward, reaching the lower Mississippi River Valley near the end of the third week of July. It brought hot, humid weather to the eastern half of the Nation. Atmospheric pollution added to the discomfort of the citizens.

TEMPERATURE (° F.) -- July temperatures averaged above normal along the coast of Washington and Oregon, from California to the Continental Divide, and parts of the Northeast. Elsewhere, temperatures in July averaged cooler than normal. The western edge of the northern Great Plains averaged more than 6° cooler than normal. The Far West averaged warmer than normal in the first half of the month and the last week of July. The Northeast quarter of the Nation was especially warm in the second and third weeks of July. The Great Plains were cooler than normal throughout almost the entire month.

Cold air moved into the north-central Great Plains early in July, ending the heat wave which had been in progress over that area. Norfolk, Nebr., registered 95° on the 1st, but only 70° on the 2d. Near the middle of the first week, a cold front stretched from northern Utah through the Texas Panhandle to New England. Early morning temperatures north of the front were in the thirties and forties. Maximums reached the sixties. These temperatures are 15° to 20° cooler than normal for early July. Warm, humid air drifted northward south of the front. Temperatures averaged about 30° warmer than in the cool air.

Summer heat continued in the Desert Southwest. Furnace Creek, Death Valley, Calif., warmed to 125° on the 2d. A large high pushed into the central Great Plains. It helped to hold temperatures down over the East, but the West warmed. By the 5th, Havre, Mont., had warmed to 86°. This was 10° warmer than Birmingham, Ala. A number of eastern locations had never been so cool in July as on the morning of the 6th. The forties were common as far south as the Ohio River. Parkersburg, W. Va., on the Ohio River, recorded 45°.

The high weakened and moved off the Atlantic Coast. Southwesterly winds behind this high brought warm, moist air from the Gulf of Mexico. On the 10th, temperatures climbed to the nineties over the Great Plains and the eighties over most of the East. Worland, Wyo., registered 100° on the afternoon of the 9th. The Pacific Northwest had been moderately cool, but warmed in the second week of July. Pendleton, Oreg., registered 97° on the 12th. The mercury hit 100° in the Desert Southwest and nighttime temperatures were generally only a few degrees below 100°.

On the 12th, Needles, Calif., recorded 97° at 2 a.m. and 118° in the afternoon. Summer heat prevailed over most of the Nation. Furnace Creek, Calif., recorded 121° on the afternoon of the 12th and Boston, Mass., in the opposite corner of the Nation, registered 94°.

At midmonth, cold air moved into the central Great Plains. Salina, Kans., recorded 107° on the 14th, but only 73° on the 15th. The heat intensified in the Northwest. The Dalles, Oreg., recorded 99° on the afternoon of the 16th. Blistering heat continued in the Sacramento Valley of California. Red Bluff, at the northern end of the Valley recorded 118° on the 14th and Stockton registered 114°, the warmest Stockton has ever been. Furnace Creek, Death Valley, Calif., recorded 128° on both the 14th and 15th.

Shortly after midmonth the Bermuda high moved westward from a position about 600 miles northeast of Bermuda. By the 21st, it had become quasi-stationary over the western Carolinas. The very light, but generally southerly, winds on the west side of the high spread warm, humid, hazy weather over the eastern half of the Nation. The light thunderstorms in the moist air brought little relief from the heat, humidity, and atmospheric pollution. Afternoon temperatures reached the high eighties and low nineties from the Great Lakes to Texas and eastward to the Atlantic Ocean. Minimum temperatures were mostly in the seventies.

Patches of light early-morning fog dotted the eastern half of the Nation on most mornings and the rising sun was reddish-orange due to the pollutants in the air.

The Far Southwest continued hot, with temperatures exceeding 100° every afternoon at some locations. The Southwest was not quite so hot as during the previous week, however. A quasi-stationary front stretched from the Great Lakes to the Texas Panhandle early in the week. Temperatures north of the front were quite comfortable, generally reaching the seventies in the afternoons. This front disappeared about midweek as the Bermuda high spread westward and on the 20th, 90° heat spread to the Great Plains. The Bermuda high moved westward, reaching the Lower Mississippi River Valley by the end of the third week of July, bringing hot, sultry weather to the eastern half of the Nation. Arctic air cooled the West. Montana and the neighboring States were especially cool, with temperatures ranging from 6° to 18° below normal.

In the last week of July, a cold front brought relief to the Northeast after almost 2 weeks of humid 90° heat. A few days before the end of July, the front became stationary from Utah to the middle Atlantic coast. The Southeast continued hot, but the North was comfortably cool.

PRECIPITATION -- A quasi-stationary front from western New York caused some dismal rainy weather early in July. As the front became active, tornadoes occurred in spots in the Great Plains from North Dakota to Texas. Property damage was light and we have no reports of deaths nor injuries. Thunderstorms developed along the front and in the humid air that lay over the central and southern Great Plains and the middle and lower Mississippi River Valley. Heavy showers doused spots in the central Great Plains about midmonth. Four to 6 inches of rain caused streams to rise in western Kansas and south-central Nebraska. A weak tropical storm moved inland near Myrtle Beach, S. C., on the evening of the 11th. It dumped 2-day totals of 3 to 6 inches of rain over the eastern portions of the Carolinas and northward to New England. With the soils already saturated, only moderate showers were required to produce local flooding in some areas.

Vigorous thunderstorms broke out along a quasi-stationary front which, shortly after midmonth, stretched from the Great Lakes to the Texas Panhandle. A few twisters occurred in central Kansas, east-central Iowa, and northern Illinois on the evening of the 17th. Some farmsteads were damaged and some cattle injured. Heavy rains and strong winds on the 18th caused property damage west of Chicago, Ill. After the front dissipated another front farther north brought active weather to the northern and central Great Plains. The showers were especially heavy north of St. Cloud, Minn., where 24-hour rainfall totals exceeded 8 inches at a few localities. Vigorous thunderstorms caused torrential downpours in South Dakota and Nebraska in the last week of July. Rains in western Tennessee swelled the creeks and small rivers to overflowing.

No rain, or only widely scattered light sprinkles, fell in California and nearby portions of neighboring States.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

JULY 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Vernon	100	21+	3 Stations	48	8+	Muscle Shoals FAA AP	12.20	Vernon	.96
Alaska	Skagway No. 2	92	5	2 Stations	26	9+	Little Port Walter	8.80	Cape Sarichef	.00
Arizona	Willow Beach	125	13	Sunrise Mountain	32	3	Groom Creek	6.17	8 Stations	.00
Arkansas	Benton	104	25	Huntsville	43	6	Gravette	10.04	Cove	1.05
California	Death Valley	128	15+	Bodie	23	25	Mt San Jacinto W S Pk	1.57	367 Stations	.00
Colorado	La Junta FAA AP	105	14+	Fraser	23	5	Leroy 7 WSW	4.48	Rangely	.00
Connecticut	New Haven	96	24+	Coventry	46	9+	Norfolk 2 SW	5.56	Bridgeport WSO AP	1.76
Delaware	Dover	97	20	2 Stations	51	8+	Middletown 1 WSW	4.50	Georgetown 5 SW	1.50
Florida	6 Stations	99	30+	De Funiak Springs	55	9	West Palm Beach WSO AP	13.25	Cross City 2 WNW	.30
Georgia	4 Stations	100	24+	Blairsville Exp Sta	47	7	Alma FAA AP	10.52	Mount Vernon 3 WNW	.45
Hawaii	Keawakapu Beach 260.2, Maui	93	25+	Mauna Loa Slope Obs, Hawaii	34	21+	Puohokamoa 2 343, Maui	20.80	18 Stations	.00
Idaho	Bruneau	106	29	Sun Valley	21	9	Porthill	2.10	10 Stations	.00
Illinois	2 Stations	99	23+	2 Stations	39	5	Cairo WSO CI R	9.20	Beardstown	.44
Indiana	Ogden Dunes	99	23	Culver Experiment Farm	38	6	Johnson Exp Farm	8.08	Martinsville 2 SW	.96
Iowa	2 Stations	98	10+	2 Stations	38	5	Cresco	13.69	Le Claire L and D 14	2.48
Kansas	Minneapolis 2	108	14	Centralia	40	5	Yates Center	16.63	Smith Center	1.12
Kentucky	2 Stations	99	24+	Falmouth 5 WNW	41	6	Hickman 1 E	16.61	Lloyd Greenup Dam	1.46
Louisiana	Winnsboro	100	26	Logansport 4 ENE	53	7	Many	11.95	Boothville WSO	2.00
Maine	Houlton FAA APT	95	13	Clayton Lake 2	35	5	Telos Dam	7.88	Brunswick	1.38
Maryland	2 Stations	99	23+	Bittinger 2 NW	41	7	Chestertown	6.03	Unionville	1.14
Massachusetts	Chester 2	101	19	Chester 2	37	7	Groton	8.81	Nantucket FAA AP	1.56
Michigan	Dearborn	98	23	2 Stations	27	4	Boyne Falls	8.62	Dearborn	1.21
Minnesota	Argyle 4 E	95	30	Tower 3 S	27	4	Long Prairie	15.55	Warroad	.69
Mississippi	Greenville	100	26	Winona 5 E	49	8+	Pelahatchie	11.71	Vicksburg Military Pk	1.30
Missouri	Caplinger Mills	106	26	Cole Camp 9 SE	38	6	Fisk	11.58	Vandalia	.77
Montana	Roundup	100	29	Gallatin Gateway 26 SSW	25	4+	Santa Rita 17 N	5.07	Darby	.22
Nebraska	Fairbury 2 SSE	104	24	Agate 3 E	33	4	Winnebago	12.09	Stockville	1.23
Nevada	Sunrise Manr Las Vegas	121	14	Reese River R S	21	22	Desert Natl WL Range	1.50	24 Stations	.00
New Hampshire	Manchester	94	16	Mount Washington	31	5	First Conn Lake	9.12	South Lyndeboro	2.36
New Jersey	Hammonton 2 NNE	98	24+	2 Stations	48	29+	Bernardsville 2 E	6.02	Tuckerton	1.50
New Mexico	Alamogordo	109	31	2 Stations	33	3+	San Jon	9.06	2 Stations	.00
New York	N Y Kennedy WSO AP	100	23	Arcade	38	30	Black River 1 SW	8.62	Lewiston 1 N	.70
North Carolina	3 Stations	99	24+	Banner Elk	38	6	Cedar Island	15.42	Enka	1.60
North Dakota	Linton	99	29	Wishek	28	4	Hankinson R R Station	5.86	2 Stations	.51
Ohio	Toledo Blade	100	22	3 Stations	38	6	Mt Gilead Lakes Park	10.04	Gallipolis	.41
Oklahoma	Buffalo	109	14	Zoe 1 E	43	6	Mutual	13.67	Madill	.06
Oregon	Spray	109	4	Spout Spgs Ski Lodge	20	20	Nehalem 9 NE	2.79	24 Stations	.00
Pennsylvania	Marcus Hook	100	23	2 Stations	39	29+	Beavertown	7.59	Scranton	.80
Puerto Rico	Ponce 4 E, P. R.	98	27	Adjuntas Substation, P.R.	56	25	Maricao 2 SSW, P.R.	12.58	Coamo 4 S, P.R.	.33
Rhode Island	3 Stations	91	18+	2 Stations	48	8+	North Scituate 4 W	7.07	Newport	1.35
South Carolina	3 Stations	99	23+	2 Stations	52	7+	Great Falls	9.86	Charleston WSO CI	1.37
South Dakota	Delrichs	108	30	Ralph	32	4	Webster	9.08	Bison	.78
Tennessee	2 Stations	98	25+	Mountain City No 2	40	7	Samburg Wildlife Ref	14.48	Mountain City No 2	2.53
Texas	Candelaria	110	2	Mount Locke	40	16	Liberty	8.60	6 Stations	.00
Utah	Saint George	112	14	Soldier Creek	30	5	Antimony	1.46	8 Stations	.00
Vermont	3 Stations	92	20+	2 Stations	36	6+	Mount Mansfield	11.41	Wardsboro	2.35
Virginia	Bohannon 1 NE	100	16	Floyd 2 NE	37	7	Kerrs Creek 1 WSW	11.03	Tangier Island	1.00
Washington	Priest Rapids Dam	103	29	Rainier Paradise RS	29	10+	Clearwater	12.75	Ellensburg	T
West Virginia	2 Stations	97	24+	Canaan Valley	36	7	Hico	11.87	Parkersburg WSO CI	1.51
Wisconsin	2 Stations	97	21	Jump River 5 E	27	4	Luck	11.27	Green Bay WSO AP	1.85
Wyoming	3 Stations	102	30	2 Stations	20	21+	Rochelle 3 E	3.00	3 Stations	.00

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See indivdual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10		
ALABAMA	M	Mb	Mb	C.	C	C.	C	C		C.				C	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s		M.p.s							%
BIRMINGHAM	189	997.3	1019.4	30.7	19.2	24.9	- 2.6	34.4	22	12.2	7+	11	0	19.4	74	90	- 41	30	13	13	0	0	0.6	21	12.5	SW	1	6	11	14	6.3	63
HUNTSVILLE	190	996.3	1019.0	30.3	18.9	24.6	- 2.7	34.4	23+	12.2	7	10	0	19.4	78	167	59	51	14	13	0	0	0.8	20	11.2	22	27	7	15	9	5.9	
MOBILE	64	1011.2	1019.0	33.2	21.7	27.4	- 0.7	36.1	24	17.8	7	26	0	21.7	78	55	-191	27	13	16	0	0	0.6	14	8.0	20	24+	4	15	12	6.5	
MONTGOMERY	56	1012.2	1019.3	32.6	20.9	26.7	- 0.9	36.7	24	16.7	7+	21	0	20.6	73	148	11	101	8	10	0	0	1.0	20	15.2	SW	13	5	20	6	5.7	68
ALASKA												8															8					
ANCHORAGE	35	1013.9	1018.6	19.7	10.3	15.0	0.4	26.7	6	6.7	17	11	0	10.0	73	11	- 37	8	5	1	0	0	1.3	22	12.5	15	10	5	11	15	6.5	42
ANNETTE	34	1014.9	1018.8	18.8	11.1	14.9	0.9	29.4	20	6.1	1	9	0	10.6	81	111	- 42	33	12	0	0	0	0.7	17	10.3	34	17	7	5	19	7.3	
BARROW	9			10.8	1.2	6.1	2.1	20.0	8	- 1.7	15	0	16			3	- 17	2	2	0	0	0			10.3	8	23	7	13	11	6.0	
BARTER ISLAND	12	1018.6	1020.7	6.7	1.5	4.1	- 1.1	15.0	18	- 1.7	1	0	9	3.3	95	18	- 5	6	7	0	0	0	3.1	7	13.0	10	28+	2	12	17	7.3	
BETHEL	38	1012.9	1018.6	18.9	9.8	14.3	1.7	28.3	7	6.1	30	12	0	9.4	76	24	- 28	7	13	5	0	0	1.4	22	13.4	20	18	4	5	22	8.1	
BETTLES	196			23.3	10.3	16.8		32.2	11	5.0	29	22	0			10		4	4	2	0	0	0.7	20	10.3	22	20	6	14	11	6.1	
BIG DELTA	396			22.5	10.5	16.5		28.9	13+	5.0	2	19	0			60		26	8	0	0	0										
COLD BAY	29	1014.6	1018.2	12.1	6.3	9.2	- 0.6	16.7	31	3.3	28+	0	0	7.2	89	46	0	14	18	0	0	0	5.5	16	24.1	17	17	0	4	27	9.1	
FAIRBANKS	133	1000.7	1017.6	23.8	12.3	18.1	2.7	30.0	12+	8.9	18+	26	0	8.9	59	16	- 31	4	11	2	0	0	0.4	33	9.4	24	20+	6	8	17	6.9	
GULKANA	479			22.0	8.3	15.2		28.9	6+	4.4	29	19	0			77		52	10	3	0	0	0.9	18	10.3	3	23+	7	13	11	6.0	
HOMER	20	1016.6	1020.4	15.9	6.3	11.2		22.8	7	3.9	11+	2	0	8.3	83	19	- 26	5	7	2	0	0	1.8	28	8.9	28	10+	8	10	13	6.5	
JUNEAU	4	1017.3	1018.0	21.1	7.8	14.4	1.5	28.9	4	3.3	30	17	0	10.0	79	29	- 85	14	9	0	0	0	0.8	8	10.3	12	13	10	6	15	6.0	63
KING SALMON	15	1016.3	1018.4	18.0	7.8	12.9	0.2	27.2	7+	4.4	31+	8	0	8.9	80	27	- 25	8	11	1	0	0	1.9	21	13.0	9	10	6	2	23	7.7	
KOTZEBUE	3	1017.3	1017.8	18.0	12.0	15.0	3.5	24.4	10	7.2	4	8	0	10.6	77	12	- 25	9	6	0	0	0	2.0	26	13.0	28	16	7	11	13	6.2	
MC GRATH	105	1005.4	1018.1	22.8	9.9	16.3	1.5	30.6	7	5.0	21	21	0	7.2	56	42	- 20	19	11	5	0	0	0.4	29	6.7	26	28+	5	9	17	7.1	
NOME	4	1016.9	1017.6	17.4	9.3	13.4	3.7	27.2	11	0.0	4	9	1	8.3	73	62	4	16	11	1	0	0	1.4	25	10.7	2	12	7	8	16	6.7	47
ST. PAUL ISLAND	7	1015.2	1016.2	8.1	3.6	5.8	- 1.7	11.7	12	1.1	12+	0	0	5.6	98	33	- 25	12	13	0	0	0	2.4	14	11.6	6	17	0	2	29	9.6	
SHEMYA	37	1006.8	1010.5	9.5	6.7	8.1	0.1	15.0	28	5.6	17+	0	0	6.7	93	53	- 2	21	19	0	0	0	0.6	9	13.4	7	20	0	0	31	9.9	
SUMMIT	732	933.3	1017.8	18.8	7.8	13.3		25.6	6	5.0	31+	10	0	7.2	68	39		12	13	5	0	0	0.0	24	13.4	10	9	4	12	15	6.7	
TALKEETNA	105			23.1	9.3	16.2	1.8	31.1	6	5.0	24+	23	0			45	- 36	23	10	2	0	0			8.9	10	24					
UNALAKLEET	5			18.2	12.2	15.2		30.6	7	8.3	26	8	0			46		12	12	1	0	0			12.5	27	20+	4	11	16	7.3	
YAKUTAT	9	1017.6	1018.8	17.7	8.9	13.3	1.1	27.2	5	5.0	3	7	0	10.0	82	75	-139	35	13	0	0	0	0.4	24	9.4	11	13	7	7	17	7.0	
ARIZONA																																
FLAGSTAFF	2135	791.4	1015.1	28.8	9.5	19.2	0.6	34.4	13	4.4	3	5	0	2.8	38	48	- 10	17	7	10	0	0	1.6	23	11.2	SW	1	17	9	5	4.1	82
PHOENIX	340	970.5	1008.0	41.6	27.7	34.7	2.6	46.1	31	21.7	17	31	0	11.7	27	18	- 1	10	2	4	0	0	0.5	23	21.9Y	NNE	17	24	5	2	2.0	93
TUCSON	788	924.1	1009.5	37.5	23.2	30.3	0.2	41.7	2+	18.9	17+	30	0	12.8	38	89	36	59	7	11	0	0	1.2	19	20.1	SE	28	14	12	5	4.3	89
WINSLOW	1492	852.4	1011.5	35.2	17.4	26.3	- 0.4	40.6	14	14.4	10+	24	0	6.1	33	30	5	28	4	8	0	0	1.6	23	14.8	33	6	15	10	6	4.2	
YUMA	59	1000.7	1007.7	42.1	27.5	34.8	1.1	46.1	31	23.3	22	31	0	15.6	34	T	- 6	T	1	1	0	0	3.0	18	13.0	SE	29+	22	5	4	2.4	93
ARKANSAS																																
FORT SMITH	136	1001.0	1017.2	31.4	19.4	25.4	- 2.9	36.7	26	10.0	6	19	0	18.9	71	123	52	43	10	7	0	0	0.8	12	17.0	[illegible]	1	12	9	10	5.3	71
LITTLE ROCK	78	1008.1	1017.7	33.3	20.4	26.9	- 0.8	39.4	25	12.2	7	21	0	19.4	69	45	- 40	32	5	6	0	0	1.3	20	13.0	S	10	11	11	9	5.2	85
CALIFORNIA																																
BAKERSFIELD	145	993.9	1011.1	37.4	21.5	29.4	0.4	45.0	15	15.6	21	29	0	12.2	37	T	T	T	0	0	0	0	2.5	32	8.9	34	30+	27	2	2	1.6	
BISHOP	1252	872.7		38.1	13.9	26.0	1.2	42.8	16+	7.8	25	31	0			1	- 2	1	3		0	0						22	6	3	2.6	
BLUE CANYON	1609			26.5	16.3	21.4	1.4	35.0	14	8.9	21	3	0			0	- 2	0	0		0	0			9.8	19	19	24	6	1	1.5	
EUREKA	13			16.6	12.1	14.3	0.8	19.4	8	10.0	9	0	0			T	- 3	T	1		0	0			9.4	SW	1	2	7	22	8.1	38
FRESNO	100	999.7	1011.3	37.1	17.9	27.5	0.1	43.9	15	13.9	20	29	0	12.8	43	T	0	T	0	0	0	0	2.5	29	8.9	NW	31	26	3	2	1.6	94
LONG BEACH	8	1011.9	1013.1	29.3	17.7	23.6	1.6	37.8	27	15.0	24+	7	0	14.4	63	0	0	0	0	0	0	0	1.3	24	7.6	18	28	17	10	4	3.3	
LOS ANGELES	30	1009.1	1012.7	24.9	17.7	21.3	0.7	30.6	29	15.6	5	0	0	15.6	74	T	T	T	0	0	0	0	3.1	25	11.6Y	W	1	13	15	3	3.7	
LOS ANGELES	82			31.5	19.6	25.6	2.8	38.9	27	16.7	3	13	0			0	0	0	0		0	0			5.8	SW	21+	18	10	3	2.9	83
MT SHASTA R	1080	892.7	1014.3	30.0	11.1	20.6	0.6	36.7	16+	7.2	25+	9	0	6.1	41	T	- 8	T	0		0	0	0.3	7								
OAKLAND	2	1014.2	1014.5	21.7	15.0	18.3	0.4	37.2	14	12.8	27+	2	0	13.3	77	T	0	T	0	0	0	0	4.0	28	8.9	31	17+	13	14	4	4.1	
RED BLUFF	104	998.6	1010.9	37.4	19.1	28.2	- 0.6	48.3	15	13.9	20	28	0	10.0	36	T	- 1	T	0	0	0	0	1.5	16	10.3	SE	8	27	3	1	1.3	98
SACRAMENTO	5	1010.8	1011.9	34.2	14.7	24.4	0.3	45.6	14+	12.2	7+	21	0	12.2	56	0	0	0	0	0	0	0	3.6	20	11.2	SW	16	26	5	0	1.7	97
SANDBERG R	1377	863.9		30.5	17.4	23.9	0.4	38.3	14	7.2	21	11	0	3.9	33	T	- 1	T	0		0	0	1.6	25	14.8	18	30	24	5	2	1.8	
SAN DIEGO	4	1011.9	1012.8	25.9	19.3	22.6	1.4	33.3	28	17.2	7+	1	0	16.1	69	T	T	T	0	0	0	0	2.9	29	9.8	NW	27	14	11	6	4.3	79
SAN FRANCISCO	2	1013.9	1014.7	22.4	13.4	17.9	0.9	36.7	14	11.1	8	2	0	11.7	73	T	T	T	0	0	0	0	4.4	28	11.2	28	27+	17	10	4	3.6	
SAN FRANCISCO	16			18.9	13.1	16.1	1.2	33.3	14	11.7	20+	1	0			T	0	T	1		0	0			11.6	W	28+					78
SANTA MARIA	72			23.3	11.8	17.6	0.8	30.0	8	8.3	28	0	0			1	1	1	2		0	0						14	14	3	4.1	
STOCKTON	7	1011.9	1012.8	34.8	16.3	25.6	- 0.1	45.6	14	13.3	24+	23	0	10.6	45	0	T	0	0	0	0	0	3.4	31	9.4	27	25+	24	6	1	1.9	
COLORADO																																
ALAMOSA	2297	776.5		27.2	8.4	17.8	- 0.4	32.2	30	3.9	2	1	0			20	- 7	9	15		0	0						7	16	8	5.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
COLORADO	M.	Mb	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M p.s.		M p s							%
COLORADO SPRINGS	1873	815.1	1015.1	27.6	13.4	20.5	- 0.9	35.6	14	8.3	4	3	0	8.3	52	104	43	33	16	14	0	0	1.1	6	16.1	36	17	6	12	13	6.2	
DENVER	1610	839.1	1013.5	29.8	12.6	21.2	- 1.5	37.8	30	6.1	5	15	0	9.4	55	16	- 23	3	10	11	0	0	0.6	13	13.4	W	6	9	10	12	5.5	61
GRAND JUNCTION	1476	852.0	1010.1	35.6	17.9	26.8	1.1	40.0	30	15.0	23	30	0	2.8	24	1	- 14	1	2	4	0	0	0.8	15	17.9	NW	31+	14	13	4	4.2	77
PUEBLO	1428	857.4	1013.1	32.3	14.8	23.6	- 1.2	39.4	14	10.0	4	22	0	11.1	54	51	4	15	12	12	0	0	1.1	7	21.0	N	17	5	12	14	6.1	75
CONNECTICUT																																
BRIDGEPORT	2	1016.9	1017.5	27.5	19.3	23.4	0.2	34.4	23	12.8	6	2	0	17.8	72	45	- 51	27	6	4	0	0	2.1	24	12.5	24	25	3	21	7	6.4	
HARTFORD	52	1010.2	1016.7	28.8	17.6	23.2	0.2	33.3	19+	11.7	6	11	0	17.8	75	98	6	42	8	4	0	0	1.1	22	12.1	NW	23	1	17	13	7.1	56
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1006.8	1018.2	29.5	19.2	24.4		35.0	22	13.9	7	10	0	19.4	77	53	- 55	25	6	4	0	0	1.1	25	8.9	30	26	7	15	9	6.1	
WASHINGTON NATIONAL	3	1015.9	1018.1	29.5	21.0	25.3	- 0.4	35.0	21	15.6	7+	11	0	19.4	72																	
DELAWARE																39		12	11	3	0	0	0.6	24	7.6	20	15	9	9	13	6.4	
WILMINGTON	23	1015.6	1018.6	29.5	20.3	24.9	0.5	35.0	23+	13.3	6	10	0	18.9	73	87	- 18	49	10	5	0	0	0.4	22	12.5	SW	16	6	12	13	6.5	53
FLORIDA																																
APALACHICOLA U	4			31.3	23.8	27.6	0.1	32.8	13+	19.4	9	10	0			40	-162	19	10	8	0	0			11.6	5	31	12	14	5	4.5	93
DAYTONA BEACH	9	1018.6	1020.0	31.6	22.5	27.1	0.3	35.0	29	20.6	7	13	0	21.1	73	82	- 89	17	12	10	0	0	1.6	11	13.0	32	6	4	16	11	6.2	
FORT MYERS	5	1018.6	1019.0	33.2	23.3	28.3	0.4	35.0	27+	21.7	8	28	0	22.2	76	247	16	65	18	19	0	0	1.7	9	15.6	25	2	5	24	2	5.3	
JACKSONVILLE	8	1019.0	1019.8	32.4	21.3	26.9	- 1.2	36.1	28+	16.1	8	18	0	22.2	80	80	-115	46	11	11	0	0	0.4	15	12.1	SW	5	6	19	6	5.5	71
KEY WEST	1	1017.3	1018.0	31.1	26.2	28.7	0.2	32.2	4+	23.3	30	3	0	23.3	72	123	18	40	13	11	0	0	4.4	11	17.4	SE	30	9	12	10	6.0	80
LAKELAND U	65			32.4	22.5	27.4	- 0.1	35.0	3	21.1	25+	17	0			89	-122	26	13		0	0						6	24	1	4.7	70
MIAMI	2	1018.6	1018.8	30.3	24.0	27.2	- 0.5	31.7	2	22.2	19+	0	0	22.8	77	181	10	68	13	14	0	0	3.0	10	13.0	12	30	4	12	15	6.7	
ORLANDO	33	1015.2	1019.8	33.4	23.4	28.4	0.4	36.7	28	21.1	7	25	0	21.7	72	101	-102	55	15	15	0	0	1.3	11	9.4	29	3	4	21	6	5.5	
PENSACOLA	34	1015.2	1019.3	32.0	23.2	27.6	0.0	33.9	22	19.4	7	17	0	21.1	70	91	-113	27	8	11	0	0	0.6	17	10.7	12	19	3	20	8	5.8	
TALLAHASSEE	17	1017.3	1019.5	33.2	20.3	26.8	- 0.6	36.1	28+	15.6	9	23	0	21.7	78	105	-100	34	12	14	0	0	0.5	6	13.4	24	31	8	19	4	5.0	
TAMPA	6	1019.3	1019.5	33.0	22.4	27.7	0.2	35.0	7+	20.6	14+	27	0	22.2	78	169	- 50	63	13	14	0	0	1.1	10	11.6	27	26	5	19	7	5.6	73
WEST PALM BEACH	5	1018.3	1018.9	32.1	24.0	28.1	- 0.1	35.0	1	20.6	11	14	0	22.2	71	337	167	148	14	17	0	0	2.7	8	14.3	4	11	8	8	15	6.5	
GEORGIA																																
ATHENS	244	990.9	1019.4	30.9	19.6	25.3	- 1.2	35.0	24+	15.0	7	10	0	20.6	80	119	- 8	59	9	15	0	0	0.9	24	13.0	29	2	5	18	8	5.8	
ATLANTA	308	983.1	1019.3	30.2	19.5	24.9	- 1.2	34.4	23	16.1	7	7	0	18.9	74	97	- 23	37	12	13	0	0	1.2	25	14.3	SW	4	3	18	10	6.3	66
AUGUSTA	41	1013.9	1019.1	32.7	20.3	26.5	- 0.6	36.1	24+	15.6	10+	22	0	20.6	77	85	- 29	21	14	16	0	0	0.7	22	13.0	27	3	5	18	8	5.4	
COLUMBUS	117	1005.4		32.2	20.7	26.4	- 0.8	36.1	22	16.7	6	18	0	20.6	74	197	48	56	12	11	0	0	0.1	24	10.7	25	29+	6	18	7	5.6	
MACON	108	1006.4	1019.4	32.5	20.1	26.3	- 1.4	35.6	23	14.4	10	23	0	20.6	74	82	- 61	38	14	13	0	0	0.6	22	17.9	S	31	4	17	10	5.8	77
ROME	194			31.5	18.9	25.2	- 0.9	36.1	22	11.7	7	13	0			130	5	67	13		0	0										
SAVANNAH	14	1018.0	1019.8	32.9	21.5	27.2	- 0.2	35.6	28+	16.1	9	23	0	20.6	72	34	-134	23	7	8	0	0	0.8	22	13.9	W	5	6	19	6	5.8	76
HAWAII																																
HILO	8	1014.9	1016.1	27.8	20.4	24.1	0.3	28.9	31+	17.8	30	0	0	20.6	84	230	- 19	37	26	0	0	0	0.2	30	6.7	E	15	0	6	25	8.8	26
HONOLULU	2	1015.2	1015.5	30.6	23.2	26.9	0.9	31.7	22+	21.7	31+	0	0	18.3	63	5	- 6	2	6	0	0	0	6.9	6	13.4	NE	29+	2	16	13	6.9	65
KAHULUI	15	1012.5	1014.9	30.4	20.6	25.5	- 0.2	31.7	22+	15.6	22	0	0	18.9	69	1	- 10	1	2	0	0	0	6.5	5	14.3	E	3	5	11	15	6.3	71
LIHUE	31	1012.2	1017.2	28.3	23.2	25.8	0.4	28.9	30+	20.6	15	0	0	20.6	77	57	8	33	22	0	0	0	5.1	5	10.3	NE	15+	0	11	20	7.7	51
IDAHO																																
BOISE	865	914.7	1012.7	32.0	14.1	23.1	- 0.9	37.2	29+	6.1	20	19	0	5.0	33	5	0	5	1	1	0	0	1.4	31	17.9	NW	6	23	5	3	2.3	89
LEWISTON	431			31.3	14.5	22.9	- 0.3	37.8	29	9.4	10	18	0			19	8	7	7		0	0			16.1Y		18	14	8	9	4.4	
POCATELLO	1358	863.5	1013.3	29.8	10.9	20.3	- 2.1	36.7	29	4.4	4	9	0	3.9	37	14	1	12	3	3	0	0	1.8	24	15.6	SW	26	19	8	4	3.0	82
ILLINOIS																																
CAIRO U	96			30.2	21.3	25.7	- 1.6	35.0	23	13.9	6	12	0			234	153	81	11		0	0			14.8	NW	26	10	14	7	5.2	66
CHICAGO O HARE	201	992.9	1016.9	28.1	18.2	23.1	0.5	33.9	22+	6.7	5	6	0	16.7	68	126	40	43	13	7	0	0	1.1	21	16.1	29	14	7	12	12	6.3	
CHICAGO MIDWAY	185	995.3	1017.4	28.4	18.7	23.6	- 0.7	35.6	22	7.8	5	9	0	16.1	64	73	- 13	32	10	7	0	0	1.0	20	13.0	SW	14	9	11	11	5.9	82
MOLINE	177	995.3	1016.5	29.0	18.3	23.7	- 0.6	33.9	22+	8.3	5	7	0	17.8	73	96	13	43	12	9	0	0	1.3	20	21.9	W	14	6	9	16	6.6	59
PEORIA	199	993.6	1017.2	28.2	17.6	22.9	- 1.6	33.3	22	8.3	5	4	0	18.3	77	90	0	36	10	7	0	0	0.9	18	13.0	NW	14	7	4	20	7.1	50
ROCKFORD	221	990.2	1016.9	26.7	16.7	21.7	- 1.7	33.9	21	7.2	5	4	0	17.2	76	213	108	67	13	9	0	0	1.1	21	10.3	36	14	7	9	15	6.7	
SPRINGFIELD	179	995.3	1017.0	30.1	18.6	24.4	- 1.2	35.6	23+	8.9	6	11	0	17.2	67	43	- 45	23	10	8	0	0	1.4	19	10.3	S	10	7	8	16	6.5	65
INDIANA																																
EVANSVILLE	116	1004.4	1018.1	29.6	18.8	24.2	- 1.8	34.4	23+	11.1	7	11	0	18.3	72	135	51	57	11	7	0	0	1.1	23	15.2	SW	15	8	10	13	6.2	68

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CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
INDIANA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M p.s.		M.p.s.							%
FORT WAYNE	241	988.8	1018.4	28.4	16.8	22.6	- 0.8	33.9	22+	7.8	6	7	0	16.1	70	66	- 20	35	12	8	0	0	1.2	24	17.9	NW	23	4	15	12	6.4	73
INDIANAPOLIS	241	989.5	1018.1	28.9	18.3	23.7	- 0.3	33.9	23+	9.4	5	8	0	17.2	70	51	- 38	27	8	6	0	0	1.2	22	16.1	NW	24	3	13	15	6.9	62
SOUTH BEND	236	989.5	1017.1	27.6	16.1	21.9	- 1.2	34.4	22+	6.7	6	6	0	16.7	75	115	27	30	13	10	0	0	1.3	22	15.6	27	15	3	15	13	6.3	
IOWA																																
BURLINGTON	211			28.5	17.8	23.2	- 1.6	33.3	10	8.3	5	6	0	18.9	73	96	9	27	9	5	0	0	1.2	21								
DES MOINES	286	982.7	1016.9	28.4	18.1	23.3	- 1.3	36.7	10	8.9	5	5	0	16.7	71	149	71	64	14	9	0	0	1.0	17	12.1	SW	6	7	9	15	6.5	55
DUBUQUE	322	978.3		26.4	16.1	21.2	- 1.3	32.8	21	7.2	5	2	0			128	38	30	13		0	0						5	11	15	7.2	
SIOUX CITY	334	976.6	1015.6	28.6	17.7	23.2	- 2.1	35.0	1	8.3	5	4	0	17.2	72	262	183	140	13	15	0	0	1.3	15	15.6	5	10	9	10	12	5.9	65
WATERLOO	265	985.1	1016.6	26.4	16.0	21.2	- 2.0	32.2	21+	7.2	5	4	0	16.7	75	134	38	44	12	9	0	0	1.2	19	13.4	33	1	7	8	16	6.7	
KANSAS																																
CONCORDIA	448	963.1	1014.8	30.3	18.4	24.3	- 2.5	36.7	14+	8.9	5	12	0	17.8	70	175	103	91	12	12	0	0	2.9	17	17.0	NW	23	9	10	12	5.3	85
DODGE CITY	787	925.5	1014.2	30.7	18.2	24.4	- 2.3	38.9	14	11.7	5	15	0	15.0	59	184	126	89	15	15	0	0	2.7	17	14.8	5	8+	5	16	10	6.1	73
GOODLAND	1114	889.6	1014.2	29.3	15.1	22.2	- 2.6	35.6	22	10.0	18+	12	0	14.4	67	67	- 1	14	13	17	0	0	2.4	15	13.4	35	31+	11	12	8	5.1	
TOPEKA	267	985.1	1016.4	28.8	18.3	23.6	- 3.1	35.6	26+	6.1	5	6	0	18.9	77	122	31	35	11	12	0	0	2.0	17	12.5	SW	14	7	7	17	6.8	51
WICHITA	403	968.2	1015.0	30.9	19.2	25.1	- 2.1	39.4	26	10.6	5	15	0	17.2	66	98	6	19	12	14	0	0	2.9	17	27.3	NW	1	9	11	11	5.9	64
KENTUCKY																																
COVINGTON	265	987.1	1018.3	29.7	18.6	24.2	0.1	35.6	23	10.0	6	11	0	17.2	69	38	- 54	15	8	4	0	0	1.2	22	14.3	24	24	4	14	13	6.8	
LEXINGTON	294	984.1	1019.0	28.2	18.2	23.2	- 2.0	33.9	22+	8.3	7	5	0	18.3	76	142	41	60	14	9	0	0	0.9	22	10.3	33	24	6	11	14	6.7	
LOUISVILLE	145	1000.7	1017.9	30.3	19.8	25.1	- 0.3	34.4	23+	10.0	7	14	0	18.3	68	92	7	34	11	7	0	0	0.9	21	8.5	[illegible]	18+	3	13	15	6.8	56
LOUISIANA																																
ALEXANDRIA	28	1014.2	1018.6	31.6	20.6	26.1	- 1.8	35.6	2+	16.1	6	15	0	20.6	79	141	7	48	17	17	0	0	0.8	17	13.0	27	3	4	20	7	5.8	
BATON ROUGE	20	1015.9	1018.6	32.7	22.0	27.3	- 0.8	35.6	3+	18.9	7	22	0	21.7	76	161	2	69	13	15	0	0	0.9	14	11.2	9	23	3	16	12	6.6	
LAKE CHARLES	3	1016.9	1018.0	31.2	22.4	26.8	- 1.1	33.9	3+	19.4	7+	15	0	22.8	84	197	12	40	16	18	0	0	1.6	13	11.2	14	20	1	17	13	6.9	
NEW ORLEANS	1	1017.6	1018.5	31.7	20.9	26.3	- 1.2	35.0	1	17.2	31+	15	0	22.2	82	99	- 72	24	15	12	0	0	1.1	14	11.2	20	27+	4	16	11	6.3	
SHREVEPORT	77	1008.5	1017.7	32.9	21.5	27.2	- 1.5	36.1	26	14.4	7	22	0	20.6	72	240	145	109	8	7	0	0	1.7	17	12.5	34	3	8	14	9	5.6	76
MAINE																																
CARIBOU	190	992.2		23.6	12.7	18.2	0.1	30.6	13	4.4	5	0	0			107	4	36	15		0	0						4	11	16	7.2	
PORTLAND	13	1013.9	1016.3	25.2	14.2	19.7	- 0.3	30.6	16	8.3	7+	0	0	16.1	83	52	- 21	15	12	7	0	0	1.3	20	11.6	SW	10	4	10	17	7.1	56
MARYLAND																																
BALTIMORE	45	1012.9	1018.5	29.6	20.3	24.9	0.1	35.0	23+	13.3	8+	11	0	18.9	72	71	- 36	34	10	6	0	0	1.1	25	11.6	NW	16	6	14	11	6.2	53
MASSACHUSETTS																																
BLUE HILL OBS R	192			26.7	16.2	21.4	- 0.2	32.8	12	11.1	6	1	0			79	- 4	21	10		0	0			34.9	NW	25					60
BOSTON	5	1015.2	1016.2	27.8	18.6	23.2	0.1	34.4	12	14.4	6	9	0	16.7	70	56	- 18	26	10	7	0	0	1.2	22	13.4	W	23	4	14	13	6.6	70
WORCESTER	301	981.4	1018.0	26.6	16.9	21.7	0.7	31.7	19	11.1	6	0	0	15.0	69	162	70	47	8	5	0	0	2.1	26	17.4	30	25	4	15	12	6.7	
MICHIGAN																																
ALPENA	210	991.9	1016.8	25.7	11.6	18.7	- 0.2	32.8	22+	2.8	5	2	0	12.8	71	89	17	46	13	8	0	0	0.6	24	10.3	W	20+	6	15	10	5.8	68
DETROIT	189			28.1	17.9	23.0	- 0.6	35.0	23+	5.6	5	6	0	15.0	62	70	- 1	29	10	6	0		1.2	25	9.4	26	23+					
DETROIT METRO	193	993.6	1017.2	27.7	15.8	21.8	- 0.7	33.9	22+	5.6	6	6	0	15.6	72	56	- 12	25	12	5	0	0	1.3	24	20.6	SW	18	7	13	11	6.0	71
FLINT	235	989.5	1017.1	26.4	15.8	21.1	- 0.7	32.2	22+	6.1	5	3	0	15.0	72	98	24	65	14	7	0	0	1.5	25	11.2	27	12	5	15	11	6.3	
GRAND RAPIDS	239	988.5	1017.4	27.1	15.4	21.3	- 1.1	33.9	11	6.1	6	5	0	15.0	70	94	25	53	9	8	0	0	1.9	23	13.4	SW	17	6	12	13	6.5	65
HOUGHTON LAKE	350	975.6	1017.3	25.3	13.0	19.2	- 0.3	31.7	22+	2.2	5	0	0	14.4	74	64	- 9	28	13	10	0	0	1.4	26	11.6	27	2	3	15	13	6.9	
LANSING	256	986.1	1017.4	26.4	13.7	20.1	- 2.0	33.3	22+	2.8	5	4	0	15.6	75	83	18	55	11	6	0	0	1.8	25	11.6	W	23+	5	15	11	6.3	58
MARQUETTE	206			22.5	12.9	17.7	- 1.6	29.4	11	5.6	3	0	0			72	- 9	21	15		0	0			11.2	W	12	4	12	15	6.8	52
MUSKEGON	191	994.9	1017.6	25.1	14.9	20.0	- 1.8	31.1	22+	6.7	6	0	0	14.4	73	89	28	35	9	8	0	0	1.7	24	10.3	33	2	11	6	14	5.8	
SAULT STE MARIE	220	989.2	1015.5	23.4	10.6	17.0	- 1.1	27.8	20+	2.8	4	0	0	13.3	80	89	26	31	10	7	0	0	1.1	28	11.6	SW	12	9	7	15	6.7	61
MINNESOTA																																
DULUTH	435	964.8	1015.7	21.9	10.5	16.2	- 2.4	27.8	30+	3.3	7	0	0	11.7	76	170	81	61	18	12	0	0	0.9	23	15.2	NW	24+	5	11	15	6.8	50
INTERNATIONAL FALLS	359	971.9	1014.7	24.1	11.3	17.7	- 0.9	31.1	30+	1.7	2	0	0	10.6	66	115	26	68	13	8	0	0	1.1	24	13.4	12	10	3	15	13	6.9	
MINNEAPOLIS	254	986.1	1015.9	25.5	15.0	20.3	- 2.1	32.8	21	6.1	4	2	0	15.0	73	130	47	40	16	10	0	0	1.0	22	13.4	NW	31	6	11	14	6.4	66
ROCHESTER	395	969.5	1016.6	25.4	14.2	19.8	- 2.6	32.8	1	6.1	4	1	0	15.6	78	152	59	45	12	9	0	0	1.8	22	10.3	22	22	6	11	14	6.6	
ST CLOUD	313	979.0	1015.9	25.4	13.4	19.4	- 2.7	31.7	21	4.4	7	0	0			184	102	58	15		0	0						7	8	16	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
MISSISSIPPI	M	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm	Mm			Mm	Mm	M.p.s.		M.p.s.							%
JACKSON	94	1007.1	1018.9	32.9	20.8	26.9	- 1.1	35.6	25+	12.8	7	23	0	21.1	78	84	- 37	27	11	14	0	0	1.0	18	15.2	NW	3	4	17	10	6.3	74
MERIDIAN	88	1008.5	1019.3	32.3	20.2	26.3	- 1.2	35.6	25	13.3	7	21	0	19.4	72	145	- 13	62	7	13	0	0	0.7	20	13.0	31	3	3	17	11	6.5	
MISSOURI																																
COLUMBIA REGIONAL	270	986.1	1017.7	30.1	18.8	24.4	- 0.7	37.2	14	9.4	5	13	0	17.8	69	98	11	32	11	6	0	0	1.3	20	12.1	NW	2	4	9	18	7.3	60
KANSAS CITY	226	989.5	1016.1	29.6	20.6	25.1	- 2.4	37.8	14	11.1	5	10	0	17.8	66	87	6	29	10	7	0	0	2.0	18	11.6	SW	17+	7	10	14	6.5	39
ST JOSEPH	247			30.1	18.4	24.3	- 2.1	35.0	15+	5.0	5	11	0	17.2	69	105	23		13				1.7	18	10.3	32	4	6	8	17	7.0	
ST LOUIS	163	997.6	1017.4	30.8	19.8	25.3	- 0.3	37.8	1	10.6	6	15	0	18.3	69	79	- 5	30	10	4	0	0	1.4	19	14.3	W	18	5	12	14	6.9	59
SPRINGFIELD	386	972.9	1017.6	31.9	18.0	25.0	- 1.0	37.8	26	6.7	6	17	0	16.7	66	57	- 42	28	8	9	0	0	1.8	17	11.6	S	14	12	5	14	5.7	66
MONTANA																																
BILLINGS	1087	893.3	1015.8	26.6	11.8	19.2	- 4.5	35.6	9	5.0	19+	6	0	5.0	45	49	26	27	11	6	0	0	0.6	31	18.8	NE	18	7	12	12	5.6	64
GLASGOW	696	935.0	1016.2	25.4	10.9	18.2	- 3.3	32.8	29	5.0	4	3	0	8.9	60	58	25	19	13	8	0	0	0.8	3	14.8	32	9	3	10	12	5.9	
GREAT FALLS	1116	890.6	1016.3	25.4	10.9	18.2	- 2.6	36.7	29	4.4	18	4	0	5.6	40	38	6	27	10	4	0	0	1.3	27	21.0	SW	24	7	9	15	6.4	69
HAVRE	788	924.8	1015.7	27.3	10.4	18.9	- 2.2	36.7	8	5.0	20+	7	0	6.1	49	30	- 3	7	13	5	0	0	1.2	27	14.3	W	9	7	9	15	6.3	78
HELENA	1167	883.2	1016.9	24.4	8.6	16.5	- 3.7	33.9	29	2.8	18	2	0	3.9	48	14	- 12	8	9	8	T	0	1.6	30	15.6	NW	13	8	12	11	5.7	64
KALISPELL	904	913.3	1017.0	25.3	8.6	16.9	- 1.8	33.9	29	4.4	4	2	0	7.2	58	38	12	14	12	5	0	0	0.6	3	15.6	4	16	12	7	12	5.3	
MILES CITY	801	923.1	1014.9	27.0	13.1	20.1	- 4.0	35.0	9	6.7	4+	7	0	8.9	52	50	16		9	5	0		0.9	1								
MISSOULA	972	905.9	1016.6	27.4	9.2	18.3	- 1.2	35.6	29	5.0	23+	7	0	6.1	51	16	- 5	8	6	4	0	0	0.8	32	17.9	SW	24	12	9	10	5.1	66
NEBRASKA																																
GRAND ISLAND	561	950.2	1015.0	29.3	17.2	23.3	- 1.8	35.0	22+	8.3	5	9	0	15.6	64	126	63	28	16	14	0	0	1.7	16	25.5	19	10	9	9	13	5.8	
LINCOLN U	351			29.8	19.6	24.7	- 2.0	36.1	10	9.4	5	12	0			56	- 27	24	11		0	0			13.9	S	19	10	7	14	6.3	51
NORFOLK	471			29.1	16.5	22.8	- 2.2	35.0	1	6.7	5	8	0			123	46	51	10		0	0						10	8	13	5.5	
NORTH PLATTE	846	919.1	1015.0	28.9	13.8	21.3	- 3.2	34.4	30	5.6	5	8	0	14.4	67	91	27	29	12	10	0	0	1.5	12	16.1	NE	2	7	15	9	5.7	70
OMAHA	298	980.7	1015.5	28.9	18.4	23.7	- 2.2	35.0	1	6.7	5	7	0	18.3	75	185	99	78	13	10	0	0	1.6	15	14.3	NW	1	8	10	13	5.8	67
SCOTTSBLUFF	1206	881.1	1014.6	29.1	13.1	21.1	- 2.6	36.7	30+	5.6	4	10	0	10.6	50	96	59	40	13	15	0	0	1.6	9	17.9	32	25	11	11	9	5.4	
VALENTINE	789			28.8	13.7	21.3	- 2.8	36.7	30	6.7	3	9	0			118	59	36	11		0	0			25.0	SW	7	11	15	5	4.9	68
NEVADA																																
ELKO	1539	845.6	1012.9	31.2	8.2	19.7	- 1.2	35.0	29	2.2	22	14	0	- 2.2	23	T	- 10	T	0	1	0	0	1.2	27	10.7	18	5	20	5	6	3.1	
ELY	1906	810.7	1010.9	31.9	8.2	20.1	0.3	35.6	13	2.8	22+	15	0	- 1.7	25	4	- 12	4	3	4					Y				4		2.4	2
LAS VEGAS	659	934.3	1008.3	42.1	25.8	33.9	1.9	46.7	14+	18.9	22	31	0	1.7	14	3	- 9	3	1	1	0	0	3.8	21	20.6	NE	16	23	5	3	2.4	95
RENO	1342	866.6	1012.9	34.0	8.9	21.5	1.7	39.4	14	3.9	25	21	0	2.2	30	T	- 7	T	1	2	0	0	1.5	28	13.4	W	19+	21	7	3	2.6	98
WINNEMUCCA	1311	868.9	1012.5	35.1	11.6	23.4	1.7	40.6	29	6.7	26	26	0	- 0.6	22	1	- 6	1	1	0	0	0	1.4	31	13.4	SW	9	21	7	3	2.7	93
NEW HAMPSHIRE																																
CONCORD	104	1004.1	1016.6	27.2	14.2	20.7	- 0.2	33.3	15	6.7	5	3	0	16.7	82	137	51	28	15	9	0	0	0.6	23	10.3	NE	25	2	13	16	7.0	53
MT WASHINGTON OBS	1909			12.9	6.4	9.7	0.2	18.9	18+	- 0.6	5	0	3			194	23	51	15	4	0	0			32.6Y	SW	10	0	7	24	8.7	27
NEW JERSEY																																
ATLANTIC CITY	20	1015.6	1018.0	29.1	19.3	24.2	0.3	35.6	23	12.2	8+	11	0	18.3	74	71	- 23	39	5	6	0	0	1.7	23	9.4	19	16	4	12	15	6.7	60
ATLANTIC CITY U	3			25.7	19.9	22.8	- 0.6	33.9	23	15.6	8+	2	0			95	- 3	40	9						16.5	N	25					
NEWARK	2	1016.3	1017.4	29.8	21.2	25.5	0.9	35.6	23	15.0	6	16	0	18.3	67	119	26	83	9	7	0	0	1.5	24	9.8	32	21	2	18	11	6.6	
TRENTON U	17			29.1	20.1	24.6	0.2	35.6	19	13.3	6	11	0			70	- 37	47	7		0	0			13.9	NW	25	6	16	9	5.8	61
NEW MEXICO																25	- 5	11	6	7	0	0	1.3	15	21.5	E	4	11	12	8	4.9	71
ALBUQUERQUE	1619	839.8	1011.7	33.9	17.8	25.9	0.1	39.4	31	13.3	6	24	0	9.4	42	116	57	28	18		0	0						7	16	8	5.5	
CLAYTON	1515			28.2	14.7	21.4	- 2.2	34.4	14	9.4	4	5	0			138	93	108	9		0	0			28.2	E	20					70
ROSWELL	1101			34.0	18.2	26.1	0.2	40.0	31	14.4	4	24	0																			
NEW YORK																79	- 10	38	13	7	0	0	1.2	23	11.6	W	25	1	14	16	7.2	54
ALBANY	84	1006.4	1017.0	27.6	15.6	21.6	- 0.7	32.8	19+	9.4	9	5	0	14.4	68	43	- 52	22	15	7	0	0	2.1	25	11.2	SW	10	0	16	15	7.5	59
BINGHAMTON	485	960.0	1018.1	26.8	17.1	21.9	1.7	33.3	23	11.1	7+	3	0	16.1	74	25	- 40	11	11	2	0	0	3.0	24	15.2	SW	23	1	17	13	7.3	71
BUFFALO	215	991.9	1017.3	26.3	17.0	21.7	0.7	31.1	18+	10.0	7	0	0	15.0	69	115	21	80	8	2	0	0	1.3	26	9.8	W	25					63
NEW YORK U	40	1014.2	1017.5	29.5	20.7	25.1	0.2	34.4	23+	13.3	6	11	0	17.2	67	66	- 37	30	9	4	0	0	1.9	22	14.3	23	25	5	18	8	5.9	
NEW YORK KENNEDY	4	1016.9	1017.8	28.8	21.2	25.0	0.6	37.8	23	15.0	6	7	0	18.3	68	88	- 6	51	7	5	0	0	1.2	24	16.5	NW	21	3	17	11	6.3	
NEW YORK LA GUARDIA	3	1016.6	1017.5	27.6	19.7	23.7	- 1.2	32.8	23	13.3	6	3	0	17.2	70	36	- 36	10	10	8	0	0	2.1	24	12.1	W	23	2	19	10	6.2	73
ROCHESTER	167	997.3	1017.3	28.8	16.8	22.8	0.8	34.4	20	10.6	30+	8	0	17.2	73	88	9	19	11	8	0	0	1.7	24	17.0	W	23	3	15	13	6.7	54
SYRACUSE	125	1002.0	1016.9	27.9	17.5	22.7	0.4	33.3	18+	11.1	30+	6	0	17.2	74																	
																118	- 30	49	14	12	0	0	0.6	32	15.6	33	2	2	19	10	6.7	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
NORTH CAROLINA	M	Mb.	Mb	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s							%
ASHEVILLE	652	945.1	1020.3	28.6	16.2	22.4	- 0.1	32.8	23+	10.0	8+	3	0	18.3	83	118	- 30	49	14	12	0	0	0.6	32	15.6	33	2	2	19	10	6.7	56
CAPE HATTERAS R	2	1019.0	1019.3	28.6	22.3	25.5	- 0.1	33.3	23	12.2	9	4	0	22.8	84	219	63	94	11	12	0	0	2.5	23	10.3	26	24	9	5	17	6.5	63
CHARLOTTE	224	991.9	1018.9	30.3	19.7	25.0	- 1.2	34.4	24+	12.8	7	10	0	19.4	76	167	43	72	17	12	0	0	1.6	22	15.2	SW	26	6	13	12	6.2	59
GREENSBORO	273	988.2	1019.2	29.9	19.0	24.5	- 0.7	35.6	24	10.6	7	9	0	19.4	76	65	- 57	15	12	10	0	0	1.0	23	13.9	NW	29	6	16	9	6.2	59
RALEIGH	132	1003.1	1018.6	30.6	19.6	25.1	- 0.4	34.4	23	13.3	7	10	0	19.4	76	173	33	45	13	13	0	0	1.2	22	13.4	32	29	5	15	11	6.1	48
WILMINGTON	9	1018.0	1019.3	31.8	21.6	26.7	0.1	36.7	23	15.0	8	22	0	21.7	79	162	- 34	124	11	7	0	0	1.7	22	11.6	22	27	9	9	13	6.2	60
NORTH DAKOTA																																
BISMARCK	502	956.0	1015.2	26.8	11.6	19.2	- 2.8	35.0	29	2.8	4	3	0	11.1	64	41	- 15	12	8	4	0	0	0.8	34	20.1	NW	11	5	10	16	6.3	60
FARGO	273	982.4	1014.9	27.2	13.2	20.2	- 1.7	35.6	10	5.0	4	2	0	13.3	67	71	- 3	27	19	10	0	0	0.3	25	17.9	88	11	7	15	9	6.0	65
WILLISTON	579	947.9	1015.8	24.9	10.7	17.8	- 4.1	33.9	9	3.3	4	2	0	10.0	65	54	7	14	12	9	0	0	1.0	32	15.6	NW	9	6	13	12	6.0	68
OHIO																																
AKRON	368	974.6	1018.6	26.7	16.9	21.8	- 0.8	32.2	22+	8.9	6	3	0	16.7	76	184	89	86	16	12	0	0	1.2	23	15.6	21	9	5	8	18	7.1	
CINCINNATI ABBE OB	232			29.2	18.7	23.9	- 1.0	36.1	23	8.9	6	10	0			43	- 48	26	9		0	0			13.9	NW	24					50
CLEVELAND	237	989.8	1018.4	26.9	16.8	21.9	- 0.3	32.8	23+	7.2	6	5	0	16.7	74	113	29	51	13	4	0	0	1.3	21	21.0	SW	18	6	10	15	6.5	63
COLUMBUS	247	988.8	1018.4	27.6	16.8	22.2	- 1.6	33.3	23	6.1	6	2	0	16.1	71	66	- 34	17	16	11	0	0	0.8	17	18.3	SW	9	2	15	14	7.3	45
DAYTON	305	982.7	1018.3	29.6	17.8	23.7	- 0.3	36.1	23	6.7	6	10	0	16.1	67	53	- 37	17	10	5	0	0	1.3	22	23.2	W	24	6	12	13	6.6	54
MANSFIELD	395			28.1	17.9	23.1	- 0.6	33.3	21+	8.3	6	7	0	16.7	71	79	- 9	15	14	10	0	0	1.5	22	11.6	29	24+	7	10	14	6.6	
TOLEDO	204	992.6	1017.5	27.6	16.1	21.9	- 0.7	34.4	21	6.1	6	6	0	16.1	73	70	5	17	14	8	0	0	1.2	24	9.8	NW	23	6	13	12	6.2	64
YOUNGSTOWN	359	976.3	1018.5	25.9	15.3	20.6	- 0.8	32.2	23+	6.7	7	2	0	16.7	82	93	- 17	29	13	6	0	0	1.1	24	12.5	30	23	4	13	14	6.9	
OKLAHOMA																																
OKLAHOMA CITY	392	970.2	1015.7	32.8	20.3	26.6	- 1.5	38.3	27	12.8	6	23	0	17.2	61	82	22	73	4	4	0	0	3.3	16	19.7	NE	2	14	7	10	4.8	78
TULSA	198	992.2	1016.1	32.8	21.0	26.9	- 1.0	39.4	27+	12.2	5	22	0	18.9	64	68	- 7	38	8	6	0	0	2.9	18	14.3	NE	1	10	12	9	5.4	72
OREGON																																
ASTORIA	2	1016.6	1017.4	21.9	11.6	16.8	0.9	31.7	3	6.7	1	0	0	12.8	81	51	19	22	6	0	0	0	1.6	28	9.4	33	28+	10	9	12	5.6	
BURNS O	1265	874.4	1014.7	29.2	9.9	19.6	- 1.2	35.0	28	2.2	21	8	0	3.3	36	T	- 8	T	1		0	0	1.5	30				18	11	2	2.8	
EUGENE	109	1002.0	1015.4	29.9	11.2	20.6	1.3	37.2	16	6.1	9	10	0	10.6	59	1	- 6	1	1	0	0	0	1.5	31	9.8	34	2	19	7	5	3.4	
MEACHAM	1234	878.8		23.9	10.8	17.4	- 0.1	31.7	28	4.4	10	0	0			8	- 5	6	4		0	0			8.0	34	18	15	9	7	4.3	
MEDFORD	396	966.8	1013.6	35.2	12.5	23.8	1.6	41.1	16+	7.2	8	26	0	8.3	44	T	- 5	T	0	1	0	0	1.7	31	9.4	15	29	27	4	0	1.4	
PENDLETON	452	962.1	1014.5	32.1	15.3	23.7	0.6	38.3	28	7.8	2	20	0	4.4	31	15	9	10	5	1	0	0	1.4	30	13.4	1	18	18	9	4	3.6	
PORTLAND	6	1014.9	1016.0	28.8	14.3	21.6	2.1	36.1	4	9.4	10	7	0	10.6	55	14	4	8	2	0	0	0	2.0	33	12.5	E	3+	19	6	6	3.6	81
SALEM	60	1008.1	1015.6	29.4	10.1	19.8	0.8	36.7	17+	4.4	10	10	0	7.8	50	3	- 6	3	2	1	0	0	1.2	34	8.9	36	29+	20	7	4	3.2	
SEXTON SUMMIT R	1169	885.5	1014.0	26.8	13.3	20.1	2.5	33.3	17	5.0	9	2	0			T	- 8	T	0		0	0	2.9	36	13.0	35	16	29	1	1	0.8	
PACIFIC AREA																																
GUAM TAGUAC R	110	995.3	1007.9	29.5	23.0	26.3	- 0.1	31.1	12	20.0	13	0	0	23.9	88	508	280	108	27	3	0	0	0.5	20	10.3	SE	9	0	6	25	8.8	
JOHNSTON	2	1012.2	1012.7	28.3	25.1	26.7	- 0.6	28.9	28+	22.8	12	0	0	22.8	78	21	- 12	10	11	0	0	0	7.8	9	14.3	NE	12	0	12	19	8.0	60
KOROR R	29	1005.1	1008.7	30.6	25.1	27.9	0.7	31.7	30+	22.2	30+	0	0	23.9	81	283	-102	99	14	0	0	0	3.6	24	10.7	NW	9+	0	4	27	9.2	57
KWAJALEIN	2	1007.1	1007.8	30.4	25.2	27.8	0.3	32.8	22	23.3	3+	1	0	24.4	83	313	87	98	29	0	0	0	1.1	12	14.3	14	18	0	0	31	9.8	
MAJURO	3	1008.5	1008.8	29.4	24.9	27.2	0.4	31.1	21+	22.8	13	0	0	23.9	83	375	57	59	22	0	0	0	0.5	23	10.7	SW	18	0	1	30	9.5	37
PAGO PAGO	4	1011.2	1011.4	28.6	23.0	25.8		30.6	30	20.0	25+	0	0	21.7	78	187		88	17	0	0	0	3.1	11	11.6	SE	9	1	17	13	7.1	50
PONAPE R	37	1002.0	1007.3	29.5	23.4	26.4	- 0.1	31.7	20+	22.2	28+	0	0	23.9	88	922	510	179	27	1	0	0	2.2	25	8.9	SW	31+	0	2	29	9.3	52
TRUK MOEN ISLAND	2	1007.8	1008.2	29.7	24.4	27.1	0.1	32.8	24	23.3	29+	1	0	24.4	86	424	110	86	26	1	0	0	4.4	25	13.0	NW	15	0	1	30	9.6	67
WAKE	3	1011.2	1011.3	30.9	25.0	28.0	0.2	32.2	27+	23.3	30+	6	0	22.2	74	86	- 31	38	19	0	0	0	6.4	9	18.3	E	12	6	8	17	7.0	64
YAP R	13			31.1	25.4	28.3	0.8	32.2	28	22.8	6	1	0			234	-116	70	19	4	0	0			9.8	W	27	0	4	27	9.0	68
PENNSYLVANIA																																
ALLENTOWN	118	1004.1	1017.9	29.1	18.6	23.8	0.4	36.1	21	12.2	9	9	0	17.8	73	149	26	46	10	8	0	0	1.3	26	17.0	28	25	3	20	8	6.1	
ERIE	223	991.5	1018.1	24.7	15.8	20.2	- 0.3	31.7	20	7.8	6	0	0	16.1	79	74	- 19	37	11	6	0	0	1.1	23	9.4	24	23	5	12	14	6.7	
HARRISBURG	103	1005.4	1018.0	29.4	19.7	24.6	0.0	36.1	23	13.9	29	11	0	18.3	70	57	- 32	13	8	5	0	0	0.8	26	13.4	W	13	4	17	10	6.5	61
PHILADELPHIA	2	1016.9	1018.0	29.7	20.3	25.1	0.8	35.0	23	13.9	6	11	0	18.3	70	67	- 39	54	7	5	0	0	1.4	24	11.2	N	25	5	16	10	6.3	59
PITTSBURGH	347	975.3	1018.8	26.4	17.1	21.8	- 0.5	32.8	22	8.3	7	3	0	16.1	72	76	- 23	19	11	8	0	0	1.3	27	13.0	27	9	1	11	19	7.6	41
SCRANTON	283	984.1	1017.8	27.2	16.7	21.9	- 0.5	33.3	23+	9.4	9	5	0	16.7	76	31	- 90	8	11	8	0	0	1.2	23	9.4	S	15	0	17	14	7.1	58
WILLIAMSPORT	160	999.3	1018.1	26.8	17.7	22.3	- 0.8	32.8	23+	11.7	29	3	0	17.8	81	96	- 10	35	15	12	0	0	1.9	27	11.2	31	23	4	13	14	7.3	
RHODE ISLAND																																
BLOCK ISLAND	34			25.7	18.1	21.9	1.0	32.8	18	11.7	8	1	0			47	- 21	22	8		0	0										
PROVIDENCE	16	1014.9	1017.1	27.3	17.8	22.6	0.3	32.8	12	11.7	7	1	0	17.8	76	108	34	64	7	6	0	0	1.3	22	10.7	32	25	6	10	13	6.4	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
SOUTH CAROLINA	M	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm	M.p.s.		M.p.s							%
CHARLESTON	12	1017.6	1019.5	31.8	21.6	26.7	- 0.3	36.1	29	15.0	9	18	0	21.1	76	45	-151	29	6	3	0	0	1.5	22	21.5Y	W	4	6	16	9	5.8	67
CHARLESTON U	3			30.8	23.8	27.3	- 0.2	34.4	23+	19.4	7+	14	0			35	-163	25	5		0	0			13.0	W	4					
COLUMBIA	65	1011.5	1019.3	32.2	20.3	26.2	- 1.3	35.0	23	15.0	10+	22	0	21.7	81	236	82	54	17	16	0	0	0.8	23	15.6	33	14	6	14	11	6.0	85
GRNVLLE-SPRTNBRG	292	985.1	1019.3	30.6	19.3	25.0	- 1.1	35.0	23	14.4	7	12	0	18.3	72	106	- 12	39	14	14	0	0	0.9	24	13.4	S	29	6	15	10	5.8	64
SOUTH DAKOTA																																
ABERDEEN	395	968.5	1014.6	27.6	14.1	20.8	- 2.2	32.8	10	5.6	5	2	0	15.0	72	196	132	50	16	19	0	0	0.3	14	15.6	33	11	11	7	13	5.7	
HURON	390	968.5	1014.3	27.4	14.4	20.9	- 2.9	32.8	10	4.4	5	1	0	15.0	72	125	79	51	18	13	0	0	1.2	17	19.2	S	9	11	10	10	5.3	66
RAPID CITY	964	906.2	1015.6	25.9	11.4	18.7	- 4.6	36.7	30	5.6	2	3	0	11.7	68	42	- 3	10	15	10	0	0	1.1	34	15.2	NW	1	8	13	10	5.4	60
SIOUX FALLS	432	964.8	1015.5	27.6	14.8	21.2	- 2.3	33.3	30	3.9	5	6	0	14.4	68	89	17	27	14	12	0	0	1.1	17	14.8	1	12	12	8	11	5.3	
TENNESSEE																																
BRISTOL	459	966.1	1019.6	29.1	17.2	23.1	- 1.3	33.3	23+	10.0	7	7	0	17.8	78	81	- 60	32	11	10	0	0	0.4	26	6.7	30	24	3	15	13	7.0	
CHATTANOOGA	203	994.6	1018.8	29.7	17.4	23.6	- 3.4	33.9	24+	10.6	7	8	0	17.2	71	191	61	77	13	13	0	0	0.6	22	12.1	N	27	7	9	15	6.3	57
KNOXVILLE	299	985.1	1019.7	28.9	19.4	24.2	- 1.6	33.9	23+	12.8	8+	5	0	19.4	79	172	49	44	16	13	0	0	0.8	26	13.0	SW	28+	7	9	15	6.5	56
MEMPHIS	79	1008.1	1018.2	31.1	21.6	26.3	- 1.1	35.0	26	13.9	7	16	0	17.8	62	124	34	64	8	6	0	0	1.7	19	15.6	28	2	10	15	6	4.9	82
NASHVILLE	180	997.0	1018.2	30.7	19.6	25.2	- 1.6	34.4	23+	12.2	6	14	0	19.4	75	163	68	52	9	6	0	0	1.6	22	19.2	W	2	9	10	12	5.7	50
OAK RIDGE R	276			29.4	18.5	24.0	- 1.1	33.9	24+	11.1	7	7	0			133	- 19	43	13		0	0			15.6Y		27	4	13	14	6.7	
TEXAS																																
ABILENE	544	954.6	1016.1	33.2	20.9	27.1	- 1.3	37.2	31	16.7	6+	27	0	18.3	63	31	- 27	25	6	7	0	0	4.3	16	18.3	SE	19	14	8	9	5.0	82
AMARILLO	1098	893.0	1013.8	30.1	17.1	23.6	- 3.4	35.0	31+	12.2	5+	10	0	13.9	59	66	6	39	11	9	0	0	4.3	19	17.9	E	8	9	16	6	5.0	77
AUSTIN	182	994.6	1016.4	33.2	22.7	27.9	- 1.2	37.8	30	18.9	7+	23	0	20.0	69	65	9	23	9	9	0	0	2.5	17	13.9	NE	4	4	16	11	6.1	72
BROWNSVILLE	6	1015.2	1015.7	31.4	23.3	27.4	- 1.5	32.8	31+	21.7	6	12	0	22.8	77	131	88	42	17	6	0	0	3.2	14	16.5	SE	14	6	17	8	5.8	81
CORPUS CHRISTI	12	1014.6	1016.2	33.6	24.1	28.8	- 0.1	36.7	30	22.8	31+	27	0	23.3	78	72	13	32	10	5	0	0	4.1	13	14.8	SE	16+	5	16	10	5.8	78
DALLAS	147	999.3	1016.3	33.6	22.9	28.3	- 1.1	37.8	29+	16.7	6	25	0	19.4	61	50	T	43	4	1	0	0	3.5	16	18.8	N	12	10	13	8	5.2	83
DEL RIO	313	979.0	1014.4	34.2	22.4	28.3	- 1.8	39.4	31	20.6	18+	29	0	18.9	61	66	33	47	7	4	0	0	4.8	13	12.5	12	11	6	12	13	6.6	
EL PASO	1194	882.8	1011.1	34.7	21.1	27.9	0.2	40.0	31	17.8	13	27	0	12.2	41	18	- 15	8	3	11	0	0	2.1	15	25.5	N	12	8	14	9	5.3	84
FORT WORTH	164	996.3	1016.4	34.4	22.3	28.4	- 1.3	38.9	29	15.0	6	27	0	20.0	64	15	- 29	7	4	4	0	0	3.0	17	11.6	21	2	10	14	7	5.1	
GALVESTON U	2			30.2	25.6	27.9	- 0.5	31.7	30+	22.2	30	0	0			87	- 34	28	12		0	0			13.0	E	21					70
HOUSTON INTERCON	29	1013.5	1017.2	32.3	21.3	26.8	- 1.2	36.1	3	16.7	7	20	0	22.2	81	70	- 32	24	14	20	0	0	1.6	13	11.6	9	30	1	17	13	6.6	60
LUBBOCK	992	905.5	1014.3	30.4	19.1	24.7	- 1.7	36.7	31	15.6	5	10	0	16.7	64	114	62	38	9	10	0	0	3.5	16	15.6	6	3	12	12	7	4.8	
MIDLAND	869	917.4	1013.7	32.6	19.8	26.2	- 2.1	38.3	31	15.6	5+	24	0	15.0	54	15	- 33	13	2	2	0	0	4.6	15	17.9	33	4	9	13	9	5.5	
PORT ARTHUR	5	1017.3		30.7	21.9	26.3	- 1.4	32.8	26	18.9	7	6	0	22.8	85	123	- 29	28	11	15	0	0	1.8	15	17.0	NW	29	5	14	12	6.1	56
SAN ANGELO	580	949.2	1014.3	35.3	21.7	28.5	- 0.8	40.6	31	18.3	6	29	0	16.7	54	4	- 31	4	2	1	0	0	3.6	17	13.0	33	4	9	12	10	5.6	
SAN ANTONIO	240	989.2	1016.5	32.9	22.8	27.9	- 1.0	36.7	30	18.3	22+	22	0	21.7	74	80	26	44	11	6	0	0	3.0	14	14.8	N	4	5	12	14	6.4	64
VICTORIA	32	1012.5	1016.5	32.9	23.6	28.3	- 0.2	35.6	30	20.0	7	22	0	22.8	77	185	94	47	14	16	0	0	2.5	14	18.3Y	N	4	2	15	14	6.8	
WACO	153	998.6	1016.4	33.2	22.6	27.9	- 1.7	37.8	29	16.7	6	26	0	20.0	66	105	55	66	5	4	0	0	3.7	16	16.5	17	18	7	17	7	5.4	
WICHITA FALLS	303	979.3	1015.0	35.8	21.1	28.5	- 1.3	40.6	27	15.0	7+	28	0	18.3	59	28	- 22	27	2	4	0	0	4.1	17	14.3	9	2	9	13	9	5.4	
UTAH																																
MILFORD	1533	846.3		34.6	13.9	24.3	1.1	38.3	29+	6.7	22	28	0			1	- 17	1	2		0	0			21.9	SW	20	19	7	5	3.3	84
SALT LAKE CITY	1286	871.3	1011.4	34.1	16.1	25.1	0.2	40.0	29	11.1	21	27	0	5.0	30	2	- 13	1	2	4	0	0	0.4	15	14.3	SE	24	18	8	5	3.3	89
WENDOVER	1291	870.3	1012.1	33.4	18.7	26.1	- 0.2	38.3	13	12.2	21	26	0	- 1.1	19	6	- 2	6	3		0	0						18	6	7	3.5	
VERMONT																																
BURLINGTON	101	1003.7	1016.1	26.5	15.1	20.8	0.2	33.3	15+	7.8	6+	2	0	16.1	78	155	58	44	17	9	0	0	0.9	19	15.2	S	10	6	10	15	6.8	51
VIRGINIA																																
LYNCHBURG	279			29.3	18.7	24.0	- 0.6	34.4	23+	12.8	8	9	0			215	108	55	10		0	0			13.0	SW	16	7	13	11	6.0	54
NORFOLK	7	1017.3	1018.4	29.6	21.0	25.3	- 0.7	35.0	24	13.3	8	11	0	20.6	78	118	- 32	27	12	8	0	0	1.3	18	15.2	W	16	9	12	10	5.8	65
RICHMOND	50	1011.9	1018.3	29.9	20.1	25.1	- 0.6	35.0	23	12.8	8	14	0	20.6	79	147	5	54	9	3	0	0	0.3	20	11.6	SW	31	6	13	12	6.0	62
ROANOKE	350	977.3	1018.8	29.2	17.8	23.5	- 1.3	34.4	24+	8.9	7	10	0	18.3	76	124	16	50	11	5	0	0	0.8	30	8.0	28	3	5	15	11	6.2	
WALLOPS ISLAND	3			26.9	20.8	23.9		34.4	24+	12.8	8	4	0			54		13	12		0	0			18.3Y	W	3					
WASHINGTON																																
OLYMPIA	59	1009.5	1016.8	25.3	8.9	17.1	- 0.6	33.9	4	4.4	10	2	0	10.6	69	44	24	19	6	1	0	0	0.5	20	8.0	19	31	16	7	8	4.0	
QUILLAYUTE	55	1010.2	1017.6	22.0	9.6	15.8	0.4	32.2	16	5.0	7+	1	0	10.0	74	237	178	164	8	1	0	0	0.8	28	10.3	NE	1	12	5	14	5.5	50
SEATTLE-TACOMA	122	1000.7	1016.8	24.4	13.4	18.9	0.6	32.8	4	8.9	7	2	0	11.1	65	34	13	19	5	1	0	0	0.6	33	10.3	N	2	14	9	8	4.2	74
SPOKANE	718	931.9	1014.5	27.7	12.4	20.1	- 1.2	35.6	29	7.8	10	6	0	5.0	40	6	- 3	4	4	2	0	0	0.5	24	11.6	SW	9	15	9	7	4.0	71
STAMPEDE PASS R	1206	881.8		18.6	9.5	14.1	0.6	26.1	5	3.9	10	0	0			86	49	50	7		0	0						16	7	8	4.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days		Average dew point	Average relative humidity	Precipitation			No of days		Snow, Sleet		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower			Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Average speed	Prevailing direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10		
WASHINGTON	M.	Mb	Mb.	C.	C.	C	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
WALLA WALLA U	289			30.6	16.4	23.5	-0.9	37.2	30+	11.1	19	13	0			14	9	7	7		0	0			10.3	NE	18	14	11	6	4.1	77
YAKIMA	321	976.6	1014.5	31.8	10.3	21.1	-0.6	37.8	30+	3.3	9	19	0	6.7	42	1	-2	1	3	3	0	0	1.3	31	10.7	5	18	19	7	5	3.3	
WEST INDIES																																
SAN JUAN	4	1015.6	1018.3	31.8	25.8	28.8	1.9	33.3	15	24.4	18+	11	0	21.7	66	57	-102	17	15	2	0	0	5.1	9	13.9	E	10	4	21	6	5.9	58
WEST VIRGINIA																																
BECKLEY	763	932.3	1018.8	25.6	15.6	20.6	-1.1	30.6	24+	5.0	7	0	0	16.7	80	147	16	44	12	6	0	0	1.3	23	8.0	26	27+	2	16	13	7.2	
CHARLESTON	286	985.1	1018.6	28.7	17.3	23.0	-0.8	34.4	24+	8.3	8+	9	0	18.3	80	105	-39	51	16	9	0	0	0.4	23	8.0	19	15	1	12	18	7.5	
ELKINS	594	949.9		25.6	14.4	20.0	-1.2	29.4	22+	7.2	7	0	0			116	-24	45	16		0	0						0	11	20	8.2	
HUNTINGTON	252	988.8	1018.7	28.7	18.6	23.7	-0.3	33.9	23	8.9	7	7	0	19.4	82	68	-46	23	13	6	0	0	0.7	20	10.3	27	24+	3	11	17	7.2	
PARKERSBURG U	187			28.8	18.3	23.6	-0.8	35.6	22	10.0	7	9	0			38	-66	13	10		0	0			13.9	W	24					57
WISCONSIN																																
GREEN BAY	208	990.9	1016.2	27.2	14.8	21.0	-0.4	35.0	20	6.1	4	4	0	15.6	74	47	-22	21	13	8	0	0	1.5	23	15.2	SW	1	4	10	17	7.1	59
LA CROSSE	198	992.9	1017.0	26.8	15.7	21.3	-1.9	33.3	22+	7.8	4	3	0	16.7	80	153	58		15	8	0		0.9	18								
MADISON	262	985.8	1016.7	26.8	13.6	20.2	-1.6	34.4	21+	4.4	5	5	0	15.6	76	89	-2	19	12	9	0	0	1.1	23	11.6	NW	1	7	8	16	6.8	53
MILWAUKEE	205	991.9	1016.9	25.3	16.1	20.7	0.3	33.3	21	7.2	5	4	0	16.1	77	117	42	36	14	6	0	0	1.3	21	14.8	NW	14+	9	8	14	6.3	66
WYOMING																																
CASPER	1627	840.2	1014.8	28.6	9.1	18.8	-3.2	33.9	30+	-1.1	4	9	1	5.6	51	26	1	14	5	6	0	0	0.8	32	20.6	27	7	12	7	12	5.2	
CHEYENNE	1867	815.8	1015.8	25.6	10.3	17.9	-3.2	33.9	30	5.0	5+	2	0	6.7	55	34	-12	13	15	13	0	0	0.4	22	15.6	NE	19	5	14	12	6.1	57
LANDER	1696	831.7	1014.5	27.7	11.2	19.4	-2.0	33.3	29+	6.1	4+	5	0	3.3	40	11	-8	6	7	6	0	0	1.2	27	15.2	NW	11	10	14	7	5.0	67
SHERIDAN	1208	881.1	1016.3	26.2	9.4	17.8	-4.0	33.9	13	3.3	3	6	0	9.3	59	41	11	18	12	8	0	0	0.8	32	17.9	W	27	10	9	12	5.6	65

Data from airport unless otherwise specified U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C or above for Alaskan Stations
Y Peak Gust
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication

HEATING DEGREE DAYS

(Base 65°F.)

JULY 1972

State and station	Current season		Normals July through this month
	This month	Period July through this month	
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	185	185	211
ANNETTE	198	198	242
BARROW	681	681	803
BARTER ISLAND	785	785	735
BETHEL	228	228	319
BETTLES	123	123	
BIG DELTA	129	129	
COLD BAY	500	500	474
FAIRBANKS	63	63	171
GULKANA	172	172	
HOMER	396	396	
JUNEAU	207	207	301
KING SALMON	298	298	313
KOTZEBUE	192	192	381
MC GRATH	129	129	208
NOME	286	286	481
ST. PAUL ISLAND	691	691	605
SHEMYA	566	566	577
SUMMIT	275	275	
TALKEETNA	131	131	220
UNALAKLEET	193	193	
YAKUTAT	274	274	338
ARIZONA			
FLAGSTAFF	22	22	46
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	0	0	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	1	1	0
LITTLE ROCK	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	0	0	0
BLUE CANYON	20	20	34
EUREKA U	217	217	270
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	0	0	19
LOS ANGELES U	0	0	0
MT SHASTA R	14	14	25
OAKLAND	47	47	53
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG R	18	18	0
SAN DIEGO	0	0	6
SAN FRANCISCO	64	64	81
SAN FRANCISCO U	144	144	192
SANTA MARIA	53	53	99
STOCKTON	0	0	0
COLORADO			
ALAMOSA	55	55	65
COLORADO SPRINGS	41	41	9
DENVER	42	42	6
GRAND JUNCTION	0	0	0
PUEBLO	16	16	0
CONNECTICUT			
BRIDGEPORT	7	7	0
HARTFORD	6	6	0
DELAWARE			
WILMINGTON	0	0	0
DIST.OF COLUMBIA			
WASHINGTON DULLES	2	2	
WASHINGTON NATIONAL	0	0	0
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	0
SAVANNAH	0	0	0
IDAHO			
BOISE	11	11	0
LEWISTON	13	13	0
POCATELLO	30	30	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	15	15	0
CHICAGO MIDWAY	15	15	0
MOLINE	8	8	0
PEORIA	9	9	0
ROCKFORD	17	17	6
SPRINGFIELD	3	3	0
INDIANA			
EVANSVILLE	2	2	0
FORT WAYNE	15	15	0
INDIANAPOLIS	8	8	0
SOUTH BEND	24	24	0
IOWA			
BURLINGTON	10	10	0
DES MOINES	7	7	0
DUBUQUE	20	20	12
SIOUX CITY	[illegible]	[illegible]	0
WATERLOO	23	23	12
KANSAS			
CONCORDIA	5	5	0
DODGE CITY	6	6	0
GOODLAND	28	28	0
TOPEKA	10	10	0
WICHITA			
KENTUCKY			
COVINGTON	2	2	0
LEXINGTON	10	10	0
LOUISVILLE	0	0	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	55	55	78
PORTLAND	27	27	12
MARYLAND			
BALTIMORE	2	2	0
MASSACHUSETTS			
BLUE HILL OBS R	12	12	0
BOSTON	3	3	0
WORCESTER	16	16	6
MICHIGAN			
ALPENA	72	72	68
DETROIT	21	21	0
DETROIT METRO	24	24	0
FLINT	34	34	9
GRAND RAPIDS	28	28	8
HOUGHTON LAKE	77	77	54
LANSING	56	56	6
MARQUETTE U	103	103	59
MUSKEGON	41	41	12
SAULT STE MARIE	105	105	96
MINNESOTA			
DULUTH	134	134	71
INTERNATIONAL FALLS	72	72	71
MINNEAPOLIS	34	34	22
ROCHESTER	39	39	25
ST CLOUD	48	48	28
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
MISSOURI			
COLUMBIA REGIONAL	2	2	0
KANSAS CITY	1	1	0
ST JOSEPH	6	6	0
ST LOUIS	2	2	0
SPRINGFIELD	9	9	0
MONTANA			
BILLINGS	85	85	6
GLASGOW	71	71	31
GREAT FALLS	109	109	28
HAVRE	74	74	28
HELENA	136	136	31
KALISPELL	113	113	50
MILES CITY	55	55	6
MISSOULA	81	81	34
NEBRASKA			
GRAND ISLAND	6	6	0
LINCOLN U	2	2	0
NORFOLK	12	12	9
NORTH PLATTE	24	24	0
OMAHA	6	6	0
SCOTTSBLUFF	41	41	0
VALENTINE	30	30	[illegible]
NEVADA			
ELKO	17	17	9
ELY	16	16	28
LAS VEGAS	0	0	0
RENO	[illegible]	[illegible]	43
WINNEMUCCA	1	1	0
NEW HAMPSHIRE			
CONCORD	27	27	6
MT WASHINGTON OBS	474	474	493
NEW JERSEY			
ATLANTIC CITY	5	5	0
ATLANTIC CITY U	2	2	0
NEWARK	0	0	0
TRENTON U	3	3	0
NEW MEXICO			
ALBUQUERQUE	0	0	0
CLAYTON	25	25	0
ROSWELL	0	0	0
NEW YORK			
ALBANY	16	16	0
BINGHAMTON	19	19	22
BUFFALO	16	16	19
NEW YORK U	2	2	0
NEW YORK KENNEDY	0	0	0
NEW YORK LA GUARDIA	4	4	0
ROCHESTER	7	7	[illegible]
SYRACUSE	9	9	5
NORTH CAROLINA			
ASHEVILLE	3	3	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	1	1	0
RALEIGH	0	0	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	41	41	34
FARGO	25	25	28
WILLISTON	75	75	31
OHIO			
AKRON	25	25	0
CINCINNATI ABBE OB	11	11	0
CLEVELAND	32	32	0
COLUMBUS	22	22	0
DAYTON	15	15	0
MANSFIELD	9	9	0
TOLEDO	28	28	0
YOUNGSTOWN	51	51	6
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	99	99	146
BURNS U	47	47	12
EUGENE	23	23	34
MEACHAM	116	116	84
MEDFORD	2	2	0
PENDLETON	5	5	0
PORTLAND	10	10	25
SALEM	34	34	37
SEXTON SUMMIT R	40	40	81
PENNSYLVANIA			
ALLENTOWN	4	4	0
ERIE	55	55	16
HARRISBURG	0	0	0
PHILADELPHIA	0	0	0
PITTSBURGH	20	20	0
SCRANTON	21	21	0
WILLIAMSPORT	12	12	0
RHODE ISLAND			
BLOCK ISLAND	4	4	0
PROVIDENCE	8	8	0
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GRNVLLE-SPRTNBRG	0	0	0
SOUTH DAKOTA			
ABERDEEN	19	19	25
HURON	26	26	9
RAPID CITY	74	74	22
SIOUX FALLS	29	29	19
TENNESSEE			
BRISTOL	8	8	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	0
MEMPHIS	0	0	0
NASHVILLE	0	0	0
OAK RIDGE R	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	13	13	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON INTERCON	0	0	0
LUBBOCK	2	2	0
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	0	0	0
SALT LAKE CITY	0	0	0
WENDOVER	0	0	0
VERMONT			
BURLINGTON	26	26	28
VIRGINIA			
LYNCHBURG	2	2	0
NORFOLK	0	0	0
RICHMOND	0	0	0
ROANOKE	10	10	0
WALLOPS ISLAND	1	1	
WASHINGTON			
OLYMPIA	85	85	68
QUILLAYUTE	160	160	170
SEATTLE-TACOMA	48	48	56
SPOKANE	36	36	9
STAMPEDE PASS R	241	241	273
WALLA WALLA U	12	12	0
YAKIMA	26	26	0
WEST VIRGINIA			
BECKLEY	35	35	11
CHARLESTON	16	16	0
ELKINS	30	30	9
HUNTINGTON	8	8	0
PARKERSBURG U	10	10	0
WISCONSIN			
GREEN BAY	37	37	28
LA CROSSE	21	21	12
MADISON	44	44	25
MILWAUKEE	40	40	43
WYOMING			
CASPER	67	67	6
CHEYENNE	85	85	19
LANDER	56	56	6
SHERIDAN	95	95	25

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	379	868	
HUNTSVILLE	359	788	
MOBILE	513	1575	
MONTGOMERY	476	1225	
ALASKA			
ANCHORAGE	5	5	
ANNETTE	15	15	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	17	17	
BETTLES	47	99	
BIG DELTA	34	56	
COLD BAY	0	0	
FAIRBANKS	55	95	
GULKANA	5	5	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	14	14	
MC GRATH	24	24	
NOME	19	19	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	19	19	
UNALAKLEET	29	29	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	76	80	
PHOENIX	919	2452	
TUCSON	678	1585	
WINSLOW	449	689	
YUMA	929	2497	
ARKANSAS			
FORT SMITH	404	938	
LITTLE ROCK	484	1184	
CALIFORNIA			
BAKERSFIELD	627	1448	
BISHOP	437	720	
BLUE CANYON	199	273	
EUREKA U	0	0	
FRESNO	518	1131	
LONG BEACH	299	585	
LOS ANGELES	173	286	
LOS ANGELES U	409	819	
MT SHASTA R	140	203	
OAKLAND	51	80	
RED BLUFF	560	1157	
SACRAMENTO	351	736	
SANDBERG R	335	539	
SAN DIEGO	247	352	
SAN FRANCISCO	49	71	
SAN FRANCISCO U	22	30	
SANTA MARIA	19	24	
STOCKTON	411	859	
COLORADO			
ALAMOSA	36	37	
COLORADO SPRINGS	168	266	
DENVER	210	326	
GRAND JUNCTION	479	853	
PUEBLO	316	607	
CONNECTICUT			
BRIDGEPORT	298	359	
HARTFORD	286	402	
DIST.OF COLUMBIA			
WASHINGTON DULLES	346	503	
WASHINGTON NATIONAL	393	635	
DELAWARE			
WILMINGTON	376	556	
FLORIDA			
APALACHICOLA U	520	1462	
DAYTONA BEACH	494	1623	
FORT MYERS	564	2263	
JACKSONVILLE	486	1331	
KEY WEST	583	2837	
LAKELAND U	515	1815	
MIAMI	498	2290	
ORLANDO	570	2099	
PENSACOLA	521	1500	
TALLAHASSEE	477	1334	
TAMPA	528	1825	
WEST PALM BEACH	547	2298	
GEORGIA			
ATHENS	395	775	
ATLANTA	370	728	
AUGUSTA	461	950	
COLUMBUS	458	1148	
MACON	455	1049	
ROME	390	751	
SAVANNAH	505	1227	
HAWAII			
HILO	330	1753	
HONOLULU	484	2199	
KAHULUI	408	1851	
LIHUE	423	2041	
IDAHO			
BOISE	283	474	
LEWISTON	277	443	
POCATELLO	150	183	
ILLINOIS			
CAIRO U	417	987	
CHICAGO O HARE	289	459	
CHICAGO MIDWAY	312	516	
MOLINE	312	582	
PEORIA	273	516	
ROCKFORD	214	407	
SPRINGFIELD	347	666	
INDIANA			
EVANSVILLE	337	673	
FORT WAYNE	262	428	
INDIANAPOLIS	313	572	
SOUTH BEND	226	347	
IOWA			
BURLINGTON	288	539	
DES MOINES	289	553	
DUBUQUE	189	334	
SIOUX CITY	284	621	
WATERLOO	188	390	
KANSAS			
CONCORDIA	347	668	
DODGE CITY	356	718	
GOODLAND	251	476	
TOPEKA	308	706	
WICHITA	385	859	
KENTUCKY			
COVINGTON	334	502	
LEXINGTON	287	475	
LOUISVILLE	386	688	
LOUISIANA			
ALEXANDRIA	442	1270	
BATON ROUGE	507	1606	
LAKE CHARLES	479	1534	
NEW ORLEANS	453	1502	
SHREVEPORT	501	1407	
MAINE			
CARIBOU	51	107	
PORTLAND	114	117	
MARYLAND			
BALTIMORE	379	554	
MASSACHUSETTS			
BLUE HILL OBS R	190	245	
BOSTON	279	379	
WORCESTER	215	265	
MICHIGAN			
ALPENA	98	108	
DETROIT	288	412	
DETROIT METRO	222	331	
FLINT	199	267	
GRAND RAPIDS	200	298	
HOUGHTON LAKE	131	161	
LANSING	161	219	
MARQUETTE U	76	116	
MUSKEGON	144	228	
SAULT STE MARIE	36	55	
MINNESOTA			
DULUTH	24	54	
INTERNATIONAL FALLS	41	162	
MINNEAPOLIS	148	351	
ROCHESTER	130	315	
ST CLOUD	115	241	
MISSISSIPPI			
JACKSON	487	1346	
MERIDIAN	449	1165	
MISSOURI			
COLUMBIA REGIONAL	351	748	
KANSAS CITY	386	951	
ST JOSEPH	344	795	
ST LOUIS	394	831	
SPRINGFIELD	385	820	
MONTANA			
BILLINGS	139	253	
GLASGOW	69	169	
GREAT FALLS	108	214	
HAVRE	110	237	
HELENA	42	74	
KALISPELL	41	74	
MILES CITY	157	334	
MISSOULA	85	143	
NEBRASKA			
GRAND ISLAND	287	616	
LINCOLN U	365	780	
NORFOLK	269	568	
NORTH PLATTE	199	373	
OMAHA	314	640	
SCOTTSBLUFF	203	342	
VALENTINE	202	390	
NEVADA			
ELKO	102	143	
ELY	117	133	
LAS VEGAS	876	1979	
RENO	191	268	
WINNEMUCCA	287	463	
NEW HAMPSHIRE			
CONCORD	167	236	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	341	435	
ATLANTIC CITY U	258	297	
NEWARK	406	596	
TRENTON U	362	512	
NEW MEXICO			
ALBUQUERQUE	428	752	
CLAYTON	208	400	
ROSWELL	438	1028	
NEW YORK			
ALBANY	208	278	
BINGHAMTON	228	283	
BUFFALO	210	270	
NEW YORK U	384	554	
NEW YORK KENNEDY	378	496	
NEW YORK LA GUARDIA	311	398	
ROCHESTER	261	379	
SYRACUSE	262	349	
NORTH CAROLINA			
ASHEVILLE	236	350	
CAPE HATTERAS R	406	719	
CHARLOTTE	377	668	
GREENSBORO	352	546	
RALEIGH	382	620	
WILMINGTON	477	800	
NORTH DAKOTA			
BISMARCK	98	211	
FARGO	135	334	
WILLISTON	52	140	
OHIO			
AKRON	223	299	
CINCINNATI ABBE OB	330	555	
CLEVELAND	239	308	
COLUMBUS	245	337	
DAYTON	324	500	
MANSFIELD	279	423	
TOLEDO	236	325	
YOUNGSTOWN	184	230	
OKLAHOMA			
OKLAHOMA CITY	470	1142	
TULSA	487	1193	
OREGON			
ASTORIA	19	20	
BURNS U	124	176	
EUGENE	156	173	
MEACHAM	71	87	
MEDFORD	315	412	
PENDLETON	314	498	
PORTLAND	200	266	
SALEM	122	138	
SEXTON SUMMIT R	143	172	
PACIFIC AREA			
GUAM TAGUAC R	449	2916	
JOHNSTON	469	2847	
KOROR R	539	3570	
KWAJALEIN	536	3614	
MAJURO	502	3442	
PAGO PAGO	421	3222	
PONAPE R	461	3335	
TRUK MOEN ISLAND	492	3461	
WAKE	545	2760	
YAP R	561	3468	
PENNSYLVANIA			
ALLENTOWN	318	442	
ERIE	165	199	
HARRISBURG	357	533	
PHILADELPHIA	381	574	
PITTSBURGH	219	321	
SCRANTON	232	305	
WILLIAMSPORT	236	318	
RHODE ISLAND			
BLOCK ISLAND	178	216	
PROVIDENCE	248	316	
SOUTH CAROLINA			
CHARLESTON	475	1021	
CHARLESTON U	509	1124	
COLUMBIA	450	941	
GRNVLLE-SPRTNBRG	380	674	
SOUTH DAKOTA			
ABERDEEN	166	351	
HURON	181	337	
RAPID CITY	98	189	
SIOUX FALLS	197	365	
TENNESSEE			
BRISTOL	279	425	
CHATTANOOGA	303	566	
KNOXVILLE	332	629	
MEMPHIS	449	1109	
NASHVILLE	385	815	
OAK RIDGE R	322	571	
TEXAS			
ABILENE	497	1401	
AMARILLO	313	685	
AUSTIN	547	1749	
BROWNSVILLE	512	2252	
CORPUS CHRISTI	594	2195	
DALLAS	561	1673	
DEL RIO	566	1920	
EL PASO	543	1195	
FORT WORTH	569	1574	
GALVESTON U	540	1785	
HOUSTON INTERCON	489	1592	
LUBBOCK	366	981	
MIDLAND	446	1270	
PORT ARTHUR	449	1427	
SAN ANGELO	574	1530	
SAN ANTONIO	542	1682	
VICTORIA	562	1950	
WACO	541	1649	
WICHITA FALLS	572	1438	
UTAH			
MILFORD	338	456	
SALT LAKE CITY	386	633	
WENDOVER	442	727	
VERMONT			
BURLINGTON	169	247	
VIRGINIA			
LYNCHBURG	324	495	
NORFOLK	398	649	
RICHMOND	381	650	
ROANOKE	305	462	
WALLOPS ISLAND	319	429	
WASHINGTON			
OLYMPIA	25	33	
QUILLAYUTE	31	42	
SEATTLE-TACOMA	85	110	
SPOKANE	138	202	
STAMPEDE PASS R	9	9	
WALLA WALLA U	305	514	
YAKIMA	187	309	
WEST INDIES			
SAN JUAN	592	3351	
WEST VIRGINIA			
BECKLEY	165	205	
CHARLESTON	283	448	
ELKINS	131	170	
HUNTINGTON	308	457	
PARKERSBURG U	308	494	
WISCONSIN			
GREEN BAY	190	317	
LA CROSSE	191	416	
MADISON	156	258	
MILWAUKEE	180	225	
WYOMING			
CASPER	101	155	
CHEYENNE	64	82	
LANDER	123	167	
SHERIDAN	74	138	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JULY 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				@ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	1	1			5					3	3	5			1	5													
Alaska									2																				
Arizona	1	1							5	1	1	5																4	5
Arkansas	2	1			5						3	4																	
California*																													
Colorado	2	2			3			5	?			4		1	3	3													
Connecticut	1	1			3			3	3			4				4													
Delaware*																													
Florida	3	3		4	4							4		2	8	6													
Georgia								3				4	3		1	5												3	
Hawaii																										2	1		
Idaho	1	1						3	4	1	6	4				4	4												
Illinois	7	3		?	6			6	6	?	?	6	6	1	1	5													
Indiana	1	1							2			4	4			4													
Iowa	6	4			5			5	6			4	4		1	5											4	6	6
Kansas	7	6		8	5			5	5		3	6	5		4	4												4	4
Kentucky	2	2			3			°5	C			°5	C		2	5												°5	C
Louisiana	1	1			4			3	5		1	5			1	5													
Maine	2	2			4			5	5			4				4												4	4
Maryland									4																	10	?	4	
Massachusetts	4	2		4	6			4	4			5			1	5												5	5
Michigan	2	2		1	5			4	6	1	2	4		3	4	5													
Minnesota	3	3			4				5			5	4		2	5										1		7	7
Mississippi											6	5		1	2	5												5	
Missouri	2	2		1	4			4		2	16	5																	6
Montana								4	6			4				4												4	
Nebraska	10	4			5			5	6		2	6	5		1	5	?											6	6
Nevada											?	?															?	?	
New Hampshire	4	3		7	5			2	4			5				4												4	4
New Jersey														1	1														
New Mexico	5	5		1	4			?	4		5	4		1	1	3											17	5	3
New York	1	1			3			5	4		2	5		3	6	5												4	
North Carolina								4	6		3	5	4	1	7	6												5	4
North Dakota	2	2			4			4	6			4	3																3
Ohio	2	2		?	4		?	4	3		?	5	?	6	2	5	?												
Oklahoma	3	2			4			5	5		5	6		2	1	5												4	4
Oregon												3				?	?											?	?
Pennsylvania								?	?			°5	C	1	1	5												°5	C
Puerto Rico & VI*																													
Rhode Island								5				4			1	5												5	
South Carolina								1			1	5			4	4											1		
South Dakota	8	6			4			5	6		5	5																	
Tennessee	1	1										5				5												5	6
Texas	19	13			5		1	5	6		3	5	4	5	1	4												3	5
Utah												4	2				4												
Vermont	1	1			4			3	5			4	3			5												4	4
Virginia	1	1		2	4									2	4	4													
Washington*																													
West Virginia*																													
Wisconsin	7	4			5			5	6			6		1	13	5													6
Wyoming	1	1						°4	C																				

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JULY 1972

Elmer R. Nelson, Office of Hydrology

The most severe flooding during July occurred on small streams in central and east-central Minnesota. Torrential rains caused small streams in a large part of 11 counties to overflow to record heights. Damage to highways, railroad beds, fields, crops, and to residential and commercial areas is expected to exceed $20 million. Three deaths were attributed to conditions resulting from the heavy rains; one was due to drowning.

Only flood events resulting in loss of life and/or flood damage during the month are summarized. They are listed by drainage basins below:

Date (July)	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	ATLANTIC SLOPE DRAINAGE		
13	Minor flooding occurred along Neshaminy Creek at Langhorne, Pa. A young boy was drowned in the lower Neshaminy Creek of southeastern Pennsylvania.	1	None
19	Heavy but localized rainfall from thunderstorms in Lycoming and Tioga Counties in Pennsylvania produced flash flooding on small streams feeding into the headwaters of West Mill Creek, near Montoursville, Pa. There was much damage to roads and bridges, south of Wellsboro, Pa., due to local flooding.	0	*N.A.
	EAST GULF OF MEXICO DRAINAGE		
29	Locally heavy rains of 1 to 3.5 inches during a 2-hour period caused flash flooding in low-lying areas in Jackson, Miss. Some basement flooding was reported.	0	Minor
	MISSISSIPPI SYSTEM		
	Upper Mississippi Basin		
21-22	Record flooding occurred on small streams in central and east central Minnesota. Federal disaster relief was approved by the President for 11 counties. The flooding was due to torrential rains during the night of the 21st and early morning of the 22d. Additional heavy rains occurred during the evening of the 22d. A new record 24-hour official rainfall of 11.18 inches was recorded at Fort Ripley, Minn.	1	$20,368
17	Rainfall of about 5 inches caused record-high or near-record stages in the Rapid and Ralston Creek basins near Iowa City, Iowa.	0	250
	Missouri Basin		
12-14	Four to more than 6 inches of rain on tributaries of the Big Blue River in Nebraska on the 10th-11th caused minor to moderate flooding downstream on Turkey Creek and West Fork of Big Blue and on the upper Big Blue River. Considerable flash flooding occurred in the vicinity of the heavy rains between Beaver Crossing and Stromsburg, Nebr. Local minor agricultural flash flooding occurred in Rooks County, Kansas, just above Webster Dam due to 3- to 5-inch rains.	0	37
17	General 1- to 3-inch rains in northeast and east-central Kansas with 5 to more than 7 inches of rain along Smoky Hill Basin between Abilene and Junction City, Kans., caused considerable local runoff and some flash flooding.	0	4
25-26	Four to 5 inches of rain in the vicinity of Hastings, Nebr., in the Little Blue River Basin produced local	0	11

Date (July)	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	Missouri Basin - Cont.		
	flash flooding. Streams experienced substantial, but within bank, rises.		
27-28	Scattered 3- to 4-inch rains, 5 to 10 miles north of St. Francis, Kans., in the Republican Basin, caused heavy local runoff.	1	$ 14
	Ohio Basin		
15	Flash flooding occurred during the evening in the area around Benwood, W. Va., and Bellaire, Ohio. Three or four blocks of Benwood was flooded. A water line in Bellaire broke, causing serious problems. Local urban flooding occurred in parts of Pittsburgh, Pennsylvania.	0	*N.A.
28	Moderate flooding occurred on the Harpeth River in central Tennessee. Considerable flash flooding occurred in Williamson County in the headwaters area, where rainfall totalled 6.83 inches during the night of the 27th. Damage was confined primarily to secondary roads and to farmlands and crops.	0	*N.A.
	Arkansas Basin		
3	Heavy rains of about 6 inches on the 2d and 3d caused a 5-foot overflow of Bird Creek at Avant, Okla.	0	Minor
19-20	Flooding on the Cottonwood River in the eastern part of Chase and Lyon Counties, Kansas, caused damage to growing crops, buildings, and equipment, and some damage to roads and bridges. Flooding on the Virdigries River in Wilson County, Kansas, was confined to lowlands near the river channel.	0	33
11	Flash flooding occurred in the North Canadian Basin near Eva, Okla.	1	*N.A.
	GULF OF CALIFORNIA DRAINAGE		
	Colorado Basin		
17	Heavy rain upstream on the Puerco River during the evening of the 17th caused considerable flooding at Gallup, N. Mex. The river rose to a stage of 14.8 feet (13,000 c.f.s.) at Gallup, a new record stage according to USGS. It was designated a disaster area by the Governor. The high water caused bridge damage above Chambers, N. Mex.	0	4,000
	PACIFIC SLOPE DRAINAGE		
	Northern Coastal Basins		
12-15	A prolonged period of unusually heavy warm rain over northern parts of Washington State between the 11th and 13th caused flooding from many Washington rivers. Flood stages were reached and/or exceeded on the Nooksack, Skagit, Stillaguamish, and Snohonish Rivers. Flooding was also reported from several rivers with headwaters on the west slopes of the Olympic Peninsula. Estimates of damage from flooding were negligible for most river systems except the Skagit River.	0	1,000

Date (July)	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	ALASKA		
17	Heavy snowmelt and rare thunderstorm activity in the Brooks Range developed a high runoff on the north slope. Flood damage occurred at Anaktuvick Pass, Alaska, a small native village. Portions of the runway were under water for a short period and the runway was closed temporarily.	0	*N.A.
27	Heavy rainfall in the Alaska Range caused flooding on numerous small streams which cross the Alaska Highway between mile 1330 and 1340. Debris caused culverts to jam, diverting the flow of water to lower points on the highway. Some gravel fill had to be replaced alongside the road.	0	*N.A.

*Notes:

N.A. --- damages not available.

FLOOD STAGE DATA

(All dates in July unless otherwise specified)

JULY 1972

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
ATLANTIC SLOPE DRAINAGE					
Neshaminy Creek:					
Langhorne, Pa.	9	13	13	9.6	13
Roanoke:					
Altavista, Va.	18	5	6	22.1	5
Randolph, Va.	21	6	8	25.3	7
Scotland Neck, N.C.	28	6	11	28.1	8
Williamston, N.C.	10	Jun 29	Aug 14	11.4	12
Pee Dee:					
Peedee, S.C.	19	Jun 24	4	#23.9	Jun 29
Savannah:					
Millhaven-Wade, Ga.	15	1	3	15.2	3
Clyo, Ga.	11	Jun 27	13	13.2	6-9
Satilla:					
Waycross, Ga.	16	2	3	16.1	2
EAST GULF OF MEXICO DRAINAGE					
Apalachicola:					
Blountstown, Fla.	15	1	2	16.0	1
MISSISSIPPI SYSTEM					
Upper Mississippi					
Rum:					
St. Francis, Minn.	8.5	26	Aug 3	11.2	29
Minnesota:					
Savage, Minn.	698	28	28	698.0	28
North Racoon:					
Jefferson, Iowa	10	19	21	11.8	20
Mississippi:					
Fort Ripley, Minn.	10	23	28	11.4	25
Hastings, Minn.	15	27	29	15.1	28
Wabasha, Minn.	12	31	31	12.0	31
Missouri Basin					
Prairie Creek:					
Cairo, Nebr.	8	11	12	11.5	12
South Loup:					
St. Michael, Nebr.	6.5	26	27	8.6	26
Ravenna, Nebr.	5	26	27	7.4	26
West Fork Big Blue:					
Dorchester, Nebr.	15	12	13	16.9	13
Turkey Creek:					
Wilber, Nebr.	11	13	14	#13.1	14
Mill Creek:					
Paxico, Kans.	19	12	12	19.0	12
Big Blue:					
Crete, Nebr.	18	14	14	18.3	14
Stranger Creek:					
Easton, Kans.	15	24	24	15.8	24
Ohio Basin					
Harpeth:					
Kingston Springs, Tenn.	15	28	28	20.8	28
MISSISSIPPI SYSTEM - Continued					
White Basin					
Cache:					
Patterson, Ark.	7	4	6	7.3	4
Arkansas Basin					
Bird Creek:					
Avant, Okla.	16	3	3	21.3	3
Verdigris:					
Altoona 2 SSW, Kans.	23	19	20	#23.7	19
Illinois:					
Watts, Okla.	13	13	14	17.1	13
Tahlequah, Okla.	11	14	15	11.7	15
North Canadian:					
Seiling, Okla.	11	8	9	12.8	9
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Columbia:					
Vancouver, Wash.	16	May 17	3	21.5	Jun 12
Northern Coastal Basins					
Snohomish:					
Snohomish, Wash.	25	13	U	S	U
Stillaguamish:					
Arlington, Wash.	16	13	13	16.0	13
Skagit:					
Concrete, Wash.	29	12	14	32.5	13
Mount Vernon, Wash.	21	13	15	23.6	13
Nooksack:					
Deming, Wash.	12	12	13	12.5	12

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* Provisional.

# Highest Stage Observed

U Unknown

S Stage 24.9, 1100 pdt, 7-13-72 (Gage out of service after this time)

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	ALBANY, N. Y. 1008 MB						ALBUQUERQUE, N. MEX. 840 MB						AMARILLO, TEXAS 894 MB						* ANCHORAGE, ALASKA 1014 MB						* ANNETTE, ALASKA 1015 MB					
					Resultant Wind						Resultant Wind						Resultant Wind						Resultant Wind						Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point +	Direction	Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point +	Direction	Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point +	Direction	Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point +	Direction	Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point +	Direction	Speed M.p.h.
SURFACE	26	86	19.1	17.4	21	1.1	31	1,619	18.8	10.1	11	2.7	31	1,095	18.7	14.1	20	3.4	31	45	13.2	7.2	18	3.2	31	37	11.[illegible]	10.5	[illegible]	1.2
1000	23	166	18.5	16.8	21	1.4													30	168	13.5	6.7	19	3.2	30	164	12.3	9.5	13	.8
950	26	598	18.6	14.5	27	4.0													31	595	12.3	5.2	19	3.3	31	569	10.8	6.9	14	1.1
900	26	1,061	16.0	12.2	29	5.1													31	1,047	10.3	3.2	19	1.7	31	1,039	8.7	4.6	[illegible]	1.6
850	26	1,545	12.6	8.4	29	5.8							31	1,527	20.0	11.1	21	9.7	31	1,520	7.5	.6	13	.9	31	1,510	6.5	1.[illegible]	17	2.0
800	26	2,052	10.0	3.9	29	7.2	31	2,043	19.0	6.6	17	3.1	31	2,048	17.6	8.1	22	7.3	31	2,017	4.3	-.8	13	1.0	31	[illegible]	4.2	-2.4	18	1.3
750	26	2,586	6.9	.4	28	8.4	31	2,595	15.9	3.7	22	3.4	31	2,597	14.2	5.3	25	4.1	31	2,540	1.0	-4.8	14	1.2	31	2,529	1.5	-6.3	21	1.3
700	26	3,150	3.7	-6.2	28	9.2	31	3,178	12.2	.2	25	3.7	31	3,176	10.1	1.7	25	2.7	31	3,091	-2.6	-9.1	14	1.4	31	3,082	-1.4	-10.8	[illegible]	1.5
650	26	3,750	1.0	-11.5	28	10.8	31	3,795	8.0	-3.3	29	3.3	31	3,789	6.1	-2.6	26	1.7	31	3,676	-5.9	-16.4	17	1.4	31	3,669	-4.7	-15.8	28	1.7
600	26	4,390	-2.3	-16.4	28	11.2	31	4,450	3.1	-7.3	30	2.9	31	4,440	2.1	-8.7	32	1.4	31	4,299	-9.6	-22.0	18	1.6	31	4,294	-8.5	-18.5	28	2.9
550	26	5,076	-6.0	-21.9	27	12.3	31	5,148	-2.5	-11.5	31	3.0	31	5,137	-2.6	-13.8	34	2.8	31	4,965	-14.0	-25.3	19	1.7	31	4,964	[illegible]	-23.[illegible]	28	4.3
500	26	5,816	-10.7	-27.2	27	13.0	31	5,897	-8.0	-18.9	31	3.3	31	5,886	-7.6	-18.2	33	3.8	31	5,682	-18.9	-28.3	20	1.0	31	5,684	-17.7	-28.2	28	5.2
450	26	6,618	-15.8	-31.4	27	13.9	31	6,708	-12.8	-25.7	30	4.0	31	6,699	-12.4	-27.0	32	4.3	31	6,458	-24.4	-33.7	22	1.9	31	6,464	-23.[illegible]	-33.[illegible]	28	6.7
400	26	7,496	-21.9	-37.1	27	15.5	31	7,597	-18.6	-33.4	29	5.0	31	7,588	-18.5	-33.8	32	5.6	31	7,305	-31.0	-39.3	23	2.1	31	7,316	-29.3	-37.6	28	8.9
350	26	8,468	-28.9	-41.1	27	17.0	30	8,582	-25.6	-40.3	29	6.5	31	8,574	-25.6	-41.2	31	7.0	31	8,241	-38.3	-43.9	23	3.3	31	8,259	-36.6	-43.9	28	10.3
300	26	9,550	-37.0	-49.6	27	18.8	30	9,677	-34.1	-47.3	28	8.3	31	9,669	-34.1	-47.5	31	9.2	31	9,279	-46.8		23	4.8	31	9,306	-44.6	-46.8	28	14.2
250	26	10,787	-46.0		27	22.1	30	10,928	-44.0		27	8.9	31	10,920	-43.9		31	10.6	31	10,467	-53.9		25	5.7	30	10,510	-51.8		28	15.2
200	26	12,242	-54.6		28	20.7	29	12,390	-55.0		27	10.7	31	12,380	-55.5		30	10.7	31	11,906	-50.5		26	5.1	28	11,959	-51.8		28	13.6
175	26	13,089	-58.0		28	18.3	29	13,233	-60.2		28	12.1	31	13,221	-60.8		31	11.2	30	12,779	-49.5		26	3.8	28	12,826	-51.2		28	12.1
150	26	14,054	-60.6		28	15.5	29	14,183	-64.9		30	10.4	31	14,169	-65.5		32	10.7	30	13,790	-49.1		25	3.9	28	13,828	-51.3		26	10.2
125	26	15,186	-61.7		27	11.9	28	15,281	-69.5		32	7.7	31	15,267	-69.2		33	8.9	29	14,983	-49.2		26	2.0	28	15,011	-51.9		28	7.9
100	26	16,572	-60.3		27	7.4	28	16,608	-69.1		34	2.1	31	16,600	-68.6		36	4.3	29	16,447	-49.2		23	1.0	28	16,457	-52.0		29	4.3
80	26	17,972	-57.6		28	2.8	28	17,949	-65.9		07	2.2	31	17,946	-65.6		05	3.4	29	17,912	-48.9		08	.4	26	17,899	-51.5		31	1.8
70	26	18,818	-56.6		06	.3	28	18,767	-63.0		08	4.6	31	18,765	-62.5		08	4.9	29	18,790	-48.7		08	1.6	26	18,766	-51.4		02	1.3
60	26	19,799	-55.3		08	2.1	28	19,721	-60.6		08	7.4	31	19,721	-60.5		08	7.4	29	19,805	-48.0		08	2.8	26	19,769	-50.9		06	2.2
50	26	20,967	-53.5		09	4.2	28	20,867	-57.1		09	9.6	30	20,863	-57.1		09	9.7	29	21,009	-47.7		08	3.6	26	20,958	-50.1		06	3.1
40	25	22,408	-52.0		09	6.2	28	22,287	-54.7		09	11.5	29	22,285	-54.9		09	11.6	28	22,485	-46.8		08	4.8	26	22,420	-48.8		08	5.5
30	25	24,283	-49.6		09	9.3	28	24,141	-51.3		09	13.1	29	24,135	-51.9		09	13.5	27	24,399	-45.2		08	6.2	25	24,317	-47.0		08	7.3
25	25	25,482	-47.7		09	10.4	28	25,331	-49.6		09	14.2	28	25,322	-49.7		09	14.7	26	25,617	-44.0		09	7.5	25	25,529	-45.4		08	8.4
20	25	26,963	-45.6		09	12.2	25	26,799	-48.0		09	15.7	28	26,791	-47.5		08	16.3	24	27,123	-41.9		09	7.5	25	27,025	-43.3		08	9.8
15	22	28,896	-42.8		09	14.5	25	28,711	-44.4		09	18.3	25	28,703	-45.0		09	18.5	21	29,073	-39.4		08	8.8	23	28,980	-39.9		09	11.7
10	15	31,664	-38.1		09	17.2	18	31,453	-39.6		09	21.1	17	31,432	-40.3		09	22.6	20	31,875	-34.7		08	10.5	20	31,780	-34.9		08	13.5
7																			13	34,419	-29.8		09	12.8	14	34,300	-30.5		09	17.3
5																									7	36,630	-27.6			

Standard pressure surface (mb)	ATHENS, GEORGIA 991 MB						* BARROW, ALASKA 1018 MB						BARTER IS., ALASKA 1019 MB						BETHEL, ALASKA 1014 MB						* BISMARCK, N. DAK. 956 MB					
SURFACE	31	246	20.2	18.9	27	1.1	24	8	3.4	2.7	10	3.0	27	15	2.3	1.9	09	3.4	31	39	11.8	10.1	24	1.9	31	503	12.6	10.4	30	.2
1000							24	155	6.5	2.0	12	3.8	27	167	4.7	3.9	10	4.6	30	158	12.3	9.1	22	2.0						
950	31	614	21.9	17.3	27	3.4	24	580	9.6	-.4	15	2.9	27	591	9.9	.7	10	4.2	31	584	10.9	6.2	18	2.6	28	565	13.5	9.7	29	.3
900	31	1,084	19.4	14.7	28	3.3	24	1,029	8.9	-2.1	16	1.9	27	1,040	9.5	-3.2	11	1.2	31	1,033	8.5	3.2	16	3.7	31	1,017	16.1	7.0	29	1.9
850	31	1,573	15.9	11.3	27	3.2	24	1,500	6.8	-4.3	17	1.9	27	1,512	7.3	-5.2	25	.8	31	1,504	5.8	.0	16	4.1	31	1,501	13.9	3.9	29	3.5
800	31	2,087	12.9	6.3	26	3.5	24	1,996	4.0	-7.2	19	1.4	27	2,009	4.4	-8.4	25	1.7	31	1,998	2.9	-2.2	16	4.6	31	2,010	10.6	1.1	29	5.3
750	31	2,627	9.7	2.8	26	3.5	24	2,518	.9	-9.9	19	1.7	27	2,531	1.0	-10.6	26	2.1	31	2,518	-.1	-6.7	15	5.3	31	2,544	6.9	-2.6	28	7.4
700	31	3,197	6.7	-3.6	26	4.5	24	3,069	-2.5	-13.7	20	1.8	27	3,082	-2.7	-13.8	27	1.8	31	3,067	-3.3	-11.8	16	5.9	31	3,108	3.2	-7.5	28	8.8
650	31	3,803	3.3	-7.3	26	5.0	24	3,653	-6.2	-15.9	19	1.8	27	3,665	-6.5	-18.0	27	1.8	31	3,650	-6.8	-16.2	16	5.9	31	3,705	-.1	-10.6	28	10.2
600	31	4,448	-.2	-11.3	26	4.9	24	4,275	-10.3	-21.3	20	2.5	27	4,287	-10.3	-23.6	27	1.9	31	4,271	-10.2	-20.6	16	4.9	31	4,341	-4.2	-15.4	28	11.0
550	31	5,139	-4.2	-17.6	25	4.5	24	4,939	-14.6	-28.4	20	2.9	27	4,951	-14.6	-27.3	28	2.2	31	4,936	-14.1	-25.4	16	5.0	31	5,022	-8.8	-20.8	28	12.8
500	31	5,885	-8.7	-25.7	24	4.2	24	5,654	-19.5	-33.4	21	2.9	27	5,666	-19.6	-31.0	28	2.1	31	5,653	-18.8	-29.9	17	4.8	31	5,753	-13.6	-25.9	28	15.5
450	31	6,693	-13.8	-29.3	24	3.6	24	6,428	-25.2	-38.2	22	3.1	27	6,440	-25.3	-37.6	28	2.6	31	6,430	-24.3	-35.7	18	4.6	31	6,547	-18.9	-30.3	28	17.5
400	31	7,578	-19.6	-36.8	24	3.2	23	7,266	-31.9	-43.6	22	3.0	27	7,284	-31.9	-41.9	27	2.8	31	7,278	-30.6	-40.0	19	5.4	31	7,413	-25.1	-36.2	28	19.8
350	31	8,560	-26.6	-42.1	25	1.9	23	8,198	-39.1	-46.3	22	3.3	27	8,216	-39.1	-47.3	27	3.2	31	8,216	-37.7	-44.5	19	4.9	30	8,372	-32.5	-43.7	28	22.1
300	31	9,651	-35.1	-49.8	29	1.9	23	9,235	-46.8		22	2.7	27	9,251	-47.5		26	2.8	31	9,258	-45.8		21	5.2	30	9,437	-40.7	-48.2	28	25.0
250	30	10,897	-45.2		29	1.7	23	10,425	-52.9		24	2.2	27	10,437	-53.6		26	3.4	31	10,453	-52.6		23	5.4	30	10,657	-48.6		28	27.3
200	30	12,350	-56.4		30	1.3	23	11,872	-49.4		24	1.8	27	11,880	-49.8		29	3.0	31	11,897	-49.9		25	4.9	29	12,103	-54.9		28	28.3
175	30	13,187	-61.9		31	1.7	23	12,750	-48.2		27	2.0	27	12,758	-47.9		30	2.9	31	12,774	-48.5		25	3.9	29	12,956	-54.6		28	25.0
150	30	14,130	-65.7		35	2.2	23	13,768	-47.4		29	1.7	27	13,777	-47.3		32	2.8	31	13,789	-48.3		25	3.2	29	13,942	-55.4		28	21.5
125	30	15,233	-67.3		05	1.6	22	14,972	-47.0		29	1.5	27	14,985	-46.9		33	1.6	30	14,987	-48.7		25	2.0	29	15,102	-56.4		28	15.8
100	30	16,578	-66.2		08	1.8	21	16,456	-46.1		32	1.1	27	16,465	-46.6		36	2.0	30	16,454	-48.7		20	.9	29	16,518	-56.8		28	9.9
80	30	17,940	-63.7		07	4.0	20	17,944	-45.5		02	.7	27	17,948	-45.9		02	2.3	30	17,921	-48.6		14	1.1	29	17,934	-56.1		29	4.9
70	30	18,762	-62.0		08	6.1	20	18,837	-44.9		05	1.1	27	18,839	-45.1		04	2.3	30	18,800	-48.5		08	2.4	29	18,785	-55.0		31	2.8
60	30	19,720	-60.1		09	7.9	20	19,868	-44.7		06	1.7	27	19,870	-44.6		05	2.5	30	19,815	-48.2		08	3.2	29	19,772	-54.0		02	1.9
50	30	20,866	-57.1		09	10.3	20	21,089	-44.4		07	2.4	27	21,092	-44.2		06	3.5	29	21,017	-47.7		09	4.2	29	20,948	-52.0		06	3.6
40	30	22,286	-54.9		09	12.1	20	22,586	-43.8		07	3.8	27	22,590	-43.8		07	4.6	28	22,489	-46.8		09	5.4	29	22,399	-50.3		08	5.9
30	30	24,138	-51.5		09	14.2	19	24,520	-43.1		07	5.5	26	24,527	-42.9		07	5.8	28	24,404	-45.1		09	7.5	29	24,287	-48.0		09	8.0
25	29	25,326	-49.9		09	15.2	16	25,747	-42.0		08	5.5	26	25,759	-41.8		07	6.1	28	25,624	-44.3		09	8.0	29	25,494	-46.4		09	9.8
20	28	26,794	-47.5		09	16.0	11	27,237	-40.3				25	27,277	-39.8		08	7.0	28	27,125	-42.9		09	8.7	28	26,986	-44.2		09	11.1
15	26	28,702	-45.3		09	18.7							23	29,261	-36.9		08	7.2	28	29,078	-39.9		09	9.4	25	28,922	-41.7		09	14.1
10	23	31,437	-40.9		09	22.9							19	32,094	-31.7		09	8.6	9	31,891	-34.7				23	31,697	-37.1		09	17.3
7	7	33,861	-37.2										11	34,629	-28.2										21	34,176	-32.9		09	18.5
5																									8	36,508	-30.7			

Standard pressure surface (mb)	BOISE, IDAHO 915 MB						BOOTHVILLE, LA. 1019 MB						* BROWNSVILLE, TEXAS 1015 MB						BUFFALO, N. Y. 992 MB						CAPE HATTERAS, N. C. 1019 MB					
SURFACE	31	871	15.9	4.0	17	2.0	31	1	25.4	23.3	10	.9	31	7	24.2	21.9	14	1.4	31	218	17.9	15.0	22	2.2	31	4	23.9	21.9	24	2.5
1000							31	162	25.6	22.5	12	1.6	31	135	25.6	23.5	15	3.8							31	168	23.8	21.2	24	3.9
950							31	614	22.7	19.6	15	3.2	31	586	22.7	20.1	15	8.5	31	591	18.1	12.7	25	4.5	31	617	21.7	18.1	26	5.3
900	31	1,009	18.9	3.4	17	.8	31	1,083	19.8	14.4	15	3.5	31	1,057	20.3	14.2	16	9.1	31	1,053	15.5	10.4	27	5.9	31	1,085	18.8	14.9	26	5.6
850	31	1,501	19.5	.1	33	2.1	31	1,574	16.6	10.1	15	3.5	31	1,549	17.5	9.6	16	8.7	31	1,536	12.5	6.0	28	6.4	31	1,574	15.8	10.5	26	6.1
800	31	2,019	16.2	-2.6	31	2.6	31	2,089	13.7	6.3	16	2.9	31	2,065	14.8	5.4	15	7.7	31	2,043	9.5	3.6	28	7.6	31	2,088	12.9	6.5	26	7.2
750	31	2,564	12.3	-5.5	29	3.6	31	2,631	10.7	2.1	16	2.5	31	2,609	11.8	2.0	14	6.6	31	2,576	6.7	-.9	27	8.9	31	2,628	10.1	1.2	26	8.2
700	31	3,137	8.4	-9.3	27	6.2	31	3,203	7.3	-3.8	17	2.4	31	3,183	8.3	-2.3	13	5.6	31	3,140	3.5	-6.1	27	10.4	31	3,199	6.9	-2.6	26	8.2
650	31	3,745	4.3	-12.6	26	8.6	31	3,809	3.6	-6.8	19	1.7	31	3,792	4.8	-6.1	13	4.6	31	3,739	.8	-13.4	27	11.2	31	3,805	3.6	-5.9	26	8.3
600	31	4,391	-.4	-17.0	26	10.0	31	4,455	-.2	-12.7	20	.9	31	4,440	1.1	-10.5	12	3.5	31	4,378	-2.6	-17.2	27	11.6	31	4,451	.0	-10.6	26	7.4
550	31	5,080	-5.2	-22.5	25	11.9	31	5,146	-4.3	-16.7	21	.9	31	5,135	-3.1	-16.7	10	3.2	31	5,063	-6.5	-21.1	27	12.9	31	5,143	-3.8	-15.3	26	7.1
500	31	5,821	-10.8	-27.8	25	13.4	31	5,891	-8.7	-20.5	22	1.0	31	5,883	-7.7	-19.9	10	2.7	31	5,802	-10.8	-27.1	27	14.2	31	5,889	-8.4	-20.3	26	6.6
450	31	6,622	-16.6	-32.7	26	14.9	31	6,699	-14.0	-25.0	28	.3	31	6,695	-12.9	-24.6	07	2.6	31	6,604	-16.1	-32.3	27	16.0	31	6,699	-13.2	-26.3	26	6.0
400	31	7,495	-23.4	-39.5	26	15.9	31	7,584	-19.8	-31.7	04	.4	31	7,583	-18.8	-32.8	05	3.1	31	7,480	-22.6	-36.9	27	17.0	31	7,586	-19.2	-32.7	26	5.3
350	31	8,461	-30.9	-45.0	26	17.8	31	8,564	-26.7	-38.1	03	1.0	31	8,567	-25.8	-39.2	04	4.4	31	8,449	-29.8	-43.1	27	17.4	31	8,569	-26.3	-38.8	27	6.0
300	31	9,532	-39.2	-50.0	26	20.2	31	9,656	-35.0	-46.2	03	1.6	31	9,663	-34.2	-47.7	02	5.7	31	9,527	-37.8	-49.1	27	20.2	31	9,662	-34.8	-46.1	27	5.8
250	31	10,758	-48.1		26	23.0	31	10,902	-44.8		06	1.8	31	10,913	-44.4		36	5.7	31	10,760	-46.4		27	24.4	31	10,908	-44.9		26	6.8
200	31	12,206	-54.6		26	25.4	31	12,358	-56.1		05	2.5	31	12,370	-55.8		36	7.5	31	12,214	-55.0		27	24.4	31	12,360	-56.7		28	6.4
175	31	13,058	-55.9		26	25.0	31	13,197	-61.2		03	3.7	31	13,209	-61.4		36	8.4	30	13,058	-58.5		28	21.2	31	13,196	-62.1		28	6.7
150	31	14,034	-58.1		27	20.8	30	14,142	-65.7		03	5.1	31	14,151	-67.7		36	8.8	30	14,024	-60.1		27	16.1	31	14,138	-66.5		29	4.8
125	31	15,176	-60.2		27	16.6	30	15,243	-67.8		04	5.2	30	15,239	-70.8		02	8.6	30	15,158	-61.2		27	12.5	31	15,238	-67.3		30	2.4
100	30	16,563	-61.2		27	8.5	30	16,584	-67.5		07	5.5	30	16,560	-70.4		05	6.8	30	16,549	-59.5		27	7.9	30	16,591	-65.4		[illegible]	.8
80	30	17,950	-60.2		29	2.2	29	17,937	-65.1		07	5.9	29	17,890	-67.8		07	8.1	29	17,949	-57.7		26	2.9	30	17,957	-63.0		08	3.5
70	30	18,786	-58.5		04	1.0	29	18,754	-63.6		08	7.7	29	18,698	-65.7		08	9.7	28	18,797	-56.5		24	.6	30	18,783	-61.4		08	5.6
60	30	19,761	-56.4		07	3.0	26	19,704	-61.7		08	9.9	28	19,641	-63.3		08	11.3	28	19,777	-55.3		28	2.7	30	19,743	-59.4		09	8.0
50	30	20,925	-54.4		08	5.1	26	20,844	-58.0		09	13.7	27	20,771	-60.2		09	13.8	28	20,945	-53.6		08	4.8	30	20,893	-56.6		09	10.6
40	30	22,361	-52.5		08	6.8	25	22,261	-55.1		09	14.8	27	22,173	-57.0		09	16.3	27	22,389	-52.2		09	6.9	29	22,317	-54.2		09	12.3
30	30	24,233	-49.7		08	10.2	22	24,109	-52.3		09	16.5	27	24,011	-53.2		09	18.8	26	24,263	-49.5		09	[illegible]	28	24,179	-50.9		09	14.7
25	28	25,431	-48.2		09	11.9	21	25,293	-50.5		09	18.4	27	25,190	-51.4		09	19.7	26	25,462	-47.9		09	11.9	27	25,371	-48.9		09	14.9
20	28	26,909	-46.0		09	12.3	20	26,758	-48.0		09	19.5	25	26,647	-48.8		08	20.3	25	26,945	-45.6		09	13.5	26	26,849	-46.9		09	15.5
15	27	28,836	-42.9		08	15.3	16	28,662	-45.3		09	20.6	22	28,544	-46.2		09	22.0	21	28,875	-43.0		09	14.5	19	28,771	-44.[illegible]		09	18.3
10	25	31,592	-38.6		09	18.7	7	31,362	-42.5				15	31,255	-42.4		09	26.4	13	31,646	-38.3				[illegible]	31,489	-40.7			
7	6	34,066	-33.9																											

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1972

* CARIBOU, MAINE
993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	14.9	13.2	28	.8
1000						
950	31	564	14.5	9.2	29	2.4
900	31	1,021	12.8	6.0	28	4.1
850	31	1,499	10.0	3.2	28	5.2
800	31	2,001	7.3	.1	28	6.2
750	31	2,530	4.6	-4.9	27	7.4
700	31	3,090	1.9	-11.1	27	8.4
650	31	3,685	-1.1	-14.4	27	9.6
600	31	4,319	-4.5	-19.5	27	10.7
550	31	4,999	-8.6	-23.6	27	11.6
500	31	5,732	-13.2	-29.7	27	12.1
450	31	6,526	-18.4	-34.5	27	14.3
400	31	7,394	-24.8	-38.9	26	15.3
350	31	8,355	-31.6	-45.7	26	16.7
300	31	9,425	-39.9	-51.4	26	19.1
250	31	10,647	-48.4		26	22.1
200	31	12,095	-54.2		27	21.9
175	31	12,949	-55.5		27	20.4
150	31	13,929	-56.8		27	16.7
125	31	15,085	-56.4		27	12.9
100	31	16,504	-56.0		26	8.0
80	31	17,929	-54.4		26	3.9
70	31	18,787	-53.6		25	1.3
60	31	19,780	-52.7		12	1.5
50	31	20,961	-51.4		11	3.6
40	31	22,416	-49.8		10	5.4
30	29	24,312	-47.9		09	8.0
25	29	25,520	-46.2		09	10.0
20	28	27,010	-44.0		09	11.6
15	26	28,952	-41.2		09	14.7
10	20	31,735	-36.1		09	16.2
7	14	34,247	-31.0			
5						

CHARLESTON, S. C.
1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	22.8	20.8	26	1.4
1000	31	166	23.6	19.9	26	2.6
950	31	615	22.4	17.2	26	4.3
900	31	1,085	19.6	14.0	25	4.0
850	31	1,575	16.5	9.9	25	3.8
800	31	2,089	13.4	5.8	25	3.7
750	31	2,630	10.4	.7	25	4.9
700	31	3,201	6.9	-3.0	25	5.1
650	31	3,807	3.7	-8.1	25	4.7
600	31	4,453	.2	-13.6	24	4.3
550	31	5,146	-3.9	-17.9	25	3.7
500	31	5,892	-8.2	-21.3	23	3.4
450	31	6,702	-13.3	-27.9	23	2.9
400	31	7,588	-19.2	-33.4	21	1.8
350	31	8,571	-26.3	-39.6	21	2.6
300	31	9,664	-34.8	-48.5	22	2.2
250	31	10,910	-44.9		22	2.5
200	31	12,363	-56.5		22	1.5
175	31	13,200	-62.1		25	1.2
150	31	14,142	-66.2		02	.9
125	31	15,243	-67.9		06	1.7
100	31	16,589	-65.9		07	2.0
80	31	17,948	-64.3		07	4.6
70	31	18,769	-62.3		09	7.0
60	31	19,727	-60.0		09	8.9
50	31	20,873	-57.0		09	11.3
40	31	22,295	-54.3		09	13.0
30	29	24,152	-51.0		09	15.1
25	29	25,343	-49.5		09	16.2
20	27	26,810	-47.4		09	16.9
15	23	28,721	-44.6		09	18.9
10	10	31,440	-39.6			
7						
5						

CHATHAM, MASS.
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	17.9	16.5	24	1.8
1000	31	146	18.0	14.9	25	2.9
950	31	587	18.3	11.9	27	4.8
900	31	1,050	16.1	8.9	27	5.4
850	31	1,534	13.3	5.2	27	6.3
800	31	2,042	10.5	1.3	27	7.5
750	31	2,577	7.5	-2.7	27	8.6
700	31	3,142	4.8	-9.8	27	9.4
650	31	3,743	1.7	-14.3	27	10.3
600	31	4,385	-1.4	-21.1	27	11.4
550	31	5,073	-5.4	-24.7	27	12.1
500	31	5,814	-10.2	-28.9	26	12.6
450	31	6,618	-15.4	-32.8	26	13.6
400	31	7,497	-21.4	-37.6	26	14.3
350	31	8,471	-28.3	-42.7	27	16.3
300	31	9,555	-36.7	-49.5	27	18.7
250	31	10,793	-46.2		27	19.5
200	31	12,246	-55.7		28	19.7
175	31	13,089	-59.5		27	18.0
150	31	14,047	-61.9		27	14.5
125	31	15,174	-62.3		27	10.2
100	30	16,560	-60.7		27	6.2
80	30	17,954	-58.9		25	.9
70	30	18,794	-57.8		09	1.5
60	30	19,771	-56.1		09	4.1
50	30	20,935	-54.3		10	5.9
40	30	22,372	-52.4		09	8.7
30	29	24,247	-49.6		09	11.0
25	27	25,443	-48.0		09	12.5
20	25	26,923	-45.8		09	14.8
15	25	28,853	-42.6		09	16.9
10	23	31,612	-38.3		09	20.1
7	14	34,092	-33.0		09	20.1
5	6	36,459	-30.2			

CHIHUAHUA, MEXICO
858 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	19.0	13.8	28	.1
1000						
950						
900						
850	31	1,512	20.1	12.9	22	.4
800	31	2,035	18.6	10.1	17	1.1
750	31	2,587	15.1	7.5	13	1.7
700	31	3,167	10.8	4.3	10	1.9
650	31	3,782	6.9	-.5	08	2.9
600	31	4,435	2.3	-4.4	07	4.4
550	31	5,133	-2.2	-9.6	07	4.5
500	31	5,884	-7.0	-14.7	07	4.3
450	31	6,699	-11.6	-22.1	07	3.5
400	31	7,592	-17.5	-28.2	08	3.4
350	31	8,582	-24.4	-35.0	07	1.7
300	31	9,683	-32.9	-42.4	01	1.4
250	31	10,939	-43.1		36	3.3
200	31	12,404	-55.1		35	4.2
175	30	13,245	-60.8		35	4.5
150	30	14,192	-66.3		02	6.2
125	30	15,283	-71.1		04	6.3
100	30	16,599	-71.7		06	5.3
80	30	17,924	-69.2		06	6.0
70	30	18,728	-66.1		08	8.4
60	30	19,669	-63.4		09	10.1
50	30	20,800	-59.5		09	13.6
40	29	22,208	-56.3		09	14.2
30	29	24,051	-52.6		09	16.0
25	29	25,233	-50.9		09	17.4
20	29	26,694	-48.7		09	17.8
15	29	28,597	-46.3		09	19.0
10	21	31,309	-42.5		09	21.5
7						
5						

* COLD BAY, ALASKA
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	7.4	6.4	16	5.7
1000	29	155	6.6	5.5	16	6.8
950	30	572	5.7	4.1	15	5.7
900	30	1,014	4.7	1.9	15	4.8
850	30	1,480	4.0	-.7	16	6.0
800	30	1,971	2.0	-2.9	17	4.9
750	30	2,490	-.4	-6.3	19	4.5
700	30	3,040	-3.0	-9.9	20	4.5
650	30	3,623	-6.3	-12.6	20	4.6
600	30	4,246	-9.7	-17.5	18	4.5
550	30	4,913	-13.9	-21.8	20	4.3
500	30	5,630	-18.6	-26.1	21	5.4
450	30	6,408	-23.7	-32.6	22	5.8
400	30	7,259	-29.7	-38.1	22	5.5
350	30	8,201	-36.3	-42.2	24	6.7
300	30	9,251	-43.7		25	7.8
250	30	10,456	-51.0		26	6.7
200	30	11,902	-51.7		25	8.5
175	30	12,771	-50.4		25	7.2
150	29	13,782	-50.5		25	5.9
125	29	14,969	-51.1		25	3.5
100	29	16,420	-51.3		23	2.4
80	28	17,871	-50.9		16	1.2
70	28	18,741	-50.9		12	1.9
60	26	19,744	-50.6		10	2.6
50	25	20,932	-50.0		10	3.9
40	25	22,395	-48.9		09	5.5
30	23	24,291	-47.1		10	6.5
25	20	25,511	-45.3		09	7.2
20	19	27,000	-43.3		09	8.5
15	18	28,950	-40.3		09	10.4
10	12	31,710	-36.8			
7	7	34,202	-33.0			
5						

DAYTON, OHIO
984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	18.9	16.6	21	.6
1000						
950	31	601	20.4	14.6	26	3.9
900	31	1,067	18.0	11.4	27	4.9
850	31	1,554	14.6	7.8	28	5.2
800	31	2,065	11.8	2.7	28	5.7
750	31	2,602	8.8	-2.4	27	6.7
700	31	3,170	5.6	-7.9	26	6.9
650	31	3,773	2.3	-13.5	26	7.3
600	31	4,415	-1.2	-16.8	26	8.0
550	31	5,104	-5.1	-21.8	26	9.1
500	31	5,847	-9.7	-25.8	26	9.3
450	31	6,652	-14.9	-30.4	26	10.0
400	31	7,533	-21.0	-37.0	27	11.6
350	31	8,509	-27.7	-43.8	27	13.4
300	31	9,596	-36.0	-49.3	27	15.1
250	31	10,837	-45.3		27	17.7
200	31	12,293	-55.5		27	18.6
175	31	13,136	-59.9		27	16.5
150	31	14,091	-62.7		28	12.9
125	31	15,211	-63.5		27	8.0
100	31	16,583	-62.7		28	4.9
80	31	17,966	-60.0		33	.6
70	31	18,803	-58.7		08	2.2
60	31	19,776	-56.7		08	4.5
50	31	20,938	-54.6		08	6.5
40	31	22,373	-52.8		09	8.4
30	31	24,241	-50.1		08	11.4
25	28	25,436	-48.3		09	12.7
20	27	26,911	-46.4		08	13.7
15	27	28,836	-43.1		09	17.2
10	20	31,601	-38.6		09	20.3
7						

DEL RIO, TEXAS
979 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	24.0	20.2	12	4.6
1000						
950	31	581	22.4	19.4	14	8.4
900	31	1,051	19.7	16.9	16	10.2
850	31	1,543	17.7	13.4	16	9.0
800	31	2,060	14.8	10.4	15	8.0
750	31	2,605	12.2	4.0	15	6.0
700	31	3,181	9.3	-.8	15	3.2
650	31	3,792	5.6	-6.5	13	2.2
600	31	4,442	1.7	-12.3	09	2.4
550	31	5,138	-2.5	-17.6	07	2.7
500	31	5,887	-7.0	-22.9	08	3.3
450	31	6,701	-12.1	-28.2	06	3.3
400	31	7,592	-18.2	-34.3	04	3.7
350	31	8,578	-25.3	-39.2	02	4.0
300	31	9,676	-33.7	-45.4	01	6.3
250	31	10,929	-43.5		01	7.9
200	31	12,392	-54.8		01	9.7
175	31	13,235	-60.5		01	9.2
150	31	14,182	-66.3		02	10.1
125	31	15,274	-70.4		03	9.2
100	31	16,596	-70.4		05	6.9
80	31	17,930	-67.1		07	7.1
70	31	18,741	-64.5		08	7.9
60	31	19,689	-61.9		08	10.1
50	30	20,826	-58.7		09	12.8
40	28	22,234	-56.4		09	14.4
30	28	24,076	-52.4		09	18.1
25	27	25,262	-49.8		09	18.2
20	27	26,731	-47.5		09	17.6
15	26	28,644	-45.1		09	18.8
10	19	31,380	-40.9		09	23.9
7	5	33,793	-37.7			

DENVER, COLO.
840 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	14.3	9.7	22	.7
1000						
950						
900						
850						
800	31	2,029	16.6	4.6	26	2.2
750	31	2,578	14.8	.2	26	2.3
700	31	3,158	11.3	-3.2	28	3.5
650	31	3,772	7.1	-7.0	28	4.8
600	31	4,425	1.9	-10.9	29	6.2
550	31	5,119	-3.6	-14.4	29	8.7
500	31	5,865	-9.0	-21.0	29	9.6
450	31	6,673	-14.4	-28.9	29	10.3
400	31	7,555	-20.6	-34.6	28	12.2
350	31	8,532	-27.8	-41.4	28	14.8
300	31	9,618	-36.2	-47.4	27	17.1
250	31	10,858	-45.3		27	20.3
200	31	12,316	-54.6		27	23.9
175	31	13,163	-58.6		28	23.0
150	31	14,124	-62.2		28	18.7
125	31	15,242	-65.0		29	15.0
100	30	16,598	-65.3		29	7.3
80	30	17,967	-61.9		30	1.6
70	30	18,797	-60.2		07	1.9
60	30	19,764	-57.9		08	4.0
50	30	20,920	-55.7		08	6.7
40	30	22,350	-53.0		08	8.1
30	30	24,218	-50.4		09	10.8
25	30	25,412	-48.8		08	11.8
20	30	26,885	-46.7		08	13.1
15	29	28,806	-43.9		09	15.9
10	20	31,546	-39.8		09	20.3
7	5	33,931	-36.9			

DODGE CITY, KANS.
926 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	19.0	13.8	18	1.8
1000						
950						
900	31	1,035	20.2	14.4	20	4.9
850	31	1,529	19.4	10.6	22	7.5
800	31	2,049	16.7	6.7	23	6.9
750	31	2,596	13.2	3.3	24	6.3
700	31	3,173	9.3	.4	24	6.5
650	31	3,784	5.5	-4.7	25	5.2
600	31	4,434	1.1	-9.5	27	4.4
550	31	5,128	-3.8	-13.9	28	5.2
500	30	5,875	-8.2	-19.9	29	7.4
450	30	6,686	-13.1	-25.7	29	8.8
400	30	7,573	-19.1	-33.8	29	9.8
350	30	8,556	-26.1	-38.0	30	9.4
300	30	9,650	-34.5	-46.0	29	10.3
250	30	10,898	-44.5		29	12.6
200	29	12,352	-55.6		29	16.7
175	29	13,193	-60.7		29	17.1
150	29	14,144	-64.3		30	15.3
125	29	15,252	-66.7		30	10.7
100	29	16,601	-66.4		32	4.7
80	29	17,958	-63.9		36	1.2
70	29	18,781	-62.1		06	3.2
60	27	19,743	-59.3		08	6.0
50	26	20,897	-56.8		09	8.4
40	25	22,319	-53.9		09	9.9
30	23	24,177	-51.4		09	11.3
25	23	25,367	-49.5		09	13.2
20	20	26,832	-48.2		09	14.9
15	19	28,740	-44.7		09	17.3
10	9	31,486	-41.6			
7						

EL PASO, TEXAS
883 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	22.2	12.5	17	1.1
1000						
950						
900						
850	30	1,521	21.9	11.7	17	3.7
800	30	2,046	19.0	9.1	18	4.1
750	30	2,598	15.7	6.4	19	3.6
700	30	3,180	11.5	3.6	18	.6
650	30	3,795	7.2	-.2	04	2.1
600	30	4,449	2.6	-5.6	05	4.3
550	30	5,147	-2.4	-10.4	06	4.7
500	30	5,897	-7.4	-16.3	06	4.3
450	30	6,710	-12.3	-23.6	05	3.1
400	30	7,601	-18.0	-30.5	04	2.5
350	30	8,589	-24.8	-38.8	02	2.8
300	30	9,688	-33.5	-45.8	34	2.6
250	30	10,942	-43.2		32	3.5
200	30	12,407	-54.7		32	4.8
175	30	13,252	-59.9		33	4.8
150	30	14,201	-65.8		34	5.3
125	29	15,286	-71.2		36	5.6
100	28	16,603	-71.6		05	4.7
80	28	17,930	-67.8		07	5.2
70	28	18,740	-65.1		08	6.7
60	28	19,685	-62.5		08	8.9
50	28	20,820	-59.1		09	11.6
40	28	22,228	-56.5		09	13.3
30	27	24,068	-53.0		09	15.7
25	27	25,249	-50.9		09	16.4
20	27	26,711	-48.5		09	16.5
15	25	28,615	-46.7		09	19.3
10	25	31,329	-42.4		09	22.8
7	17	33,767	-38.0		09	29.0

ELY, NEV.
811 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	11.2	-3.6	20	3.9
1000						
950						
900						
850						
800	31	2,026	16.8	-.6	19	2.4
750	31	2,577	16.6	-2.6	16	.2
700	31	3,160	12.7	-5.4	24	2.4
650	31	3,777	7.9	-8.6	24	4.4
600	31	4,430	2.4	-11.8	24	6.1
550	31	5,126	-3.4	-15.3	24	7.5
500	31	5,872	-8.7	-21.3	25	9.5
450	31	6,679	-14.6	-27.9	26	10.4
400	31	7,561	-20.8	-35.0	26	12.5
350	31	8,536	-28.1	-42.5	26	14.7
300	31	9,620	-37.0	-49.9	26	16.4
250	31	10,857	-45.8		26	19.8
200	31	12,314	-54.4		26	22.4
175	31	13,162	-58.5		26	20.9
150	31	14,122	-62.5		26	20.1
125	30	15,236	-65.4		27	14.7
100	29	16,586	-66.3		27	5.4
80	29	17,946	-63.6		17	1.0
70	29	18,772	-60.3		10	2.3
60	29	19,738	-58.4		09	4.4
50	28	20,892	-56.1		09	7.0
40	28	22,320	-53.5		09	9.0
30	28	24,183	-50.9		09	11.5
25	28	25,375	-49.2		09	12.5
20	28	26,847	-46.5		09	13.6
15	24	28,767	-43.5		09	16.2
10	21	31,514	-39.3		09	18.9
7	9	33,998	-35.7			

EMPALME, MEXICO
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	27.4	22.7	06	1.5
1000	31	92	28.3	21.8	08	1.5
950	31	548	26.9	17.8	15	2.8
900	31	1,026	25.0	13.6	16	2.7
850	31	1,526	22.5	10.6	13	1.6
800	31	2,051	19.1	7.9	07	1.7
750	31	2,603	15.3	5.3	07	2.5
700	31	3,183	11.1	2.5	08	3.4
650	31	3,798	6.9	-.2	09	4.0
600	31	4,451	2.3	-4.1	09	4.3
550	31	5,149	-2.3	-8.1	09	4.9
500	31	5,900	-6.9	-14.7	09	4.5
450	31	6,715	-11.6	-20.8	10	4.2
400	31	7,609	-17.3	-28.2	10	3.4
350	31	8,599	-24.3	-35.8	11	2.3
300	31	9,701	-32.6	-44.8	11	2.7
250	31	10,958	-42.6		12	3.0
200	31	12,428	-54.1		14	2.7
175	31	13,273	-60.1		21	.3
150	31	14,222	-65.7		01	.5
125	30	15,312	-71.5		07	2.6
100	30	16,623	-73.4		08	4.7
80	30	17,938	-69.5		08	6.4
70	30	18,742	-66.3		09	8.6
60	30	19,683	-63.7		09	10.7
50	30	20,811	-60.1		09	12.7
40	30	22,213	-57.0		09	14.2
30	29	24,050	-53.7		09	16.2
25	28	25,222	-52.2		09	16.6
20	26	26,677	-49.4		09	17.2
15	24	28,566	-47.5		09	18.8
10	18	31,275	-43.2			
7						

* FAIRBANKS, ALASKA
1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	135	14.1	9.2	34	1.5
1000	18	196	13.9	8.7	32	1.6
950	29	582	14.8	6.1	34	.5
900	29	1,038	12.1	3.5	28	.8
850	29	1,514	8.4	.8	26	1.3
800	29	2,011	4.4	-1.4	23	1.5
750	29	2,534	.4	-4.4	21	1.7
700	29	3,084	-3.2	-10.2	21	1.9
650	29	3,667	-6.8	-14.4	21	1.8
600	29	4,287	-10.4	-19.5	22	1.6
550	28	4,951	-14.6	-24.5	21	1.8
500	28	5,667	-19.6	-30.4	21	2.1
450	28	6,440	-25.5	-34.1	22	1.6
400	28	7,283	-32.3	-41.2	23	2.7
350	28	8,214	-39.4	-46.4	24	4.3
300	28	9,248	-47.8		24	4.8
250	28	10,430	-54.9		24	5.1
200	28	11,864	-51.1		25	4.2
175	28	12,736	-49.7		25	3.3
150	28	13,747	-49.1		26	2.5
125	28	14,944	-49.0		27	2.0
100	28	16,409	-48.8		28	.4
80	27	17,875	-48.2		03	.6
70	27	18,755	-47.8		06	1.7
60	27	19,774	-47.5		08	2.4
50	27	20,981	-47.0		08	2.9
40	26	22,467	-45.9		08	4.5
30	26	24,388	-44.5		09	6.6
25	24	25,608	-43.3		09	6.8
20	23	27,119	-41.4		08	7.5
15	17	29,100	-38.0		08	8.8
10	9	31,912	-33.3			
7						

FLINT, MICH.
990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	236	16.6	14.3	22	1.4
1000						
950	31	586	18.2	12.2	27	4.2
900	31	1,049	15.9	10.0	28	5.3
850	31	1,533	12.8	6.5	28	6.3
800	31	2,040	9.7	2.0	27	7.8
750	31	2,573	6.8	-3.0	27	8.8
700	31	3,137	3.7	-6.8	27	9.2
650	31	3,736	.7	-11.3	27	11.0
600	31	4,375	-2.9	-16.4	27	11.9
550	31	5,060	-6.7	-22.0	27	12.3
500	31	5,798	-11.2	-28.4	27	13.8
450	31	6,599	-16.6	-32.6	27	14.6
400	31	7,473	-22.9	-37.1	28	15.3
350	31	8,441	-29.7	-42.8	28	17.4
300	31	9,520	-37.6	-49.1	28	18.8
250	31	10,755	-46.2		28	20.5
200	30	12,201	-54.7		27	22.8
175	30	13,049	-58.0		27	22.1
150	30	14,017	-59.5		28	17.5
125	29	15,150	-60.0		27	12.5
100	29	16,544	-59.6		27	7.8
80	29	17,946	-57.5		28	3.3
70	29	18,792	-56.5		34	.4
60	29	19,774	-55.1		08	2.6
50	28	20,941	-53.3		09	5.4
40	27	22,387	-51.5		09	7.0
30	25	24,263	-49.4		09	9.3
25	25	25,463	-47.5		09	10.5
20	24	26,946	-45.1		09	13.3
15	23	28,876	-42.4		09	14.8
10	14	31,659	-37.6			
7						

FORT WORTH, TEXAS
996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	23.2	19.3	18	1.7
1000						
950	31	590	22.3	18.1	20	7.9
900	31	1,061	20.6	14.5	20	7.9
850	31	1,553	17.6	11.3	20	5.4
800	31	2,070	14.7	7.0	21	3.4
750	31	2,613	11.6	1.7	21	2.4
700	31	3,188	8.7	-2.5	19	2.0
650	31	3,797	4.9	-6.0	19	1.6
600	31	4,446	1.0	-11.0	18	1.1
550	31	5,140	-3.1	-16.5	16	.2
500	31	5,888	-7.5	-23.7	02	.8
450	31	6,701	-12.6	-29.4	02	1.8
400	31	7,590	-18.6	-35.0	36	2.6
350	31	8,575	-25.5	-42.4	36	4.3
300	31	9,672	-34.0	-48.7	36	5.4
250	31	10,922	-43.9		36	7.8
200	31	12,383	-55.0		36	9.8
175	31	13,226	-60.3		36	9.7
150	31	14,176	-65.3		36	8.9
125	31	15,278	-68.2		36	7.7
100	31	16,613	-68.6		03	5.6
80	31	17,960	-65.3		07	5.9
70	31	18,778	-62.7		08	7.2
60	30	19,733	-61.4		08	8.2
50	29	20,873	-57.8		09	11.1
40	27	22,291	-55.2		09	12.1
30	25	24,145	-51.9		09	14.2
25	25	25,332	-50.1		09	15.1
20	25	26,797	-48.0		09	16.6
15	22	28,709	-44.9		09	19.7
10	13	31,447	-39.7		08	24.2
7						

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* See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT.
936 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	696	12.1	8.5	08	1.4
1000						
950						
900	31	1,024	15.7	5.3	25	.8
850	31	1,508	13.4	1.6	27	2.4
800	31	2,015	10.0	-.5	29	4.1
750	31	2,548	6.0	-2.3	29	6.2
700	31	3,109	2.0	-6.1	28	7.3
650	31	3,704	-1.7	-10.2	28	9.1
600	31	4,336	-5.6	-15.6	28	11.5
550	31	5,014	-9.9	-22.3	28	12.9
500	31	5,742	-14.6	-28.0	27	14.2
450	31	6,532	-20.2	-32.8	27	16.0
400	31	7,394	-26.4	-39.3	27	18.6
350	31	8,348	-33.5	-44.7	27	21.0
300	31	9,409	-41.5	-50.1	27	23.3
250	31	10,624	-49.6		28	26.8
200	31	12,069	-53.9		28	27.8
175	31	12,927	-53.4		28	24.9
150	31	13,918	-53.9		28	21.9
125	31	15,087	-54.6		28	16.3
100	31	16,512	-55.8		28	10.0
80	31	17,933	-55.4		29	5.3
70	31	18,787	-54.2		31	2.8
60	31	19,779	-53.1		03	1.1
50	31	20,957	-51.7		08	3.1
40	31	22,409	-50.4		09	5.1
30	31	24,295	-48.2		09	7.4
25	30	25,499	-46.4		09	8.7
20	30	26,989	-44.3		09	10.5
15	30	28,931	-41.4		09	12.0
10	17	31,704	-37.3			
7						
5						

GRAND JUNCTION, COLO.
853 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,472	19.2	.5	12	3.0
1000						
950						
900						
850	23	1,509	20.9	1.9	12	3.5
800	30	2,024	20.8	.7	13	3.3
750	30	2,578	17.6	-2.1	18	.7
700	30	3,162	13.0	-4.7	27	2.9
650	30	3,780	8.1	-6.8	27	5.3
600	30	4,434	2.7	-9.6	27	7.3
550	30	5,131	-2.9	-13.5	28	8.9
500	30	5,877	-8.8	-19.9	28	10.0
450	30	6,686	-13.9	-27.3	27	11.2
400	30	7,570	-20.2	-33.8	27	12.7
350	30	8,548	-27.4	-40.5	27	14.5
300	30	9,636	-35.9	-47.3	27	16.9
250	30	10,878	-45.2		26	21.5
200	29	12,340	-54.0		27	23.6
175	29	13,189	-58.5		27	23.0
150	29	14,149	-62.5		27	19.4
125	29	15,264	-66.2		28	15.3
100	29	16,611	-67.0		28	7.2
80	29	17,970	-63.8		24	.8
70	29	18,795	-60.9		08	2.1
60	28	19,759	-58.6		09	5.3
50	27	20,911	-56.3		09	7.6
40	25	22,336	-53.9		09	9.8
30	24	24,196	-51.0		09	12.5
25	23	25,384	-49.7		08	13.2
20	19	26,847	-47.2		09	16.2
15	15	28,766	-44.2		09	17.7
10	[illegible]	31,534	-38.7			
7						
5						

• GREAT FALLS, MONT.
890 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	1,118	12.6	5.0	27	2.3
1000						
950						
900						
850	31	1,507	13.8	2.1	27	3.3
800	31	2,016	10.8	-.1	27	3.1
750	31	2,550	7.1	-2.6	28	4.2
700	31	3,113	2.8	-4.5	27	6.2
650	31	3,709	-1.2	-8.5	27	9.3
600	31	4,343	-5.3	-13.5	27	11.6
550	30	5,019	-9.2	-20.9	27	13.2
500	30	5,750	-13.8	-27.8	27	14.5
450	30	6,542	-19.5	-34.1	27	16.0
400	30	7,406	-25.9	-39.5	27	18.3
350	30	8,363	-33.0	-43.2	27	20.9
300	30	9,426	-40.9	-45.9	27	23.1
250	30	10,644	-48.9		27	25.7
200	30	12,089	-54.7		27	27.7
175	29	12,939	-54.5		27	24.7
150	29	13,927	-54.6		27	21.0
125	29	15,091	-55.9		27	15.6
100	29	16,508	-56.5		28	10.2
80	29	17,925	-56.4		29	3.6
70	29	18,774	-55.7		33	2.0
60	29	19,760	-53.9		02	1.9
50	28	20,936	-52.4		07	3.5
40	27	22,386	-50.9		08	6.1
30	27	24,269	-48.9		09	8.2
25	27	25,472	-47.1		09	10.2
20	27	26,956	-44.9		08	11.5
15	22	28,889	-42.5		09	13.3
10	20	31,666	-37.3		09	16.1
7	18	34,155	-32.8		09	18.1
5	10	36,508	-30.7			

GREEN BAY, WIS.
991 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	210	16.2	14.1	23	1.5
1000						
950	31	572	18.2	11.6	26	4.0
900	31	1,034	15.6	8.7	26	5.6
850	31	1,517	12.6	5.3	27	6.8
800	31	2,024	9.8	1.8	27	7.7
750	31	2,558	6.7	-2.3	27	8.8
700	31	3,122	3.2	-5.7	27	10.2
650	31	3,719	-.4	-12.3	27	11.0
600	31	4,355	-3.8	-16.0	27	11.9
550	31	5,037	-7.8	-22.9	28	13.0
500	31	5,772	-12.4	-29.4	28	13.4
450	31	6,569	-17.8	-33.0	27	14.7
400	31	7,440	-23.8	-38.3	27	16.5
350	30	8,405	-30.7	-43.5	27	18.3
300	30	9,479	-38.9	-50.1	27	20.5
250	30	10,707	-47.2		27	24.6
200	30	12,157	-54.9		27	25.9
175	30	13,006	-57.1		28	23.0
150	30	13,979	-58.0		28	17.2
125	30	15,126	-58.5		27	13.7
100	30	16,530	-58.4		28	8.8
80	30	17,938	-56.9		29	4.2
70	30	18,786	-55.7		28	1.9
60	30	19,771	-54.5		07	1.0
50	30	20,943	-52.7		08	4.5
40	30	22,389	-51.2		09	6.3
30	30	24,271	-48.7		09	9.0
25	30	25,474	-47.0		09	10.6
20	29	26,962	-44.8		09	11.9
15	29	28,896	-42.0		09	14.3
10	25	31,667	-37.8		09	17.3
7						
5						

GREENSBORO, N. C.
988 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	275	19.9	18.1	26	1.3
1000						
950	31	613	21.3	16.3	29	3.4
900	31	1,081	19.1	13.3	29	3.6
850	31	1,571	16.2	9.9	28	4.0
800	31	2,084	12.9	6.6	27	4.9
750	31	2,624	9.8	2.5	27	5.3
700	31	3,195	6.7	-3.6	26	6.0
650	31	3,801	3.6	-8.8	26	6.6
600	31	4,446	.0	-12.6	26	7.4
550	31	5,139	-3.8	-19.0	25	7.0
500	31	5,885	-8.3	-22.9	25	7.0
450	31	6,695	-13.2	-28.7	25	7.0
400	31	7,582	-19.4	-34.1	26	6.9
350	31	8,564	-26.6	-40.3	27	6.7
300	31	9,655	-35.0	-48.9	26	7.1
250	31	10,900	-45.1		26	7.9
200	31	12,353	-56.5		27	8.1
175	31	13,190	-61.5		28	7.7
150	31	14,136	-65.3		29	5.9
125	31	15,243	-66.5		29	2.3
100	31	16,598	-64.8		32	.7
80	31	17,969	-62.1		08	3.0
70	31	18,798	-60.3		09	4.5
60	31	19,764	-58.3		09	6.7
50	31	20,920	-55.7		09	9.5
40	30	22,347	-53.4		09	11.1
30	28	24,213	-50.3		09	13.6
25	26	25,410	-48.5		09	14.9
20	25	26,877	-47.1		09	15.1
15	21	28,806	-43.6		09	17.3
10	8	31,563	-39.9			
7						
5						

GUADALUPE IS., MEXICO
1011 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	23	17.9	16.7	34	6.2
1000	31	114	16.0	14.7	33	6.5
950	31	552	19.8	3.8	32	2.7
900	31	1,021	23.3	-3.3	33	.9
850	31	1,517	21.7	-2.5	31	.2
800	31	2,040	18.5	-3.8	11	1.1
750	31	2,588	14.8	-5.7	10	2.0
700	31	3,167	10.5	-8.8	11	3.4
650	31	3,779	6.2	-10.2	11	4.8
600	31	4,429	1.3	-13.2	11	5.2
550	31	5,123	-3.8	-16.8	12	5.5
500	31	5,869	-8.4	-22.4	13	5.3
450	31	6,678	-13.5	-29.4	15	5.8
400	31	7,564	-19.1	-37.1	15	6.9
350	30	8,548	-26.1	-43.7	17	9.0
300	30	9,642	-34.3	-51.2	18	11.7
250	30	10,893	-43.7		18	9.2
200	29	12,354	-54.4		18	8.7
175	28	13,200	-60.0		18	6.8
150	27	14,145	-66.1		18	5.7
125	26	15,239	-71.1		18	6.1
100	24	16,550	-73.1			
80	22	17,869	-69.6			
70	22	18,671	-66.6			
60	22	19,611	-63.6			
50	22	20,742	-59.1			
40	17	22,144	-57.4			
30	16	23,971	-54.1			
25	15	25,151	-52.1			
20	14	26,598	-49.5			
15	13	28,486	-47.8			
10	12	31,189	-43.0			
7						
5						
4						

• GUAM, MARIANA IS.
996 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	111	25.4	23.5	18	.3
1000						
950	31	529	23.3	21.2	23	.8
900	31	1,001	20.7	17.8	27	1.9
850	31	1,494	18.2	14.4	28	2.3
800	31	2,013	15.5	10.9	28	2.0
750	31	2,559	12.8	7.0	28	1.5
700	31	3,136	9.7	2.8	31	.8
650	31	3,749	6.3	-.5	32	1.0
600	31	4,402	2.6	-4.6	31	1.1
550	31	5,102	-1.0	-10.2	02	.9
500	31	5,857	-5.2	-13.6	06	1.3
450	31	6,679	-9.5	-19.4	07	2.3
400	31	7,580	-15.1	-24.7	08	3.0
350	31	8,580	-21.6	-31.7	08	3.9
300	31	9,695	-29.8	-40.2	08	4.6
250	31	10,967	-40.0	-50.0	06	4.9
200	31	12,449	-52.8		05	6.5
175	30	13,298	-60.1		05	7.6
150	30	14,242	-67.9		06	8.8
125	29	15,316	-76.2		07	10.7
100	21	16,587	-81.1		07	11.9
80	20	17,869	-72.5		09	11.7
70	20	18,660	-69.7		09	12.1
60	18	19,587	-66.5		09	14.4
50	18	20,700	-63.3		08	18.9
40	18	22,083	-60.0		09	23.2
30	18	23,897	-56.1		09	26.8
25	18	25,064	-53.3		09	29.1
20	17	26,514	-49.2		09	31.7
15	14	28,420	-46.5		09	32.6
10						
7						
5						
4						

HILO, HAWAII
1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	10	21.7	19.4	25	1.9
1000	31	139	22.1	19.0	26	.8
950	31	585	19.1	16.9	08	2.9
900	31	1,048	16.0	14.1	08	4.5
850	31	1,533	13.0	11.3	08	3.8
800	31	2,042	11.9	1.3	09	4.1
750	31	2,581	10.4	-4.3	10	4.2
700	31	3,153	8.0	-11.2	12	2.9
650	31	3,760	4.7	-14.9	14	1.1
600	31	4,409	1.5	-20.6	23	1.7
550	31	5,104	-2.8	-24.0	25	3.4
500	31	5,852	-7.9	-28.1	25	6.4
450	31	6,663	-13.0	-30.6	26	8.5
400	31	7,551	-18.9	-35.7	26	11.4
350	31	8,535	-25.6	-40.8	26	15.4
300	31	9,632	-33.7	-48.0	26	19.3
250	31	10,985	-43.5		26	23.8
200	31	12,348	-55.2		26	26.3
175	30	13,187	-61.4		27	26.4
150	30	14,128	-67.8		27	25.3
125	30	15,210	-73.1		26	19.6
100	30	16,517	-72.2		25	7.2
80	30	17,846	-68.1		10	4.9
70	30	18,650	-66.6		10	8.0
60	30	19,589	-64.2		09	10.7
50	30	20,711	-61.7		09	13.7
40	29	22,103	-58.8		09	17.6
30	29	23,926	-54.9		09	20.6
25	26	25,097	-53.0		09	22.3
20	26	26,545	-50.3		09	24.4
15	25	28,437	-47.6		09	25.4
10	20	31,141	-44.5		09	27.1
7	8	33,549	-42.1			
5						
4						

HUNTINGTON W. VA.
990 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	246	19.3	18.2	15	1.3
1000						
950	31	605	20.6	15.7	26	3.6
900	31	1,072	18.2	13.0	27	4.6
850	31	1,560	14.9	10.7	27	5.2
800	31	2,071	11.9	6.6	27	5.6
750	31	2,610	9.1	.4	27	5.8
700	31	3,179	5.9	-3.5	27	6.2
650	31	3,782	2.6	-7.0	27	6.8
600	31	4,426	-.7	-14.1	26	7.5
550	31	5,116	-4.5	-21.4	26	7.6
500	31	5,860	-9.0	-26.0	26	8.4
450	31	6,668	-14.1	-29.9	26	8.6
400	31	7,552	-20.0	-35.4	26	9.7
350	31	8,531	-27.0	-41.7	26	11.0
300	31	9,621	-35.3	-48.4	27	11.8
250	31	10,866	-45.0		27	12.2
200	31	12,322	-55.7		27	14.5
175	31	13,162	-60.4		28	13.3
150	31	14,116	-63.5		28	9.0
125	31	15,231	-64.7		27	5.4
100	31	16,596	-63.3		28	3.0
80	30	17,974	-60.6		35	.9
70	30	18,808	-59.2		08	2.8
60	30	19,778	-57.6		09	5.1
50	30	20,937	-54.7		09	7.4
40	28	22,369	-52.7		09	8.9
30	25	24,242	-50.0		08	10.8
25	25	25,438	-48.6		09	12.5
20	24	26,914	-46.1		09	14.3
15	21	28,845	-43.1		09	17.5
10	10	31,590	-38.7			
7						
5						
4						

• INTERNATIONAL FALLS, MINN.
972 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	359	12.8	9.6	21	.7
1000						
950	31	551	14.7	10.7	26	2.4
900	31	1,008	13.2	7.9	28	4.9
850	31	1,486	10.5	4.1	27	6.5
800	31	1,989	7.5	.3	27	7.5
750	31	2,517	4.2	-2.2	28	8.5
700	31	3,075	1.0	-8.1	28	9.0
650	30	3,670	-2.2	-13.3	28	9.7
600	30	4,302	-5.7	-18.7	28	11.2
550	30	4,978	-10.0	-23.5	28	12.6
500	30	5,707	-14.6	-29.3	28	14.1
450	30	6,497	-20.2	-34.8	28	15.6
400	30	7,359	-26.4	-40.5	28	17.6
350	30	8,313	-33.4	-45.8	27	21.1
300	30	9,375	-41.3	-51.2	27	24.4
250	30	10,592	-48.9		27	28.0
200	30	12,039	-53.8		27	25.5
175	30	12,896	-53.7		27	23.7
150	30	13,888	-53.4		28	18.6
125	30	15,060	-54.4		28	14.2
100	30	16,487	-54.8		28	10.5
80	30	17,916	-54.3		29	5.2
70	30	18,775	-53.1		30	3.1
60	30	19,771	-52.2		35	1.5
50	30	20,954	-50.9		06	2.3
40	29	22,416	-49.4		08	4.8
30	28	24,312	-47.3		09	7.0
25	28	25,522	-45.8		09	8.5
20	28	27,016	-43.5		09	10.0
15	23	28,964	-40.7		09	12.8
10	20	31,731	-37.0		09	15.2
7	16	34,229	-32.5		09	17.0
5	11	36,629	-27.5			
4	7	38,218	-25.9			

JACKSON, MISS.
1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	100	21.3	20.4	17	1.1
1000	31	166	22.3	19.4	20	1.8
950	31	614	22.0	17.0	23	4.3
900	31	1,083	19.3	13.8	24	3.7
850	31	1,573	16.1	10.9	23	2.6
800	31	2,086	13.1	6.3	23	2.2
750	31	2,627	10.0	1.7	24	2.4
700	31	3,197	6.5	-2.7	24	2.4
650	31	3,803	3.2	-6.8	23	2.9
600	31	4,448	-.6	-10.4	23	2.6
550	31	5,138	-4.5	-16.5	25	2.0
500	31	5,883	-8.9	-22.7	25	2.1
450	31	6,692	-13.7	-28.3	26	1.4
400	31	7,577	-19.4	-37.0	31	1.0
350	30	8,558	-26.5	-42.6	31	.7
300	30	9,650	-35.0	-48.9	28	1.9
250	30	10,896	-45.1		31	1.7
200	30	12,350	-56.0		33	2.6
175	30	13,189	-61.1		33	2.9
150	30	14,136	-65.2		36	3.4
125	30	15,240	-67.5		01	4.4
100	30	16,586	-66.7		04	3.5
80	30	17,941	-65.1		06	4.8
70	30	18,760	-62.4		09	6.2
60	30	19,715	-60.9		09	7.2
50	29	20,858	-58.2		08	9.8
40	29	22,273	-55.7		09	12.6
30	28	24,117	-52.6		09	14.6
25	25	25,303	-50.2		09	16.1
20	24	26,768	-48.5		09	17.2
15	23	28,669	-46.0		09	18.8
10	16	31,389	-42.3		09	22.2
7						

JOHN F. KENNEDY INT. AP NY
1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	5	22.3	17.6	30	1.6
1000	31	152	21.3	16.9	29	2.4
950	31	597	20.0	14.3	29	3.9
900	31	1,062	17.3	11.4	28	3.7
850	31	1,548	14.1	8.6	28	5.2
800	31	2,058	11.4	4.4	27	7.1
750	31	2,596	8.6	.3	27	8.2
700	31	3,163	5.3	-4.5	27	9.3
650	31	3,765	2.1	-9.0	27	10.6
600	31	4,408	-1.0	-15.3	27	11.3
550	31	5,098	-4.7	-20.1	26	12.1
500	31	5,842	-9.3	-25.1	26	12.5
450	31	6,648	-14.5	-29.7	26	12.7
400	31	7,530	-20.6	-35.1	27	15.2
350	31	8,508	-27.5	-41.2	26	17.6
300	31	9,596	-35.8	-48.2	26	19.8
250	31	10,838	-45.4		27	22.7
200	30	12,293	-55.2		27	22.8
175	30	13,136	-59.4		27	21.6
150	30	14,094	-62.2		27	17.1
125	29	15,220	-63.1		26	12.7
100	28	16,593	-61.5		27	4.9
80	28	17,985	-59.0		24	.7
70	28	18,826	-57.5		09	2.4
60	27	19,801	-56.0		09	5.4
50	27	20,965	-54.1		09	7.0
40	27	22,404	-52.0		09	9.3
30	27	24,278	-49.5		09	11.9
25	25	25,477	-47.8		08	12.6
20	25	26,957	-45.9		08	16.0
15	24	28,888	-42.5		09	17.4
10	12	31,656	-38.3			
7						

JOHNSTON IS., PACIFIC AREA
1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	3	26.4	22.8	09	7.7
1000	31	114	25.1	22.2	09	8.7
950	31	564	21.5	20.2	09	10.4
900	31	1,033	18.5	16.5	09	10.6
850	31	1,522	15.4	12.8	09	9.6
800	31	2,035	13.4	6.3	09	7.9
750	31	2,577	11.6	-.7	09	6.2
700	31	3,152	9.6	-7.6	09	4.0
650	31	3,764	6.2	-10.0	10	2.5
600	31	4,415	1.9	-12.7	14	1.3
550	31	5,111	-2.2	-16.0	21	1.3
500	31	5,862	-6.6	-19.6	24	3.0
450	31	6,678	-11.5	-23.2	26	4.7
400	31	7,572	-17.3	-29.4	27	7.2
350	31	8,562	-24.0	-34.1	26	11.2
300	31	9,666	-32.4	-41.9	26	15.0
250	31	10,925	-42.5		26	19.1
200	31	12,393	-54.8		26	22.3
175	31	13,234	-61.6		26	23.3
150	31	14,172	-69.1		26	23.1
125	27	15,243	-75.4		27	20.2
100	27	16,526	-76.2		27	6.4
80	25	17,837	-69.9		09	5.6
70	25	18,638	-67.2		09	9.1
60	22	19,573	-64.9		09	12.1
50	22	20,694	-62.1		09	15.4
40	22	22,081	-59.6		09	20.1
30	22	23,898	-55.4		09	23.9
25	19	25,066	-52.9		09	25.3
20	19	26,517	-49.8		09	27.3
15	14	28,404	-47.6		09	[illegible]
10	11	31,120	-44.3			
7						

KEY WEST, FLA.
1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	3	26.6	23.3	11	3.5
1000	31	152	26.1	23.0	11	4.8
950	31	604	22.6	20.6	11	6.2
900	31	1,074	19.7	15.5	12	5.9
850	31	1,565	17.0	9.8	12	5.6
800	31	2,081	14.1	5.7	12	5.0
750	31	2,623	11.0	.7	12	4.7
700	31	3,195	7.6	-3.4	12	4.6
650	31	3,803	4.1	-6.5	11	4.6
600	31	4,449	.3	-10.4	11	4.1
550	31	5,143	-3.6	-14.2	10	2.8
500	31	5,890	-8.2	-20.8	10	2.6
450	31	6,700	-13.2	-26.4	11	2.0
400	31	7,587	-19.2	-31.8	10	1.0
350	31	8,570	-26.0	-38.7	16	.6
300	31	9,664	-34.6	-46.6	24	.9
250	31	10,911	-44.8		27	2.5
200	31	12,366	-56.3		28	3.3
175	31	13,203	-62.0		30	2.9
150	31	14,145	-66.9		34	2.7
125	31	15,240	-68.8		04	2.4
100	31	16,574	-68.4		07	4.5
80	31	17,918	-67.1		09	7.4
70	31	18,727	-65.3		09	9.6
60	31	19,671	-63.0		09	12.4
50	30	20,801	-60.3		09	16.2
40	30	22,204	-56.9		09	18.0
30	27	24,045	-53.0		09	19.5
25	26	25,226	-50.8		09	20.5
20	25	26,691	-47.9		09	21.2
15	24	28,599	-45.7		09	22.2
10	11	31,311	-41.4			
7						

KOROR, CAROLINE IS.
+ 1006 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	30	28.1	24.4	24	4.0
1000	31	81	27.5	24.4	24	5.2
950	31	535	23.9	22.2	24	7.9
900	31	1,007	21.1	[illegible]	25	8.3
850	31	1,502	18.4	14.1	27	7.4
800	31	2,021	16.1	9.9	28	6.8
750	31	2,568	13.2	5.8	28	6.1
700	31	3,146	9.9	1.8	29	5.0
650	31	3,759	6.4	-1.8	29	4.5
600	31	4,412	2.7	-4.9	29	3.5
550	31	5,112	-1.1	-8.3	27	3.3
500	31	5,866	-5.6	-12.5	29	1.7
450	31	6,686	-10.3	-17.4	04	.9
400	31	7,584	-16.2	-22.5	09	3.3
350	31	8,579	-22.7	-29.6	09	7.7
300	31	9,690	-30.2	-39.8	09	12.5
250	31	10,962	-39.9	-52.6	07	[illegible]
200	31	12,446	-52.3		06	21.2
175	31	13,297	-59.1		06	22.9
150	31	14,246	-66.7		06	22.4
125	31	15,329	-73.8		07	17.1
100	31	16,612	-78.6		07	5.2
80	31	17,899	[illegible]		08	4.7
70	31	18,690	-69.3		08	7.9
60	31	19,617	-66.4		08	10.8
50	30	20,727	-64.7		09	17.4
40	30	22,098	-61.9		09	24.7
30	29	23,905	-55.9		09	30.5
25	29	25,073	-53.1		09	32.5
20	29	26,522	-50.0		09	34.0
15	28	28,414	-47.5		09	34.8
10	21	31,129	-43.2		09	[illegible]
7	5	33,491	-42.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	24.5	13	.8
1000	31	78	26.8	23.0	14	1.0
950	31	531	23.5	21.4	13	1.1
900	31	1,003	20.8	17.5	13	1.3
850	31	1,497	18.3	15.1	12	1.3
800	31	2,016	15.8	12.3	12	1.7
750	31	2,563	13.1	9.2	13	2.0
700	31	3,142	9.9	5.8	12	2.1
650	31	3,755	6.4	1.6	12	2.7
600	31	4,409	2.7	-1.8	12	2.8
550	31	5,109	-1.2	-5.1	12	2.9
500	31	5,865	-5.3	-11.1	12	3.5
450	31	6,686	-9.8	-17.0	11	3.4
400	31	7,586	-15.2	-24.4	11	3.8
350	31	8,583	-21.9	-32.6	11	3.4
300	31	9,699	-30.4	-39.7	10	2.7
250	31	10,968	-40.7	-49.0	10	3.9
200	31	12,445	-53.5	-60.9	10	5.0
175	31	13,289	-61.1		07	4.4
150	31	14,228	-68.9		05	5.1
125	30	15,298	-76.7		04	6.1
100	26	16,563	-81.2		05	1.6
80	21	17,843	-73.4		09	2.4
70	20	18,634	-70.1		09	6.1
60	19	19,560	-67.3		08	10.7
50	18	20,664	-64.9		09	17.1
40	17	22,034	-61.3		09	23.5
30	16	23,840	-56.6		09	29.3
25	16	25,003	-54.3		09	31.4
20	14	26,446	-51.4		09	31.7
15	11	28,324	-49.4		09	35.9
10	6	31,019	-43.9			
7						

LAKE CHARLES, LA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	23.0	22.3	09	1.5
1000	30	155	24.9	22.0	14	2.2
950	30	605	22.3	18.8	18	4.0
900	30	1,074	19.4	14.6	18	4.2
850	30	1,565	16.5	10.8	18	4.1
800	30	2,079	13.6	6.9	18	3.6
750	30	2,621	10.6	2.9	19	2.7
700	30	3,192	7.0	-2.3	18	1.7
650	30	3,798	3.5	-6.0	17	1.2
600	30	4,444	-.2	-9.6	19	.6
550	30	5,135	-4.3	-15.4	22	.3
500	30	5,880	-8.9	-21.0	30	.4
450	30	6,689	-13.7	-27.1	35	1.0
400	30	7,575	-19.5	-34.4	01	1.7
350	30	8,557	-26.2	-42.9	36	2.9
300	30	9,650	-34.7	-50.5	35	3.6
250	30	10,898	-44.5		36	4.2
200	30	12,355	-55.9		01	4.9
175	30	13,194	-61.2		01	5.6
150	30	14,140	-65.5		02	6.8
125	30	15,241	-67.9		03	6.6
100	29	16,583	-67.5		05	5.3
80	29	17,933	-65.5		07	6.2
70	29	18,749	-63.6		08	8.5
60	29	19,700	-61.5		08	9.5
50	29	20,840	-58.1		08	11.8
40	28	22,255	-55.6		09	13.6
30	25	24,096	-53.0		09	16.6
25	25	25,279	-50.4		09	17.2
20	24	26,745	-48.1		09	18.3
15	24	28,652	-45.9		09	19.2
10	17	31,385	-41.0		09	25.0
7						

LANDER, WYO. 832 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	13.1	2.2	24	1.9
1000						
950						
900						
850						
800	31	2,030	14.7	-.4	31	1.1
750	31	2,573	12.0	-2.5	30	1.3
700	31	3,147	8.4	-6.4	26	3.4
650	31	3,756	4.6	-10.5	27	7.8
600	31	4,403	.1	-14.4	27	9.7
550	31	5,093	-5.0	-19.2	27	12.2
500	31	5,835	-10.3	-24.8	27	14.7
450	31	6,638	-16.1	-30.7	27	16.3
400	31	7,514	-22.3	-37.0	27	17.9
350	31	8,484	-29.7	-42.8	27	19.9
300	31	9,561	-38.4	-49.1	27	22.4
250	31	10,790	-47.4		27	25.4
200	31	12,238	-55.5		27	26.6
175	31	13,085	-57.7		27	27.5
150	31	14,053	-59.7		27	24.8
125	31	15,188	-61.5		28	17.8
100	30	16,568	-62.8		28	10.5
80	30	17,949	-60.7		29	2.4
70	30	18,786	-58.0		05	.9
60	30	19,761	-56.7		08	3.4
50	29	20,921	-54.7		08	6.3
40	29	22,356	-52.6		08	8.3
30	28	24,225	-49.7		09	11.0
25	28	25,422	-48.5		09	10.9
20	27	26,895	-46.4		08	13.7
15	25	28,818	-43.5		09	16.5
10	15	31,566	-38.7		09	20.6
7						

* LIHUE KAUAI, HAWAII 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	24.0	20.4	06	4.6
1000	31	150	23.3	19.4	06	6.1
950	31	597	19.4	17.7	07	8.5
900	31	1,061	16.1	14.1	07	9.0
850	31	1,545	13.3	9.3	07	8.3
800	31	2,055	11.3	3.6	08	7.5
750	31	2,592	9.9	-8.5	09	5.3
700	31	3,163	7.7	-13.8	10	3.3
650	31	3,770	4.5	-17.6	13	1.7
600	31	4,417	.5	-20.2	20	1.2
550	31	5,109	-3.9	-23.7	22	2.0
500	31	5,854	-8.5	-28.0	25	3.9
450	31	6,664	-13.4	-32.6	26	6.2
400	31	7,549	-20.1	-37.4	27	8.4
350	31	8,529	-26.9	-43.5	27	11.4
300	31	9,619	-35.0	-49.6	27	16.3
250	31	10,866	-44.8		26	21.5
200	31	12,322	-56.0		26	27.9
175	31	13,159	-62.1		27	29.3
150	31	14,099	-67.9		27	27.9
125	31	15,186	-71.0		26	18.5
100	31	16,514	-68.7		25	5.1
80	30	17,858	-66.6		10	4.7
70	30	18,669	-65.2		09	8.1
60	30	19,613	-63.2		09	11.2
50	30	20,741	-60.9		09	14.5
40	28	22,138	-57.8		09	17.2
30	27	23,972	-53.4		09	21.0
25	27	25,150	-52.0		09	22.7
20	27	26,604	-49.3		09	23.4
15	25	28,500	-46.6		09	23.8
10	23	31,214	-42.4		09	26.5
7	6	33,646	-38.2			

LITTLE ROCK, ARK. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	21.1	18.7	22	1.5
1000	31	154	22.8	19.1	22	2.1
950	31	603	22.5	16.6	23	5.2
900	31	1,072	19.6	14.2	23	5.2
850	31	1,563	16.6	9.8	24	4.0
800	31	2,077	13.7	4.4	24	2.8
750	31	2,619	10.8	-.3	24	2.9
700	31	3,190	7.1	-4.6	24	3.2
650	31	3,797	3.7	-8.5	25	2.7
600	31	4,442	-.3	-12.7	25	2.1
550	31	5,133	-4.3	-19.1	25	1.7
500	31	5,878	-8.4	-25.2	29	1.6
450	31	6,688	-13.5	-32.2	32	1.4
400	31	7,574	-19.6	-37.3	31	2.3
350	31	8,555	-26.5	-43.2	32	3.2
300	31	9,647	-34.9	-50.2	33	3.8
250	31	10,893	-44.7		33	5.1
200	31	12,351	-55.6		35	7.2
175	31	13,191	-61.0		35	6.9
150	31	14,139	-65.0		34	7.1
125	31	15,245	-66.9		36	5.5
100	30	16,595	-66.3		02	3.7
80	30	17,954	-64.1		07	4.8
70	30	18,778	-61.4		08	6.5
60	30	19,738	-59.7		09	7.9
50	30	20,886	-56.4		09	10.2
40	29	22,309	-54.4		09	12.3
30	29	24,165	-51.4		09	14.1
25	29	25,354	-49.5		09	14.8
20	29	26,826	-46.9		08	17.4
15	27	28,743	-43.8		09	18.1
10	15	31,491	-39.9			
7						

MCGRATH, ALASKA 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	12.5	7.2	27	1.0
1000	20	195	13.5	8.2	27	1.1
950	31	585	13.8	6.3	24	.4
900	31	1,039	10.9	4.0	18	1.1
850	31	1,512	7.2	1.8	17	1.6
800	31	2,009	3.8	-.3	16	1.9
750	31	2,530	.2	-2.9	17	2.3
700	31	3,080	-3.3	-9.3	18	2.3
650	31	3,663	-6.5	-16.0	18	2.9
600	31	4,285	-10.2	-21.0	19	2.7
550	31	4,950	-14.7	-26.3	19	3.2
500	31	5,665	-19.6	-30.9	20	3.4
450	31	6,439	-25.0	-35.2	20	3.8
400	31	7,284	-31.4	-41.4	22	4.8
350	31	8,218	-38.7	-46.5	22	5.7
300	31	9,256	-46.7		23	6.4
250	31	10,447	-53.2		24	4.4
200	31	11,893	-49.5		24	2.3
175	31	12,771	-48.1		23	2.2
150	31	13,788	-48.1		24	1.9
125	31	14,989	-48.3		24	1.3
100	31	16,460	-47.9		16	.2
80	30	17,934	-47.7		10	1.0
70	29	18,818	-47.4		09	1.8
60	29	19,838	-47.1		08	2.6
50	28	21,046	-46.8		09	3.4
40	27	22,529	-46.0		08	4.9
30	24	24,445	-44.6		08	5.8
25	23	25,669	-43.6		08	6.6
20	23	27,175	-42.0		08	7.9
15	19	29,142	-39.3		08	9.2
10						
7						
5						
4						

MAJURO, MARSHALL IS. + 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.2	24.4	24	1.2
1000	31	86	26.8	23.3	21	1.1
950	31	540	23.7	21.9	19	1.1
900	31	1,013	21.3	18.8	17	1.0
850	31	1,507	18.8	15.6	17	1.0
800	31	2,028	16.3	12.2	16	1.1
750	31	2,576	13.3	9.3	14	.9
700	31	3,154	10.1	6.6	13	1.2
650	31	3,768	6.8	3.3	11	2.1
600	31	4,423	3.2	-.1	10	2.9
550	31	5,125	-.5	-4.3	11	3.2
500	31	5,882	-4.6	-9.0	11	4.2
450	31	6,706	-9.3	-14.5	10	4.9
400	31	7,608	-14.5	-23.7	11	4.9
350	31	8,611	-21.2	-30.7	11	4.7
300	31	9,728	-29.3	-39.2	10	4.5
250	31	11,003	-39.6	-49.2	08	4.1
200	31	12,488	-52.4		07	5.4
175	31	13,337	-59.4		05	6.0
150	31	14,284	-67.2		05	6.4
125	31	15,363	-75.0		06	4.3
100	30	16,641	-78.9		29	3.1
80	30	17,933	-72.1		05	1.3
70	30	18,728	-67.9		09	6.5
60	30	19,661	-65.5		09	10.9
50	29	20,776	-63.0		09	17.2
40	29	22,159	-59.7		09	24.8
30	29	23,982	-54.4		09	28.8
25	29	25,158	-51.6		09	30.9
20	27	26,621	-48.3		09	32.6
15	27	28,530	-45.1		09	33.5
10	20	31,264	-40.1		09	36.8
7						
5						
4						

* MEDFORD, OREG. 968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	14.3	8.5	33	.6
1000						
950	31	562	18.1	8.2	29	.8
900	31	1,025	18.0	5.3	29	.7
850	31	1,513	16.2	3.0	11	1.0
800	31	2,027	14.6	-3.5	18	.5
750	31	2,570	11.6	-6.4	23	2.3
700	31	3,142	7.6	-8.9	24	3.8
650	31	3,748	3.9	-14.5	25	5.8
600	31	4,394	.0	-19.1	25	7.3
550	31	5,085	-4.6	-23.9	26	7.9
500	31	5,827	-9.9	-28.6	26	8.7
450	31	6,631	-15.7	-33.2	26	10.0
400	31	7,508	-22.5	-38.7	26	10.5
350	30	8,474	-30.1	-44.7	27	11.4
300	30	9,549	-38.7	-51.0	27	13.5
250	30	10,776	-47.9		27	17.0
200	30	12,222	-55.1		26	19.1
175	30	13,071	-56.9		26	18.9
150	30	14,044	-58.8		26	17.2
125	30	15,183	-60.9		26	13.0
100	30	16,566	-61.6		26	6.8
80	30	17,952	-60.4		25	1.2
70	30	18,787	-58.8		07	1.8
60	30	19,760	-56.8		08	4.0
50	30	20,920	-55.0		09	5.9
40	29	22,357	-52.8		09	8.0
30	29	24,225	-50.0		09	10.1
25	28	25,423	-48.5		09	11.6
20	28	26,899	-46.3		09	13.8
15	27	28,828	-42.9		09	15.4
10	25	31,594	-38.3		09	18.8
7	21	34,066	-33.8		09	20.4
5	15	36,430	-30.0		09	25.1
4	8	38,038	-27.8			

MERIDA, MEXICO 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	23.2	22.6	09	1.1
1000	31	132	24.6	22.9	10	4.3
950	31	583	23.2	19.3	11	7.3
900	31	1,054	20.8	14.9	11	7.4
850	31	1,547	17.9	10.5	10	7.5
800	31	2,065	15.3	4.3	11	6.8
750	31	2,609	12.1	.6	11	6.7
700	31	3,183	8.4	-2.0	12	5.7
650	31	3,792	4.8	-5.3	11	5.2
600	31	4,441	1.1	-9.1	10	5.1
550	31	5,136	-2.9	-13.1	09	3.9
500	31	5,885	-7.2	-20.8	08	3.1
450	31	6,699	-12.2	-23.0	06	2.9
400	31	7,590	-18.2	-29.4	06	1.8
350	31	8,577	-25.1	-35.8	20	.3
300	31	9,675	-33.5	-44.1	28	2.0
250	31	10,927	-43.7		26	5.2
200	31	12,388	-55.5		28	5.8
175	30	13,228	-60.9		29	6.7
150	29	14,173	-67.0		29	7.8
125	29	15,264	-70.1		28	5.7
100	28	16,593	-69.2		36	2.5
80	28	17,931	-67.6		07	6.5
70	28	18,738	-65.6		08	9.0
60	28	19,681	-63.1		08	10.0
50	28	20,812	-60.2		08	12.6
40	28	22,216	-56.7		08	16.0
30	28	24,056	-52.9		09	17.5
25	28	25,239	-50.4		09	17.8
20	25	26,699	-48.1		08	19.3
15	21	28,607	-45.7		08	20.5
10	9	31,338	-42.0			
7						
5						
4						

MIAMI, FLA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	25.0	22.5	09	1.9
1000	31	162	25.9	23.1	11	3.4
950	31	614	22.6	20.1	13	5.5
900	31	1,084	20.1	14.9	13	6.0
850	31	1,576	17.0	10.7	13	5.8
800	31	2,091	14.3	6.6	13	5.5
750	31	2,634	11.0	2.6	13	5.1
700	31	3,206	7.5	-1.8	12	4.6
650	31	3,814	3.9	-5.2	12	4.2
600	31	4,460	.0	-8.8	12	3.5
550	31	5,153	-3.7	-13.5	11	2.4
500	31	5,900	-8.0	-19.6	11	2.8
450	31	6,711	-13.4	-23.5	11	2.2
400	31	7,597	-19.5	-29.8	10	2.2
350	31	8,579	-26.4	-37.2	11	1.8
300	31	9,671	-34.9	-45.7	10	1.7
250	31	10,917	-45.1		08	1.4
200	31	12,370	-56.5		09	1.7
175	31	13,206	-62.2		05	2.2
150	31	14,146	-66.9		03	2.9
125	31	15,243	-68.8		05	2.9
100	31	16,582	-67.7		07	4.1
80	31	17,928	-66.3		09	7.3
70	31	18,741	-64.5		09	9.8
60	31	19,689	-62.2		09	12.3
50	31	20,823	-59.4		09	14.9
40	31	22,231	-56.4		09	16.9
30	31	24,074	-52.5		09	18.7
25	30	25,259	-50.1		09	19.3
20	30	26,725	-47.6		09	19.9
15	25	28,634	-45.4		09	21.3
10	15	31,360	-41.5		09	24.3
7	6	33,796	-37.5			
5						
4						

MIDLAND, TEXAS 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	20.7	15.0	15	3.7
1000						
950						
900	31	1,042	21.0	15.9	17	6.8
850	31	1,536	19.1	11.6	18	10.4
800	31	2,057	16.9	9.0	18	6.1
750	31	2,605	14.0	4.2	15	2.5
700	31	3,184	10.2	.0	10	2.0
650	31	3,796	6.2	-3.9	08	2.1
600	31	4,448	1.8	-9.1	08	2.0
550	31	5,144	-2.6	-14.7	06	2.3
500	31	5,894	-6.9	-21.5	04	2.5
450	31	6,709	-11.9	-28.2	03	2.8
400	31	7,600	-18.1	-32.8	03	4.0
350	31	8,587	-24.9	-39.7	02	4.5
300	31	9,686	-33.5	-46.9	01	5.4
250	31	10,939	-43.7		35	7.5
200	30	12,402	-55.1		36	7.8
175	30	13,244	-60.3		36	8.9
150	30	14,192	-65.8		36	8.7
125	30	15,287	-69.9		01	9.3
100	30	16,613	-69.9		04	5.1
80	27	17,951	-67.1		07	5.2
70	27	18,764	-64.0		08	7.1
60	27	19,713	-62.0		08	8.8
50	27	20,849	-58.6		09	11.6
40	26	22,261	-56.0		09	13.4
30	25	24,105	-52.6		09	15.1
25	25	25,290	-50.2		09	16.1
20	21	26,755	-48.2		09	17.0
15	17	28,668	-45.0		09	19.2
10	14	31,393	-41.8		09	24.0

MONTERREY, MEXICO 965 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	21.9	20.8	10	.6
1000						
950	31	583	21.4	20.1	12	2.6
900	31	1,052	18.7	17.0	13	6.3
850	31	1,542	17.3	11.8	13	8.1
800	31	2,060	15.7	7.3	14	7.0
750	31	2,606	13.0	2.0	14	4.9
700	31	3,183	9.6	-2.9	14	2.1
650	31	3,794	5.6	-6.5	09	1.0
600	31	4,444	1.5	-11.6	06	1.6
550	31	5,139	-2.7	-16.4	08	2.1
500	31	5,889	-7.2	-21.5	09	2.6
450	31	6,703	-12.1	-25.7	07	3.2
400	31	7,594	-17.9	-31.5	05	3.5
350	31	8,583	-24.6	-38.7	03	4.5
300	31	9,683	-33.3	-46.9	01	4.5
250	31	10,937	-43.5		36	6.8
200	31	12,400	-54.9		36	8.9
175	31	13,243	-60.6		36	9.2
150	31	14,189	-66.5		36	9.4
125	31	15,281	-70.7		03	8.7
100	31	16,603	-70.7		04	6.6
80	30	17,935	-67.3		06	7.9
70	30	18,745	-65.3		07	9.8
60	30	19,689	-63.1		08	12.1
50	30	20,820	-59.9		08	14.2
40	29	22,225	-57.1		08	16.6
30	27	24,062	-52.9		08	18.9
25	27	25,244	-51.1		08	19.7
20	26	26,704	-48.1		08	20.9
15	26	28,610	-45.7		08	20.2
10	14	31,331	-42.0			

MONETT, MO. 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	19.6	17.1	16	2.0
1000						
950	31	593	21.0	16.6	20	3.7
900	31	1,062	19.7	12.9	24	7.4
850	31	1,553	16.5	9.6	25	6.8
800	31	2,067	13.6	5.4	26	5.6
750	31	2,608	10.4	1.7	25	4.8
700	31	3,180	6.9	-3.0	24	4.3
650	31	3,785	3.3	-6.5	25	4.4
600	31	4,430	-.3	-12.2	25	4.2
550	31	5,122	-4.2	-19.0	25	4.4
500	31	5,867	-8.8	-23.3	27	4.5
450	31	6,675	-13.8	-29.2	28	5.1
400	31	7,560	-19.8	-36.5	29	6.3
350	31	8,540	-26.6	-42.6	29	6.6
300	31	9,632	-34.9	-49.2	30	7.5
250	31	10,879	-44.7		30	9.3
200	31	12,335	-55.6		30	11.1
175	30	13,174	-60.2		31	11.4
150	30	14,126	-63.9		31	9.7
125	30	15,237	-65.8		32	7.7
100	30	16,593	-65.8		33	4.3
80	30	17,957	-62.9		03	2.6
70	30	18,785	-60.4		07	3.7
60	30	19,750	-58.8		08	5.4
50	30	20,901	-56.6		08	7.1
40	30	22,325	-53.9		09	9.4
30	30	24,186	-50.9		09	11.6
25	28	25,379	-49.0		09	13.2
20	26	26,850	-46.9		09	14.7
15	25	28,771	-43.8		09	16.8
10	21	31,509	-40.1		09	20.8

MONTGOMERY, ALA. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	21.5	19.2	16	.8
1000	31	169	21.9	19.3	19	1.3
950	31	617	21.9	17.0	23	2.8
900	31	1,085	19.1	14.0	24	2.8
850	30	1,573	15.7	10.3	24	3.0
800	30	2,086	12.9	5.7	23	3.2
750	29	2,627	9.8	1.1	24	3.7
700	29	3,197	6.4	-4.1	24	4.0
650	29	3,802	2.9	-7.8	24	3.8
600	29	4,446	-.7	-11.1	23	3.4
550	29	5,136	-4.7	-16.4	23	3.0
500	29	5,880	-9.2	-22.0	23	2.8
450	29	6,688	-14.1	-27.0	24	1.7
400	29	7,572	-20.0	-33.0	28	.9
350	29	8,552	-26.7	-39.5	31	.8
300	29	9,643	-35.2	-47.0	02	.6
250	29	10,887	-45.3		04	1.1
200	29	12,339	-56.6		01	1.7
175	29	13,176	-61.8		03	2.4
150	29	14,120	-65.8		03	3.2
125	29	15,221	-67.5		04	3.3
100	29	16,565	-66.7		07	3.6
80	29	17,922	-64.4		08	5.2
70	29	18,743	-62.3		08	6.7
60	29	19,700	-60.1		09	8.1
50	29	20,846	-57.6		09	11.3
40	29	22,265	-54.7		09	12.8
30	28	24,119	-51.6		09	14.9
25	26	25,309	-49.7		09	16.8
20	25	26,777	-47.3		09	16.8
15	22	28,679	-44.8		09	19.4
10	12	31,412	-40.1		09	22.1

NASHVILLE, TENN. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	20.5	19.1	18	.6
1000	12	191	20.1	17.4	16	.5
950	31	608	21.3	16.5	24	3.8
900	31	1,076	18.7	13.5	25	4.2
850	31	1,565	15.3	10.3	25	4.1
800	31	2,077	12.1	6.9	25	4.0
750	31	2,615	9.3	.8	25	4.5
700	31	3,184	5.9	-4.3	25	5.0
650	31	3,788	2.7	-8.7	26	5.3
600	31	4,432	-.8	-12.9	26	5.5
550	31	5,122	-4.5	-19.9	26	5.7
500	31	5,867	-8.8	-24.7	26	5.4
450	31	6,676	-13.9	-28.7	26	5.8
400	31	7,560	-19.8	-34.2	26	6.1
350	31	8,541	-26.8	-41.4	27	6.8
300	31	9,632	-35.1	-48.7	27	7.7
250	31	10,877	-44.9		27	8.7
200	31	12,331	-56.2		28	9.1
175	31	13,169	-61.5		29	8.7
150	31	14,117	-65.0		30	6.7
125	31	15,224	-66.4		31	3.2
100	31	16,576	-65.3		34	1.4
80	31	17,945	-62.8		06	2.4
70	31	18,771	-61.0		08	5.0
60	29	19,738	-58.8		08	7.0
50	29	20,890	-56.1		09	8.8
40	28	22,317	-54.1		09	10.8
30	27	24,172	-51.5		09	13.2
25	27	25,362	-49.6		09	14.3
20	27	26,830	-47.3		09	15.9
15	26	28,749	-44.5		09	18.5
10	22	31,493	-39.8		09	22.5

See reference note at end of table

RAWINSONDE DATA

Average monthly values

• NOME, ALASKA 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	11.3	7.8	33	1.1
1000	31	145	12.4	7.4	26	.4
950	31	575	10.6	4.4	18	1.7
900	31	1,023	8.1	1.9	18	2.8
850	31	1,493	5.6	-.7	17	4.1
800	31	1,987	2.8	-2.9	17	4.1
750	31	2,507	-.3	-7.1	18	3.9
700	31	3,056	-3.8	-9.7	17	3.8
650	31	3,638	-7.0	-16.8	16	3.7
600	31	4,258	-10.8	-22.5	17	4.0
550	31	4,922	-14.8	-27.0	17	3.8
500	31	5,636	-19.5	-31.8	17	3.2
450	31	6,410	-25.3	-35.0	17	3.3
400	31	7,254	-31.7	-41.0	19	3.1
350	31	8,187	-38.9	-46.8	19	2.8
300	31	9,225	-46.5		22	2.4
250	31	10,417	-53.1		24	1.7
200	30	11,858	-49.7		24	1.3
175	29	12,736	-48.1		24	1.9
150	29	13,753	-48.0		26	1.5
125	29	14,957	-48.0		22	.7
100	29	16,429	-47.7		21	.4
80	28	17,903	-47.5		10	1.0
70	28	18,786	-47.5		10	1.8
60	28	19,806	-47.1		09	2.6
50	28	21,015	-46.6		09	3.6
40	28	22,498	-45.8		09	4.4
30	27	24,419	-44.6		08	6.3
25	26	25,645	-43.3		09	7.0
20	23	27,152	-41.7		[illegible]	7.9
15	23	29,117	-38.4		08	8.7
10	20	31,946	-33.6		08	10.4
7	15	34,475	-28.0		08	12.2
5	5	36,814	-26.2			

NORTH PLATTE, NEBR. 919 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	15.0	12.2	10	.9
1000						
950						
900	31	1,025	17.4	12.9	18	1.4
850	31	1,515	18.0	9.0	23	3.7
800	31	2,033	15.7	3.7	24	5.1
750	31	2,578	12.4	.4	25	4.9
700	31	3,152	8.3	-2.6	27	5.6
650	31	3,760	4.3	-7.0	28	6.8
600	31	4,407	-.4	-10.2	28	6.9
550	31	5,097	-5.2	-15.4	28	8.0
500	31	5,839	-9.7	-22.7	29	10.5
450	31	6,645	-14.6	-27.2	29	12.0
400	31	7,527	-20.9	-33.8	28	14.8
350	31	8,503	-27.7	-40.0	28	16.9
300	31	9,589	-36.2	-47.7	28	18.7
250	31	10,830	-45.7		27	21.1
200	30	12,288	-54.9		27	22.7
175	29	13,134	-59.0		28	22.4
150	29	14,093	-62.2		28	21.5
125	29	15,217	-62.8		29	15.3
100	27	16,591	-62.4		29	6.6
80	27	17,974	-60.4		31	2.5
70	27	18,808	-59.0		06	1.8
60	27	19,782	-56.4		08	3.7
50	27	20,945	-54.1		08	6.4
40	27	22,385	-52.0		09	8.2
30	27	24,261	-49.3		09	10.9
25	26	25,459	-47.8		09	11.5
20	25	26,936	-45.5		09	13.6
15	22	28,864	-42.9		09	15.6
10	10	31,640	-37.8			

OAKLAND, CALIF. 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	14.6	12.3	27	2.2
1000	31	117	14.3	12.0	27	2.4
950	31	552	15.7	7.6	25	3.1
900	31	1,016	22.0	-6.1	27	2.5
850	31	1,511	21.6	-10.3	25	2.3
800	31	2,033	18.9	-11.3	23	2.7
750	31	2,582	15.3	-14.1	22	3.6
700	31	3,161	11.3	-17.4	22	4.5
650	31	3,774	7.0	-19.9	22	4.9
600	31	4,425	2.2	-22.8	22	4.7
550	31	5,121	-2.8	-25.9	22	5.4
500	31	5,868	-8.1	-31.4	23	6.2
450	31	6,678	-13.7	-36.0	23	7.0
400	31	7,561	-20.6	-41.2	23	7.8
350	31	8,538	-27.9	-46.6	23	9.4
300	31	9,623	-36.6	-52.5	24	11.5
250	31	10,861	-45.8		24	13.4
200	31	12,319	-54.2		24	16.1
175	31	13,167	-58.2		23	17.3
150	31	14,129	-61.7		24	15.8
125	31	15,250	-64.8		24	11.5
100	31	16,608	-65.6		24	4.4
80	31	17,968	-64.1		13	1.7
70	31	18,791	-61.3		09	4.2
60	31	19,754	-58.6		09	6.2
50	31	20,907	-56.4		09	7.6
40	31	22,330	-54.4		09	9.6
30	30	24,188	-51.7		09	11.8
25	28	25,371	-49.9		09	13.1
20	27	26,835	-48.1		09	15.0
15	27	28,744	-45.2		09	16.8
10	19	31,483	-40.8		09	18.8

OMAHA, NEBR. 969 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	18.6	16.6	15	1.2
1000						
950	31	569	20.1	15.4	20	2.4
900	31	1,037	19.4	11.3	23	6.2
850	31	1,527	16.9	7.3	25	6.0
800	31	2,042	13.9	3.4	25	5.7
750	31	2,583	10.3	.3	26	5.6
700	31	3,154	6.9	-4.4	27	6.1
650	31	3,760	3.1	-9.5	27	6.8
600	31	4,403	-1.0	-13.4	27	7.6
550	31	5,092	-5.3	-17.2	27	9.3
500	31	5,834	-9.8	-23.2	27	9.8
450	31	6,640	-14.8	-27.8	28	11.9
400	31	7,521	-20.7	-33.4	28	14.0
350	31	8,498	-27.7	-39.1	28	16.0
300	31	9,585	-36.0	-46.2	28	17.2
250	31	10,826	-45.5		28	20.6
200	31	12,280	-55.5		28	23.8
175	31	13,124	-59.0		28	22.5
150	31	14,087	-60.6		29	19.1
125	31	15,216	-62.3		29	13.9
100	31	16,593	-62.0		29	7.2
80	31	17,977	-60.4		31	3.3
70	31	18,814	-58.4		02	2.3
60	31	19,788	-56.6		08	3.7
50	31	20,949	-54.7		09	5.9
40	31	22,384	-52.4		08	8.0
30	31	24,256	-49.9		09	10.0
25	30	25,453	-48.5		09	11.0
20	30	26,931	-45.8		09	13.0
15	27	28,852	-43.1		09	15.5
10	19	31,612	-38.9			

+ PAGO PAGO, AMERICAN SAMOA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.5	21.9	[illegible]	3.6
1000	31	108	25.6	20.7	11	4.7
950	31	558	21.8	19.0	10	5.6
900	31	1,026	18.3	16.0	08	4.4
850	31	1,515	15.5	11.6	07	3.7
800	31	2,029	14.1	5.1	06	2.1
750	31	2,573	13.2	-3.2	09	.4
700	31	3,150	10.3	-8.4	24	1.6
650	31	3,763	7.3	-12.0	26	1.5
600	31	4,417	3.8	-16.5	30	1.9
550	31	5,119	-.3	-20.8	27	2.3
500	31	5,874	-5.1	-25.0	25	2.8
450	31	6,694	-9.9	-30.5	25	3.5
400	31	7,593	-15.5	-36.1	26	4.5
350	31	8,591	-22.4	-41.8	26	5.5
300	31	9,700	-31.1	-48.4	25	8.2
250	31	10,966	-41.1	-55.7	26	10.2
200	31	12,444	-52.9		26	13.0
175	31	13,293	-59.6		26	12.3
150	31	14,240	-67.1		27	11.4
125	31	15,321	-74.4		27	9.1
100	31	16,599	-78.8		27	6.1
80	31	17,877	-75.0		27	4.1
70	31	18,663	-69.3		27	4.0
60	31	19,596	-64.2		28	3.1
50	31	20,725	-60.2		35	.2
40	31	22,124	-58.0		08	5.6
30	30	23,947	-55.3		08	9.5
25	29	25,119	-52.8		08	10.1
20	29	26,569	-49.8		09	9.7
15	28	28,463	-46.3		08	9.4
10	22	31,192	-42.7		10	5.3
7	8	33,611	-42.1			

• PEORIA, ILL. 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	18.1	16.7	17	1.1
1000						
950	31	587	20.4	13.8	24	3.0
900	31	1,053	18.0	11.5	26	3.9
850	31	1,541	15.2	8.1	26	4.7
800	31	2,053	12.2	3.4	26	5.7
750	31	2,591	8.8	-.2	26	6.8
700	31	3,158	5.4	-6.3	26	7.3
650	31	3,761	2.2	-10.6	27	7.6
600	31	4,403	-1.5	-15.6	27	8.2
550	31	5,091	-5.4	-20.2	26	9.7
500	31	5,833	-10.0	-25.7	27	10.5
450	31	6,638	-15.0	-31.6	27	11.4
400	31	7,518	-21.2	-35.5	28	12.4
350	31	8,492	-28.5	-42.6	28	13.6
300	31	9,576	-36.6	-47.7	28	16.1
250	31	10,814	-46.1		28	18.8
200	30	12,264	-55.8		29	22.5
175	30	13,107	-59.6		29	18.3
150	30	14,066	-61.8		28	14.6
125	30	15,191	-63.1		28	10.1
100	30	16,566	-62.2		29	6.7
80	29	17,948	-60.4		34	1.5
70	29	18,784	-58.4		07	1.9
60	29	19,757	-56.9		08	4.1
50	28	20,919	-55.0		09	6.4
40	28	22,353	-52.6		09	8.3
30	28	24,222	-50.1		09	10.7
25	28	25,418	-48.6		09	12.0
20	26	26,891	-46.7		09	13.6
15	23	28,814	-43.4		09	17.1
10	22	31,577	-38.2		09	19.7
7	20	34,049	-35.0		09	21.8
5	12	36,413	-31.7			
4	6	37,928	-30.8			

* PITTSBURGH, PA. 976 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	18.1	16.7	23	1.2
1000						
950	31	595	18.9	15.4	26	2.9
900	31	1,059	16.8	12.7	27	4.3
850	31	1,544	13.6	9.4	27	4.7
800	31	2,054	10.7	5.2	27	5.9
750	31	2,590	8.2	-.7	27	7.3
700	31	3,157	5.2	-6.1	28	8.0
650	31	3,759	2.0	-13.8	27	9.2
600	31	4,401	-1.5	-18.0	27	10.2
550	31	5,089	-5.4	-21.0	27	10.7
500	31	5,830	-9.9	-24.4	26	11.5
450	31	6,635	-15.1	-31.6	26	11.6
400	31	7,515	-21.2	-35.6	26	12.5
350	31	8,490	-28.4	-41.2	26	14.4
300	31	9,574	-36.5	-49.8	26	15.9
250	31	10,814	-45.6		27	18.6
200	31	12,267	-55.9		27	20.3
175	31	13,108	-60.3		28	18.2
150	31	14,063	-62.6		27	12.9
125	31	15,183	-63.1		27	9.1
100	31	16,558	-62.2		27	4.9
80	29	17,944	-59.8		29	1.0
70	29	18,782	-58.5		08	1.9
60	29	19,754	-56.9		09	4.6
50	29	20,915	-54.8		09	6.2
40	29	22,349	-52.8		09	8.5
30	29	24,218	-50.1		09	11.3
25	29	25,414	-48.4		09	12.6
20	28	26,896	-46.1		09	14.1
15	27	28,820	-43.2		09	16.1
10	23	31,587	-38.3		09	19.8
7	22	34,063	-34.4		10	21.4
5	13	36,442	-31.0			
4	7	38,030	-29.5			

+ PONAPE, CAROLINE IS. 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	27.4	24.4	25	1.9
1000	31	65	26.3	23.7	26	2.3
950	31	518	23.2	21.3	27	5.5
900	31	989	20.3	18.3	27	6.3
850	31	1,482	17.6	14.8	28	6.5
800	31	2,000	15.3	12.1	28	5.9
750	31	2,546	12.6	8.6	28	3.8
700	31	3,123	9.3	5.8	28	1.8
650	31	3,736	6.2	2.7	31	.5
600	31	4,389	2.6	-.8	09	.8
550	31	5,090	-.8	-5.6	08	2.6
500	31	5,846	-4.8	-10.4	11	3.4
450	31	6,669	-9.3	-17.2	11	3.8
400	31	7,571	-14.6	-24.1	11	5.6
350	31	8,573	-21.1	-32.5	11	6.5
300	31	9,690	-29.3	-41.3	10	6.8
250	31	10,965	-39.7	-48.6	09	8.0
200	31	12,449	-52.4		09	10.7
175	31	13,299	-59.5		08	12.0
150	31	14,246	-67.3		08	11.2
125	31	15,325	-74.8		08	9.6
100	31	16,601	-78.7		02	1.3
80	31	17,890	-72.9		05	1.9
70	31	18,681	-69.5		09	5.8
60	31	19,609	-66.3		09	9.7
50	30	20,718	-64.9		09	16.0
40	29	22,092	-60.9		09	24.5
30	28	23,901	-56.5		09	29.7
25	26	25,066	-53.5		09	31.5
20	25	26,513	-50.3		09	32.2
15	24	28,410	-46.8		09	34.7
10	12	31,125	-43.0			

PORTLAND, MAINE 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	16.7	14.8	30	.7
1000	31	142	17.9	14.6	29	1.6
950	31	582	18.2	11.5	28	2.9
900	31	1,045	15.5	9.0	28	3.4
850	31	1,527	12.3	6.7	27	5.2
800	31	2,033	9.3	3.1	28	6.5
750	31	2,567	6.9	-2.5	28	7.8
700	31	3,131	3.7	-7.4	27	9.2
650	31	3,729	.8	-13.3	27	10.4
600	31	4,369	-2.5	-17.1	27	11.4
550	31	5,054	-6.6	-23.1	26	13.3
500	31	5,792	-11.2	-27.2	26	14.5
450	31	6,594	-16.3	-33.8	26	15.5
400	31	7,469	-22.6	-39.3	26	17.4
350	31	8,438	-29.5	-45.0	26	19.7
300	31	9,517	-37.6	-47.6	26	21.9
250	31	10,752	-46.4		27	24.6
200	31	12,206	-54.7		27	22.8
175	31	13,054	-57.9		27	20.7
150	31	14,022	-59.4		27	16.2
125	31	15,161	-59.8		27	13.0
100	31	16,559	-58.8		26	6.7
80	31	17,966	-56.8		25	2.3
70	31	18,815	-55.9		19	.7
60	31	19,798	-54.8		10	3.0
50	31	20,969	-53.0		10	5.1
40	31	22,414	-51.1		09	7.5
30	30	24,295	-48.9		09	9.6
25	30	25,497	-47.2		09	11.3
20	30	26,981	-45.2		09	13.5
15	28	28,914	-41.9		09	15.1
10	14	31,688	-37.2		10	18.2

* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	11.0	9.5	05	.6
1000	31	142	12.9	10.2	04	.7
950	31	575	13.9	7.3	35	.8
900	31	1,030	12.8	2.9	30	1.3
850	31	1,509	11.2	-2.1	28	1.8
800	31	2,013	8.9	-5.1	28	3.0
750	31	2,545	6.2	-8.6	28	3.5
700	31	3,107	3.1	-11.0	28	5.2
650	31	3,704	-.2	-15.2	28	6.4
600	31	4,341	-3.5	-20.2	27	7.9
550	31	5,023	-7.9	-24.2	27	9.4
500	31	5,756	-12.9	-28.0	27	11.1
450	31	6,551	-18.6	-31.5	27	12.8
400	31	7,418	-25.1	-36.7	27	14.3
350	30	8,376	-32.1	-42.8	28	16.4
300	30	9,443	-40.3	-47.7	27	17.8
250	30	10,662	-49.3		28	19.1
200	30	12,105	-54.5		28	20.3
175	30	12,961	-54.1		27	18.6
150	30	13,949	-54.7		28	16.5
125	29	15,108	-56.0		27	12.3
100	29	16,525	-56.6		27	8.3
80	29	17,944	-55.6		28	3.7
70	28	18,797	-54.9		32	1.0
60	28	19,783	-54.4		07	1.5
50	28	20,956	-52.8		08	3.6
40	28	22,402	-51.0		08	6.2
30	27	24,282	-48.8		08	8.5
25	27	25,485	-47.3		08	9.4
20	24	26,968	-45.0		09	10.8
15	23	28,904	-42.7		09	12.3
10	20	31,670	-37.6		09	15.5
7	17	34,149	-33.1		09	17.9
5	13	36,537	-28.6			
4	[illegible]	38,161	-27.0			

RAPID CITY, S. DAK. 906 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	13.2	9.9	30	2.4
1000						
950						
900	27	1,034	14.7	9.7	30	2.1
850	31	1,511	16.3	5.6	26	1.7
800	31	2,025	13.9	3.2	25	2.6
750	31	2,566	10.8	-.6	27	3.6
700	31	3,138	7.1	-5.0	28	5.3
650	31	3,743	3.1	-8.8	28	7.1
600	31	4,387	-1.4	-13.6	28	10.0
550	31	5,073	-6.7	-16.4	29	12.0
500	31	5,810	-11.8	-23.8	28	12.9
450	31	6,610	-16.8	-29.4	28	14.8
400	31	7,484	-23.0	-37.4	28	16.9
350	31	8,451	-30.1	-43.4	28	18.7
300	31	9,527	-38.5	-50.0	28	21.8
250	31	10,755	-48.1		27	23.5
200	31	12,199	-55.6		28	25.9
175	31	13,047	-57.3		28	25.1
150	31	14,017	-59.1		27	22.8
125	31	15,157	-60.6		28	17.1
100	31	16,545	-60.4		28	9.8
80	31	17,939	-59.1		29	3.7
70	31	18,780	-57.7		33	1.2
60	31	19,755	-56.4		05	1.8
50	31	20,919	-54.0		07	3.6
40	31	22,357	-52.2		08	6.3
30	31	24,230	-49.7		09	8.8
25	30	25,429	-48.0		09	9.9
20	30	26,908	-45.7		09	12.0
15	30	28,834	-43.5		09	13.5
10	20	31,587	-38.2		09	17.7
7	[illegible]	34,068	-35.4			

ST CLOUD, MINN. 979 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	14.5	13.3	23	.3
1000						
950	31	572	17.0	13.0	24	3.1
900	31	1,034	15.6	10.0	25	4.9
850	31	1,517	12.7	6.1	27	5.7
800	31	2,024	9.8	1.9	27	6.7
750	31	2,558	6.6	-1.9	27	7.9
700	31	3,121	3.3	-6.6	28	9.4
650	31	3,718	.3	-12.7	28	11.0
600	31	4,355	-3.7	-16.1	28	11.9
550	31	5,037	-7.7	-20.9	28	12.7
500	31	5,772	-12.5	-25.2	28	14.1
450	31	6,569	-17.8	-30.7	28	15.5
400	31	7,439	-24.1	-37.0	28	17.5
350	31	8,403	-31.2	-43.0	27	18.3
300	31	9,473	-39.6	-48.5	27	21.4
250	31	10,697	-48.3		27	22.6
200	31	12,142	-55.4		27	25.3
175	31	12,990	-56.8		27	24.8
150	31	13,966	-57.0		28	20.4
125	31	15,118	-57.8		28	14.5
100	31	16,523	-58.0		28	9.6
80	31	17,930	-57.1		29	5.0
70	31	18,778	-55.6		31	2.5
60	31	19,763	-54.5		01	1.4
50	31	20,935	-53.1		07	3.4
40	31	22,380	-51.2		08	5.4
30	31	24,260	-49.0		09	7.8
25	31	25,462	-47.4		08	9.2
20	31	26,945	-45.4		09	10.7
15	25	28,879	-42.3		09	12.7
10	15	31,637	-38.4			

• ST PAUL IS., ALASKA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	4.6	4.6	16	2.0
1000	30	139	4.9	4.9	17	2.7
950	31	554	5.4	3.9	17	4.0
900	31	996	4.7	2.1	18	4.0
850	31	1,462	3.6	1.5	18	4.2
800	31	1,953	1.8	-1.3	17	4.1
750	31	2,472	-.6	-6.7	17	4.0
700	31	3,021	-3.0	-12.1	17	4.1
650	31	3,606	-5.9	-16.1	17	4.3
600	31	4,229	-9.3	-18.6	17	3.9
550	31	4,897	-13.5	-22.5	18	3.3
500	31	5,615	-18.3	-28.0	18	4.0
450	31	6,394	-23.6	-32.2	19	4.0
400	31	7,244	-29.6	-39.3	20	4.3
350	31	8,186	-36.5	-45.7	21	5.1
300	31	9,234	-44.3		21	6.5
250	31	10,435	-51.2		22	6.7
200	31	11,887	-49.3		24	5.9
175	31	12,765	-48.7		24	4.7
150	31	13,779	-48.5		24	3.5
125	31	14,976	-49.5		22	2.5
100	30	16,440	-49.9		18	1.0
80	30	17,900	-49.6		11	1.1
70	28	18,776	-49.6		10	2.1
60	28	19,787	-49.3		10	3.3
50	28	20,984	-48.8		09	4.2
40	27	22,453	-48.2		09	6.1
30	27	24,356	-46.5		09	7.7
25	27	25,570	-45.4		09	7.8
20	27	27,066	-43.6		08	8.9
15	25	29,012	-41.0		09	10.0
10	19	31,792	-36.2		08	11.6
7	12	34,293	-32.8			

SALEM, ILL. [illegible]97 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	19.3	17.5	17	.8
1000	10	187	18.7	15.8	21	.6
950	31	594	21.1	14.9	24	4.2
900	31	1,061	18.4	13.0	25	4.6
850	31	1,549	15.2	10.1	26	4.2
800	31	2,061	12.5	3.7	27	4.5
750	31	2,600	9.5	.8	27	5.0
700	31	3,170	6.1	-4.2	27	5.7
650	31	3,774	2.7	-8.8	26	6.2
600	31	4,417	-.8	-14.7	26	6.3
550	31	5,107	-4.9	-19.5	26	6.5
500	30	5,849	-9.3	-25.8	27	7.5
450	30	6,656	-14.6	-32.0	27	7.8
400	30	7,537	-20.5	-37.7	28	9.4
350	30	8,515	-27.5	-43.7	28	11.2
300	30	9,603	-35.7	-49.0	28	12.8
250	30	10,845	-45.3		28	15.8
200	30	12,298	-56.2		28	14.6
175	30	13,137	-60.9		28	14.1
150	30	14,089	-63.7		29	12.6
125	30	15,202	-65.4		29	7.3
100	30	16,563	-63.9		30	3.9
80	30	17,937	-61.9		03	1.2
70	30	18,768	-59.8		07	3.5
60	30	19,736	-57.9		09	5.5
50	30	20,891	-55.7		09	7.4
40	29	22,322	-53.4		09	8.8
30	28	24,183	-50.7		09	11.7
25	28	25,375	-49.4		09	13.1
20	28	26,846	-47.0		09	14.6
15	25	28,761	-44.5		09	18.1
10	23	31,502	-39.8		09	21.4
7	8	33,930	-35.3			

SALEM, OREG. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	12.0	7.0	25	.4
1000	31	132	15.1	9.6	34	.5
950	31	568	15.7	7.0	02	2.5
900	31	1,027	15.9	2.7	02	1.1
850	31	1,511	14.0	-1.2	28	.9
800	31	2,020	11.4	-5.2	27	2.6
750	31	2,557	8.8	-8.2	26	4.6
700	31	3,124	5.9	-12.5	26	6.6
650	31	3,727	2.4	-16.4	27	7.7
600	31	4,369	-1.6	-18.4	27	8.2
550	31	5,057	-5.9	-23.4	27	9.7
500	31	5,796	-11.2	-27.0	27	10.4
450	31	6,596	-17.0	-32.3	27	11.5
400	31	7,468	-23.7	-38.3	27	13.3
350	31	8,432	-31.1	-44.6	27	15.1
300	31	9,503	-39.6	-50.7	27	16.6
250	31	10,727	-48.4		27	17.8
200	31	12,170	-55.5		27	20.3
175	31	13,020	-56.1		26	19.3
150	31	13,997	-57.3		27	17.5
125	31	15,147	-58.7		27	13.4
100	31	16,546	-59.2		27	7.9
80	31	17,946	-58.4		27	2.5
70	31	18,788	-57.2		03	.9
60	30	19,765	-56.2		07	2.8
50	30	20,930	-53.9		08	4.8
40	29	22,370	-52.1		09	6.7
30	29	24,244	-49.4		09	9.6
25	29	25,444	-47.9		08	11.1
20	29	26,924	-45.7		09	12.4
15	28	28,853	-43.2		09	14.0
10	20	31,625	-37.8		09	16.9

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH
871 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	18.3	4.5	16	3.3
1000						
950						
900						
850	31	1,501	22.2	2.7	16	3.1
800	31	2,025	19.7	-1.2	19	2.2
750	31	2,577	15.9	-4.2	23	2.2
700	31	3,157	11.5	-7.6	26	4.6
650	31	3,772	6.9	-9.9	26	7.5
600	31	4,423	1.6	-11.8	26	9.3
550	31	5,117	-4.0	-16.0	26	10.6
500	31	5,861	-9.8	-21.0	26	11.6
450	31	6,665	-15.3	-28.4	26	13.6
400	31	7,544	-21.6	-36.0	26	15.1
350	31	8,517	-28.9	-42.5	26	16.2
300	31	9,598	-37.4	-50.7	26	18.0
250	31	10,832	-46.8		26	21.5
200	31	12,283	-55.1		26	25.6
175	31	13,130	-58.1		26	25.8
150	29	14,092	-61.0		27	22.9
125	29	15,218	-63.5		27	15.8
100	29	16,582	-64.6		27	6.6
80	29	17,949	-62.2		28	1.3
70	29	18,781	-59.3		07	1.9
60	29	19,750	-57.8		09	4.7
50	29	20,908	-55.1		08	6.2
40	29	22,339	-53.0		08	8.8
30	28	24,206	-50.1		09	10.8
25	27	25,400	-48.5		08	11.9
20	27	26,877	-45.9		09	14.9
15	26	28,810	-43.1		09	16.2
10	25	31,576	-37.9		09	20.6
7	7	34,054	-35.0			
5						
4						

SAN DIEGO, CALIF.
998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	18.2	15.8	31	1.4
1000						
950	31	545	20.6	8.0	34	1.4
900	31	1,016	24.4	-.6	34	2.0
850	31	1,514	23.7	-2.6	30	3.1
800	31	2,041	21.1	-3.0	27	3.1
750	31	2,595	17.6	-6.6	23	3.3
700	31	3,179	12.8	-7.3	21	4.4
650	31	3,795	7.9	-10.1	20	4.5
600	31	4,449	2.7	-13.0	20	4.5
550	31	5,146	-2.6	-18.2	18	4.4
500	31	5,895	-7.7	-24.5	18	4.3
450	31	6,706	-13.1	-30.2	19	3.9
400	31	7,593	-19.2	-37.2	21	4.1
350	31	8,577	-26.1	-43.9	21	5.9
300	31	9,670	-34.8	-50.7	22	7.2
250	31	10,917	-44.1		22	9.8
200	31	12,382	-53.8		22	11.9
175	31	13,230	-58.9		22	11.0
150	31	14,185	-64.4		22	9.8
125	31	15,286	-69.2		22	7.4
100	31	16,612	-70.0		16	1.3
80	31	17,946	-67.6		09	4.1
70	31	18,757	-64.2		09	6.3
60	31	19,707	-61.4		09	8.7
50	31	20,847	-57.9		09	10.5
40	29	22,265	-55.2		09	11.7
30	29	24,115	-52.2		09	14.6
25	28	25,299	-50.7		09	15.6
20	26	26,761	-48.4		09	17.1
15	24	28,671	-45.3		09	18.6
10	20	31,411	-41.1		09	23.3
7	5	33,844	-37.7			
5						
4						

SAN JUAN, P. R.
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	26.4	21.4	12	3.6
1000	31	157	25.2	21.7	10	6.5
950	31	607	22.0	19.7	10	9.7
900	31	1,076	19.0	15.3	10	10.5
850	31	1,566	16.3	10.3	10	10.4
800	31	2,081	14.4	4.1	10	9.2
750	31	2,625	11.6	-.4	10	8.2
700	31	3,198	7.8	-5.0	11	7.7
650	31	3,805	4.0	-9.3	11	6.9
600	31	4,450	-.2	-14.8	10	5.9
550	31	5,142	-3.8	-20.8	10	5.3
500	31	5,889	-7.9	-26.2	12	3.2
450	31	6,699	-13.4	-30.3	13	1.7
400	31	7,584	-19.9	-34.9	23	1.5
350	31	8,564	-27.0	-39.4	26	2.6
300	31	9,653	-35.5	-47.9	27	5.2
250	31	10,896	-45.4		27	9.8
200	31	12,348	-56.9		27	11.9
175	31	13,182	-62.6		28	13.4
150	31	14,120	-67.9		28	11.7
125	31	15,208	-70.4		29	5.9
100	31	16,538	-69.2		07	3.2
80	31	17,869	-69.0		08	9.7
70	31	18,671	-67.3		09	13.0
60	30	19,607	-64.9		09	15.2
50	30	20,728	-61.4		09	17.2
40	27	22,121	-58.3		09	18.8
30	27	23,948	-54.7		09	21.7
25	25	25,123	-52.2		09	25.0
20	22	26,587	-48.8		09	27.8
15	20	28,494	-45.8		09	30.1
10	10	31,216	-42.5			
7						
5						
4						

* SAULT STE MARIE, MICH.
989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	13.8	12.4	32	.5
1000						
950	31	562	15.0	9.6	27	2.9
900	31	1,020	13.7	6.0	27	5.3
850	31	1,499	10.7	3.5	27	6.1
800	31	2,002	7.7	1.0	27	7.3
750	31	2,532	4.9	-3.8	27	9.3
700	31	3,092	1.9	-9.1	27	11.2
650	31	3,688	-1.0	-13.6	27	11.7
600	31	4,322	-4.5	-19.6	27	12.6
550	31	5,002	-8.5	-24.7	27	13.9
500	31	5,735	-13.2	-27.8	28	15.2
450	31	6,529	-18.4	-34.0	28	16.3
400	31	7,398	-24.6	-39.8	28	17.8
350	31	8,359	-31.5	-44.4	28	19.7
300	30	9,432	-39.7	-46.0	27	21.1
250	30	10,655	-48.2		27	23.9
200	30	12,104	-53.7		28	23.0
175	29	12,961	-55.0		28	21.5
150	29	13,944	-56.1		[illegible]	18.2
125	29	15,103	-56.4		27	14.3
100	29	16,520	-56.0		27	9.6
80	29	17,943	-54.8		28	4.8
70	28	18,799	-54.0		29	2.0
60	28	19,791	-53.1		03	.5
50	28	20,969	-52.1		08	3.5
40	28	22,421	-50.1		09	6.2
30	27	24,309	-47.7		09	8.6
25	26	25,516	-46.0		09	9.6
20	25	27,011	-43.9		09	11.4
15	25	28,953	-41.4		09	13.5
10	24	31,732	-37.1		09	16.8
7	19	34,221	-32.4		09	18.8
5	16	36,620	-27.7		08	22.5
4	6	38,203	-26.0			

* SHEMYA, ALASKA
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	38	7.2	6.3	11	.4
1000	25	107	7.0	6.6	09	.1
950	30	513	6.6	6.3	20	1.4
900	30	957	6.5	3.3	22	1.6
850	30	1,426	5.7	1.3	24	1.8
800	30	1,922	4.2	-.9	23	1.7
750	30	2,445	1.5	-3.7	24	1.7
700	30	2,998	-1.3	-8.5	25	2.0
650	30	3,586	-4.4	-12.9	26	2.5
600	30	4,213	-7.9	-18.8	27	2.6
550	30	4,884	-12.0	-22.7	28	3.6
500	30	5,607	-16.7	-29.0	28	4.6
450	30	6,391	-21.8	-33.6	28	5.2
400	30	7,248	-27.9	-39.4	28	6.6
350	30	8,197	-34.7	-46.9	28	8.4
300	30	9,253	-42.7	-46.4	28	10.4
250	29	10,454	-49.8		29	11.5
200	29	11,912	-50.1		28	10.2
175	28	12,790	-50.3		28	8.8
150	28	13,796	-50.7		29	7.2
125	28	14,982	-51.6		28	4.7
100	28	16,428	-52.0		30	1.6
80	27	17,872	-51.8		04	1.0
70	27	18,739	-51.6		07	2.5
60	25	19,742	-51.3		07	3.7
50	25	20,929	-50.4		08	5.3
40	24	22,391	-49.6		09	6.7
30	22	24,278	-47.8		09	8.5
25	20	25,484	-46.6		09	10.3
20	20	26,972	-44.4		09	10.7
15	16	28,906	-42.4		09	12.2
10	12	31,683	-37.7		09	13.6
7	7	34,168	-33.8			
5						
4						

* SHREVEPORT, LA.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	22.0	19.7	16	1.2
1000	31	154	22.6	20.0	18	2.0
950	31	602	22.1	17.5	20	5.0
900	31	1,071	19.8	13.6	21	4.3
850	31	1,562	16.9	9.4	21	3.9
800	31	2,077	13.8	5.7	22	4.0
750	31	2,619	10.9	1.6	22	3.9
700	31	3,192	7.6	-4.6	22	2.8
650	31	3,799	4.0	-6.9	23	2.4
600	31	4,445	.1	-12.2	24	1.7
550	31	5,137	-4.1	-15.3	27	.8
500	31	5,883	-8.4	-22.2	29	1.3
450	31	6,693	-13.2	-28.8	31	1.4
400	31	7,580	-18.9	-35.7	36	2.1
350	31	8,564	-26.0	-43.6	36	3.8
300	30	9,655	-34.5	-50.8	36	4.7
250	30	10,904	-44.2		36	4.9
200	30	12,364	-55.4		01	4.5
175	30	13,204	-60.9		02	6.1
150	30	14,151	-65.4		01	7.3
125	30	15,253	-68.1		02	6.7
100	30	16,594	-67.2		04	4.4
80	30	17,946	-65.1		06	5.0
70	30	18,763	-63.6		08	6.6
60	30	19,715	-61.1		08	7.9
50	30	20,857	-57.9		09	11.0
40	29	22,274	-55.5		09	12.7
30	26	24,122	-52.3		09	15.1
25	25	25,307	-50.1		09	15.8
20	25	26,772	-48.0		09	17.7
15	23	28,681	-45.0		09	18.8
10	21	31,412	-41.0		09	23.3
7	16	33,850	-36.5		09	26.5
5	5	36,164	-35.9			

SPOKANE, WASH.
932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	720	14.0	4.4	14	1.3
1000						
950						
900	31	1,016	17.2	3.0	13	.5
850	31	1,501	14.5	-.4	25	.9
800	31	2,011	10.9	-3.3	26	2.5
750	31	2,545	6.9	-4.8	26	4.0
700	31	3,108	3.2	-8.8	27	6.2
650	31	3,705	.0	-13.6	26	8.8
600	31	4,342	-3.9	-17.2	26	10.6
550	31	5,023	-8.1	-22.1	27	11.1
500	31	5,757	-13.3	-25.4	27	13.2
450	31	6,551	-18.6	-30.9	27	14.6
400	31	7,418	-25.0	-36.8	27	16.5
350	31	8,377	-32.5	-42.8	27	18.2
300	31	9,442	-40.7	-46.9	27	21.4
250	31	10,660	-49.2		27	22.2
200	31	12,106	-53.6		27	24.2
175	31	12,964	-53.8		27	22.7
150	31	13,954	-54.0		27	18.5
125	31	15,120	-55.9		27	13.8
100	31	16,538	-56.2		28	8.9
80	31	17,955	-56.1		28	4.4
70	31	18,807	-55.0		31	2.0
60	31	19,795	-53.7		04	2.3
50	31	20,972	-51.9		07	4.2
40	31	22,422	-50.6		08	6.0
30	31	24,309	-48.2		08	7.9
25	30	25,516	-46.5		08	9.9
20	27	26,999	-44.3		08	11.0
15	24	28,938	-41.8		08	12.1
10	18	31,701	-37.7		09	14.2
7						
5						

* SWAN ISLAND, W. I.
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	26.7	23.8	09	5.2
1000	31	119	26.7	24.1	09	6.7
950	31	572	23.3	21.4	09	10.0
900	31	1,044	20.2	17.2	10	12.0
850	31	1,535	17.0	12.7	10	13.0
800	31	2,052	14.6	6.3	10	11.7
750	31	2,595	11.9	.9	11	11.4
700	31	3,170	8.6	-2.7	11	10.2
650	31	3,779	5.0	-7.1	11	8.9
600	31	4,428	1.4	-11.1	11	7.7
550	31	5,124	-2.4	-16.3	11	6.0
500	31	5,875	-7.0	-19.9	11	4.0
450	31	6,689	-11.8	-24.8	11	2.7
400	30	7,581	-17.5	-29.1	10	.6
350	30	8,571	-24.6	-35.0	31	1.3
300	30	9,671	-33.0	-42.2	29	4.5
250	29	10,927	-43.3		28	8.0
200	29	12,390	-55.5		28	11.9
175	29	13,228	-62.2		28	14.1
150	29	14,164	-69.4		28	13.8
125	29	15,239	-73.7		30	8.6
100	26	16,546	-71.9		05	4.3
80	26	17,866	-70.2		08	9.6
70	26	18,666	-67.5		09	11.1
60	26	19,601	-64.9		09	13.8
50	25	20,721	-62.0		09	17.0
40	25	22,113	-58.6		09	20.1
30	25	23,937	-54.6		09	23.3
25	25	25,109	-52.6		09	24.2
20	22	26,568	-49.3		09	26.5
15	18	28,481	-45.9		09	31.2
10	10	31,198	-42.3			
7						
5						

TAMPA, FLA.
1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	23.4	21.4	09	2.0
1000	31	169	24.2	21.8	11	3.2
950	31	619	22.5	17.8	13	3.8
900	31	1,088	20.0	13.4	14	3.6
850	31	1,580	17.2	8.9	14	3.7
800	31	2,095	14.3	4.8	13	3.3
750	31	2,638	11.1	.1	12	3.4
700	31	3,210	7.5	-3.6	12	2.9
650	31	3,817	3.6	-7.8	12	2.3
600	31	4,462	-.3	-12.8	11	2.0
550	31	5,153	-4.1	-17.3	11	1.7
500	31	5,899	-8.7	-20.7	11	1.2
450	31	6,708	-13.5	-26.6	12	1.2
400	31	7,594	-19.6	-34.1	11	1.7
350	31	8,575	-26.7	-40.7	10	1.6
300	31	9,666	-35.0	-47.7	09	2.6
250	31	10,911	-45.0		10	2.3
200	31	12,366	-56.3		09	4.0
175	31	13,203	-61.9		09	3.7
150	31	14,145	-66.4		07	3.3
125	31	15,243	-68.2		07	4.0
100	31	16,584	-67.0		08	4.2
80	30	17,937	-65.4		08	5.6
70	30	18,752	-63.7		08	8.3
60	30	19,702	-61.8		09	11.4
50	29	20,840	-58.8		09	15.0
40	28	22,253	-55.5		09	16.3
30	26	24,104	-51.7		09	16.9
25	24	25,291	-50.6		09	17.2
20	24	26,753	-48.3		09	19.3
15	23	28,662	-45.3		09	21.6
10	17	31,389	-41.4		09	24.2
7						
5						

TOPEKA, KANS.
985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	268	19.4	17.7	17	1.6
1000						
950	31	584	20.5	16.3	21	6.3
900	31	1,052	19.5	13.4	22	6.7
850	31	1,543	16.6	10.4	24	5.7
800	31	2,058	13.8	7.6	25	4.7
750	31	2,600	10.3	3.7	26	3.8
700	31	3,171	6.8	-1.6	25	4.7
650	31	3,777	3.4	-6.3	26	5.4
600	31	4,421	-.6	-10.0	26	6.9
550	31	5,111	-5.0	-15.2	27	6.8
500	31	5,855	-9.3	-19.9	28	8.1
450	31	6,663	-14.2	-25.6	28	9.6
400	31	7,546	-20.0	-32.4	28	10.5
350	31	8,526	-26.9	-36.9	28	12.3
300	31	9,617	-35.1	-43.5	28	13.4
250	30	10,856	-45.2		29	15.0
200	30	12,310	-55.8		29	18.8
175	30	13,152	-60.1		29	18.8
150	30	14,108	-62.3		30	15.0
125	30	15,225	-64.8		30	10.6
100	30	16,589	-63.9		30	5.7
80	30	17,960	-62.0		35	2.1
70	30	18,791	-59.5		06	3.3
60	30	19,758	-58.3		08	5.2
50	30	20,912	-55.6		09	7.9
40	30	22,342	-53.2		09	9.3
30	28	24,204	-50.6		09	11.3
25	27	25,395	-49.3		09	13.2
20	25	26,871	-47.1		09	15.1
15	21	28,794	-43.9		08	16.9
10	19	31,538	-39.5		09	19.3
7						
5						

+ TRUK, CAROLINE IS.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	27.9	25.0	26	4.4
1000	31	81	27.2	24.6	26	4.9
950	31	535	23.7	22.2	26	6.4
900	31	1,007	20.9	18.4	26	7.7
850	31	1,501	18.4	14.7	27	7.3
800	31	2,021	16.2	12.1	28	5.9
750	31	2,569	13.4	8.8	28	4.6
700	31	3,147	9.9	5.6	28	3.8
650	31	3,761	6.8	2.1	29	2.7
600	31	4,416	3.2	-.3	26	1.1
550	31	5,117	-.7	-4.4	12	.5
500	31	5,874	-5.0	-8.4	12	1.2
450	31	6,696	-9.6	-14.8	11	2.8
400	31	7,597	-14.9	-21.8	10	3.7
350	31	8,598	-21.5	-30.9	09	4.7
300	31	9,713	-29.7	-39.9	09	5.7
250	30	10,983	-40.2	-51.1	09	8.8
200	30	12,465	-52.7		08	13.9
175	30	13,313	-59.7		07	15.2
150	30	14,260	-67.1		07	16.5
125	30	15,340	-74.5		08	13.2
100	30	16,620	-78.5		06	2.6
80	30	17,908	-72.7		09	2.7
70	29	18,701	-68.8		09	6.5
60	29	19,630	-66.5		09	10.4
50	29	20,740	-64.0		09	17.1
40	27	22,117	-60.7		09	25.5
30	27	23,928	-56.2		09	30.2
25	27	25,095	-53.2		09	32.8
20	25	26,544	-49.9		09	34.7
15	24	28,439	-46.5		09	35.9
10	22	31,159	-42.1		09	37.0
7	8	33,571	-40.0			
5						

* TUCSON, ARIZ.
923 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	24.6	12.7	16	3.1
1000						
950						
900	30	1,014	26.9	10.4	18	2.4
850	30	1,517	24.8	7.0	26	1.1
800	30	2,046	21.1	5.1	31	1.7
750	30	2,601	17.1	3.0	33	1.5
700	30	3,184	12.5	.6	01	.8
650	30	3,802	7.7	-1.2	11	.9
600	30	4,456	2.6	-3.8	12	1.3
550	30	5,154	-2.4	-9.0	10	2.1
500	30	5,904	-7.4	-16.0	10	2.1
450	30	6,718	-12.2	-27.4	12	1.6
400	30	7,609	-18.1	-34.9	14	1.9
350	30	8,595	-25.2	-40.3	17	1.7
300	30	9,693	-33.7	-47.1	23	3.0
250	30	10,946	-43.6		22	5.4
200	30	12,409	-54.8		24	7.9
175	30	13,253	-59.8		26	6.5
150	30	14,204	-65.3		27	4.3
125	30	15,300	-70.5		32	2.1
100	29	16,616	-71.6		08	2.8
80	29	17,942	-68.4		08	4.1
70	29	18,751	-64.9		08	6.7
60	29	19,698	-62.2		08	9.6
50	29	20,834	-58.6		09	11.3
40	27	22,243	-55.9		09	12.7
30	27	24,087	-52.7		09	15.0
25	25	25,264	-51.0		09	16.8
20	24	26,724	-48.8		09	16.9
15	24	28,627	-45.8		09	19.0
10	20	31,354	-41.6		09	24.1
7	16	33,809	-37.0		09	28.7
5						

* VANDENBERG AFB, CALIF.
1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	12.7	12.0	34	.8
1000	28	119	12.6	11.8	34	1.0
950	31	549	17.2	9.3	01	1.8
900	31	1,017	23.1	1.9	04	1.3
850	31	1,514	22.6	-.4	36	.9
800	31	2,038	19.6	-3.8	28	1.1
750	31	2,590	16.1	-5.9	24	2.2
700	31	3,171	11.8	-8.7	23	2.9
650	31	3,785	7.2	-11.8	22	3.9
600	31	4,438	2.4	-16.1	21	4.6
550	31	5,135	-2.3	-20.6	21	5.1
500	31	5,883	-7.8	-24.3	21	5.7
450	31	6,694	-13.5	-29.4	21	6.3
400	31	7,580	-19.6	-35.7	22	7.5
350	31	8,560	-27.3	-41.3	22	8.3
300	31	9,647	-35.8	-48.7	22	10.2
250	31	10,889	-45.2		22	12.0
200	31	12,349	-54.3		22	13.9
175	31	13,196	-58.9		22	14.7
150	31	14,154	-63.3		22	13.3
125	31	15,263	-67.4		22	10.3
100	31	16,602	-68.4		22	3.8
80	30	17,940	-66.0		10	2.9
70	30	18,757	-62.8		09	5.5
60	30	19,713	-60.3		10	7.0
50	29	20,858	-57.3		10	8.3
40	28	22,281	-54.7		09	10.1
30	27	24,135	-52.1		09	12.5
25	26	25,322	-50.6		09	14.0
20	23	26,781	-48.1		09	15.1
15	20	28,696	-44.7		09	18.0
10	14	31,437	-39.4		09	19.3
7	10	33,903	-35.4		10	22.6
5	6	36,266	-34.0			

VICTORIA, TEXAS
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	23.2	22.0	10	1.0
1000	31	141	25.1	23.2	15	2.4
950	31	592	22.6	20.3	17	7.0
900	31	1,062	19.9	15.3	17	7.0
850	31	1,553	16.8	11.0	17	6.1
800	31	2,068	13.9	6.4	18	5.4
750	31	2,610	11.1	2.0	18	4.3
700	31	3,183	8.1	-2.2	17	3.4
650	31	3,790	4.5	-7.0	15	2.6
600	30	4,443	.8	-13.7	13	2.1
550	30	5,137	-3.3	-16.9	12	2.2
500	30	5,885	-7.8	-21.2	10	1.5
450	30	6,697	-12.6	-29.5	06	1.6
400	30	7,585	-18.9	-34.8	05	2.9
350	30	8,570	-25.6	-42.1	02	3.6
300	30	9,665	-34.0	-50.3	02	4.6
250	30	10,916	-44.0		02	6.7
200	30	12,376	-55.3		01	8.6
175	29	13,218	-60.9		01	8.4
150	29	14,164	-65.7		02	9.2
125	29	15,260	-69.6		03	8.3
100	29	16,589	-69.3		05	6.8
80	29	17,929	-66.7		07	7.6
70	29	18,742	-64.5		08	8.6
60	28	19,691	-62.0		09	10.1
50	28	20,826	-59.5		09	13.0
40	27	22,232	-56.9		09	14.9
30	26	24,072	-53.1		09	17.3
25	26	25,254	-50.8		09	18.2
20	25	26,714	-48.4		09	18.9
15	24	28,621	-45.5		09	20.5
10	19	31,348	-41.3		09	24.3
7	5	33,801	-37.8			
5						

* WAKE IS., PACIFIC AREA
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.3	24.3	09	6.6
1000	31	110	25.9	23.0	09	7.8
950	31	562	22.4	20.8	10	9.2
900	31	1,031	19.4	17.1	11	9.6
850	31	1,523	16.5	13.0	11	9.4
800	31	2,038	14.2	8.5	11	8.3
750	31	2,582	11.7	4.1	11	7.2
700	31	3,156	8.7	-.8	11	6.5
650	31	3,766	5.2	-4.3	10	5.9
600	31	4,416	1.7	-9.1	10	5.1
550	31	5,114	-1.9	-14.5	10	3.8
500	31	5,866	-6.1	-19.4	10	2.8
450	31	6,684	-10.7	-24.4	09	2.3
400	31	7,580	-16.2	-31.2	05	1.7
350	31	8,574	-23.2	-36.8	34	2.2
300	31	9,682	-31.3	-44.4	31	3.8
250	31	10,946	-41.5		31	6.0
200	31	12,420	-53.9		30	7.6
175	31	13,265	-60.7		30	7.5
150	29	14,205	-68.3		31	8.0
125	26	15,282	-75.2		33	6.4
100	22	16,564	-77.8		05	3.8
80	19	17,873	-70.1		08	9.2
70	19	18,674	-66.8		08	11.0
60	18	19,615	-64.1		09	12.5
50	18	20,741	-60.7		09	14.3
40	17	22,135	-58.4		09	19.5
30	17	23,963	-54.2		09	23.5
25	16	25,149	-51.6		09	25.4
20	14	26,599	-48.5		09	26.1
15	9	28,494	-45.1			
10						
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	* WALLOPS IS., VA. NASA 1018 MB						WASHINGTON DULLES INT. AP 1008 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	22.1	19.2	25	.2	31	85	19.4	17.8	33	.6
1000	31	156	22.2	17.9	26	1.4	30	159	20.2	17.4	31	1.0
950	31	603	20.9	14.1	29	2.5	31	602	20.5	14.5	31	3.4
900	31	1,069	17.9	11.9	28	2.5	31	1,068	17.9	12.0	31	4.1
850	31	1,556	14.8	9.2	27	3.7	31	1,555	15.0	8.2	29	4.3
800	31	2,068	11.9	5.1	27	5.4	31	2,067	12.2	4.9	27	5.9
750	31	2,606	8.9	.7	26	6.6	31	2,606	9.0	.5	27	6.7
700	31	3,174	5.7	-4.6	26	7.6	31	3,174	5.6	-5.1	26	7.4
650	31	3,778	2.7	-9.3	27	8.6	31	3,777	2.9	-10.2	26	8.2
600	31	4,421	-.8	-13.9	27	9.3	31	4,422	-.6	-14.0	26	8.9
550	31	5,111	-4.8	-18.5	27	9.5	31	5,112	-4.2	-20.5	27	9.7
500	31	5,855	-9.1	-24.3	26	9.3	31	5,858	-8.5	-25.8	26	9.7
450	31	6,663	-14.2	-30.0	26	10.0	31	6,667	-13.8	-31.1	26	10.5
400	31	7,546	-20.3	-35.2	26	10.9	31	7,551	-20.0	-36.4	26	11.1
350	31	8,524	-27.2	-41.0	26	11.0	31	8,531	-26.9	-41.9	27	12.4
300	31	9,612	-35.8	-48.3	27	11.8	31	9,622	-35.2	-48.4	27	14.1
250	31	10,854	-45.8		27	12.7	31	10,866	-45.1		27	15.4
200	31	12,304	-56.8		27	13.4	31	12,321	-55.9		27	16.4
175	31	13,140	-61.9		28	12.9	30	13,166	-60.6		27	15.1
150	31	14,084	-65.4		28	9.8	30	14,117	-64.2		28	11.5
125	31	15,191	-66.2		27	5.9	30	15,231	-64.8		27	7.2
100	31	16,550	-64.1		28	2.1	30	16,597	-63.0		27	3.8
80	31	17,923	-61.9		09	1.4	30	17,976	-60.7		06	.4
70	31	18,753	-60.3		09	3.6	30	18,811	-58.9		09	2.8
60	31	19,719	-58.2		08	6.2	30	19,782	-57.6		09	5.3
50	31	20,873	-56.3		09	8.8	30	20,940	-55.1		09	7.7
40	31	22,300	-53.3		09	11.0	29	22,373	-52.7		09	9.1
30	31	24,166	-50.4		09	12.8	28	24,244	-49.6		09	11.8
25	29	25,360	-48.6		08	13.6	28	25,442	-48.1		09	12.5
20	27	26,836	-46.1		09	15.4	27	26,920	-46.0		09	15.0
15	27	28,760	-43.4		09	16.5	25	28,845	-43.3		10	17.1
10	23	31,499	-39.9		09	20.7	18	31,608	-39.1		09	19.7
7	16	33,960	-35.0		09	21.3						

Standard pressure surface (mb)	WAYCROSS, GA. 1014 MB						WINNEMUCCA, NEV. 871 MB						WINSLOW, ARIZ. 852 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	44	21.3	20.5	26	.6	31	1,312	15.6	-2.1	06	.5	31	1,487	19.1	6.4	21	1.4
1000	31	163	22.6	20.8	26	.9												
950	31	612	22.4	16.4	26	1.7												
900	31	1,081	19.8	12.6	24	2.1												
850	31	1,572	16.7	9.2	24	2.2	31	1,519	20.6	-.7	07	1.6	28	1,515	20.1	7.2	22	1.7
800	31	2,086	13.7	4.4	23	3.0	31	2,041	18.2	-2.5	34	1.7	31	2,037	22.0	4.8	27	4.9
750	31	2,628	10.7	-1.4	23	3.6	31	2,589	14.3	-4.6	30	2.5	31	2,595	18.6	1.7	29	4.0
700	31	3,199	7.3	-5.3	24	3.4	31	3,166	9.9	-7.2	28	4.4	31	3,181	13.9	-1.5	30	2.6
650	31	3,806	3.8	-11.4	24	3.0	31	3,777	5.4	-9.5	26	6.1	31	3,801	8.8	-3.8	32	2.2
600	31	4,451	-.1	-14.5	24	2.3	31	4,426	.5	-13.7	25	9.1	31	4,457	3.1	-6.1	26	1.3
550	31	5,143	-4.2	-18.6	25	2.1	31	5,117	-4.6	-19.0	24	10.5	31	5,155	-2.7	-10.4	25	1.6
500	31	5,888	-8.5	-24.7	23	1.7	31	5,860	-10.0	-25.8	25	11.6	31	5,903	-7.8	-18.6	26	2.0
450	31	6,697	-13.5	-31.7	21	1.6	31	6,663	-15.8	-31.6	25	12.3	31	6,714	-13.1	-26.8	28	3.7
400	31	7,583	-19.6	-35.9	20	1.6	31	7,540	-22.3	-37.7	26	13.5	31	7,602	-19.0	-33.1	27	4.9
350	31	8,564	-26.5	-41.7	17	1.3	31	8,510	-29.6	-43.7	25	15.8	31	8,586	-25.9	-40.1	26	7.4
300	31	9,656	-35.0	-48.0	14	.7	31	9,587	-38.2	-49.7	26	18.0	31	9,680	-34.4	-47.0	25	10.0
250	31	10,902	-44.8		12	1.3	31	10,819	-47.0		26	19.0	31	10,929	-44.0		25	11.9
200	31	12,356	-56.2		11	1.5	31	12,270	-54.7		26	22.3	31	12,392	-54.6		25	12.4
175	31	13,194	-61.7		08	2.5	31	13,119	-57.6		26	21.6	31	13,237	-59.9		27	12.6
150	31	14,138	-65.7		06	2.9	31	14,085	-60.8		26	19.7	31	14,188	-64.8		28	10.2
125	31	15,239	-67.8		07	3.7	31	15,213	-63.1		26	14.8	31	15,288	-69.7		29	7.1
100	31	16,585	-66.4		07	3.4	31	16,579	-64.2		27	5.8	30	16,613	-70.1		29	1.6
80	31	17,943	-64.2		08	6.0	31	17,950	-62.1		23	.3	30	17,947	-67.1		08	2.2
70	31	18,763	-62.7		08	7.6	31	18,781	-59.9		08	2.4	30	18,760	-63.6		08	4.8
60	31	19,720	-60.1		08	9.6	31	19,750	-57.5		08	4.1	29	19,711	-61.1		09	7.7
50	31	20,866	-57.1		09	12.0	31	20,906	-56.0		08	6.9	29	20,852	-58.1		09	9.7
40	31	22,285	-54.9		09	14.0	31	22,333	-53.6		09	8.3	29	22,268	-55.3		09	11.4
30	31	24,141	-51.5		09	16.1	30	24,194	-50.8		08	10.8	28	24,117	-52.6		09	13.7
25	30	25,328	-50.0		09	16.8	29	25,388	-49.0		09	11.9	24	25,303	-50.7		09	14.2
20	26	26,793	-48.0		09	17.2	29	26,860	-47.1		09	12.9	22	26,769	-48.3		09	15.8
15	23	28,702	-45.1		09	20.4	25	28,779	-44.2		09	15.3	21	28,675	-45.5		09	17.3
10	14	31,442	-40.4		09	24.1	13	31,519	-40.2				14	31,410	-40.5		10	22.2
7																		

Standard pressure surface (mb)	YAKUTAT, ALASKA 1017 MB						+ YAP, CAROLINE IS. 1007 MB						YUCCA FLAT, NEV. 880 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	12	9.9	9.1	10	.5	31	14	28.8	25.0	25	3.3	31	1,198	18.4	-3.7	27	.2
1000	27	158	12.2	8.5	12	.3	31	75	27.3	24.5	25	4.1						
950	28	562	11.7	4.7	16	.4	31	529	24.0	22.0	25	6.8						
900	28	1,033	10.1	1.0	03	.4	31	1,001	21.1	18.6	26	6.7						
850	28	1,507	8.1	-1.6	03	1.0	31	1,495	18.1	14.5	27	5.6	31	1,498	25.8	5.4	24	2.0
800	28	2,005	5.3	-4.6	04	1.2	31	2,014	15.8	10.3	28	5.7	31	2,029	22.4	2.5	22	4.5
750	28	2,530	2.0	-6.2	05	2.2	31	2,561	13.0	6.7	28	5.5	31	2,586	18.2	-.5	22	4.0
700	28	3,083	-1.8	-7.9	05	2.3	31	3,138	10.0	2.3	29	4.9	31	3,170	13.6	-3.6	21	3.8
650	28	3,669	-5.5	-13.5	05	2.0	31	3,752	6.8	-1.0	30	3.5	31	3,789	8.6	-6.8	20	4.6
600	28	4,293	-9.3	-18.3	05	1.9	31	4,406	2.9	-4.9	32	1.6	31	4,445	3.3	-10.4	20	5.1
550	28	4,960	-13.6	-22.4	03	1.6	31	5,106	-1.2	-8.0	35	1.1	31	5,143	-2.3	-14.7	21	4.8
500	28	5,678	-18.5	-28.5	02	1.4	31	5,861	-5.3	-12.5	02	1.1	31	5,892	-7.7	-21.9	23	5.6
450	28	6,456	-24.0	-34.5	02	2.0	31	6,681	-9.9	-17.1	08	2.1	31	6,703	-13.1	-28.1	24	7.8
400	28	7,304	-30.4	-41.6	02	1.7	31	7,581	-15.6	-22.4	10	4.5	31	7,589	-19.7	-33.9	25	8.4
350	28	8,242	-38.1	-46.0	01	2.3	31	8,579	-22.2	-30.1	10	7.6	31	8,568	-27.2	-40.6	25	9.9
300	27	9,271	-46.5		01	2.3	31	9,693	-29.8	-39.8	09	10.9	31	9,656	-35.9	-48.0	25	12.7
250	27	10,463	-52.7		31	3.3	31	10,966	-39.8	-49.9	07	14.8	31	10,899	-45.1		25	14.8
200	27	11,907	-50.3		29	3.2	31	12,450	-52.4		06	19.2	30	12,363	-54.4		25	16.2
175	27	12,782	-49.2		28	2.4	31	13,300	-59.6		06	21.1	30	13,210	-59.0		25	16.4
150	26	13,784	-48.9		29	1.9	31	14,246	-67.4		06	20.9	30	14,167	-63.3		25	14.9
125	26	14,981	-49.2		28	1.5	31	15,325	-74.7		07	17.6	30	15,278	-67.1		25	11.3
100	25	16,446	-49.4		32	.4	31	16,604	-79.0		07	9.2	30	16,618	-67.8		26	3.2
80	25	17,910	-49.0		08	1.1	31	17,889	-72.9		08	7.9	29	17,965	-65.2		14	1.5
70	25	18,787	-48.9		08	2.0	31	18,679	-69.4		08	10.1	29	18,785	-61.9		09	3.4
60	25	19,802	-48.2		08	2.6	31	19,607	-66.3		08	13.4	29	19,745	-59.3		09	6.5
50	25	21,005	-47.5		08	3.9	31	20,719	-63.8		09	17.2	28	20,894	-56.5		09	8.3
40	25	22,483	-46.6		08	5.6	31	22,095	-61.1		09	24.1	27	22,318	-54.3		09	9.2
30	24	24,401	-45.4		08	8.1	30	23,902	-56.4		09	30.6	27	24,175	-51.8		09	12.4
25	23	25,624	-44.0		09	8.3	30	25,068	-53.3		09	32.7	25	25,358	-50.3		09	13.7
20	21	27,127	-42.0		09	8.3	29	26,521	-49.7		09	35.8	24	26,828	-47.5		09	15.6
15	18	29,090	-39.3		08	10.3	28	28,416	-46.8		09	35.8	23	28,735	-45.7		09	17.6
10	12	31,901	-34.5				25	31,130	-42.6		09	39.8	16	31,461	-40.7		09	20.5
7							13	33,538	-39.4				7	33,929	-35.3			

Note: All observations scheduled at 1200, G.c.t. Pressures shown under station names are the average station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperatures to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values at standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in meters above mean sea level, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. JULY 1972

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jul.									
1	0.74	0.80	0.94	1.06	1.28	----	0.88	0.76	----
2	.70	.78	.90	1.08	1.26	1.01	----	.72	0.63
3	.74	.81	.90	1.08	1.29	1.07	.95	.84	.76
4	----	----	.77	.94	1.22	----	----	----	----
5	.66	.72	.86	1.00	1.21	----	----	----	----
6	.57	.65	.80	----	1.23	----	----	----	----
7	----	----	----	----	1.14	----	----	----	----
[illegible]	----	----	.86	1.06	1.28	----	----	----	----
10	.70	.78	.89	1.03	1.24	----	----	----	----
11	.66	.75	.89	1.04	1.30	.99	----	----	----
12	.78	.83	.96	1.08	1.29	----	----	----	----
13	.81	.88	1.00	1.12	1.28	----	----	----	----
14	.73	.80	.92	1.08	1.31	1.14	.99	.87	.79
1[illegible]	----	----	----	1.05	1.21	1.01	.82	----	----
17	.74	.84	.94	----	----	----	----	----	----
19	----	----	----	----	1.30	----	----	----	----
21	.50	----	.74	.94	1.25	----	----	----	----
23	.65	.85	.97	1.12	----	----	----	----	----
24	.75	.83	.94	1.08	1.30	(1.14)	----	----	----
26	----	----	----	1.10	1.29	1.11	.97	.85	----
27	----	----	.94	1.05	1.23	----	----	----	----
28	.72	.82	.95	1.07	1.35	1.17	.94	----	.73
29	.62	.72	.84	1.02	1.25	1.07	.92	.80	.72
30	.71	.81	.94	1.10	1.31	----	----	----	----
31	.65	.77	.90	1.08	----	----	----	----	----
Averages	0.69	0.79	0.90	1.06	1.26	1.08	0.92	0.81	0.73
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jul.									
1	HS0.77	HS0.86	HS0.94	HS1.13	----	----	----	----	----
9	----	----	----	----	----	----	HM0.82	HS0.72	
Averages	0.77	0.86	0.94	1.13	----	----	0.82	0.72	----

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jul.									
1	0.80	0.90	1.03	1.19	1.38	1.13	0.98	0.87	0.77
2	.73	.84	.97	1.15	1.38	1.17	1.03	.90	.81
3	.65	.76	.88	1.11	1.35	1.13	.95	.81	.70
4	.69	.78	.90	1.07	1.32	1.12	.94	.80	.70
5	D .16	D .15	D .31	D .66	D 1.12	D 1.01	D .83	D .71	----
6	H .46	H .57	H .71	H .88	1.18	.95	----	----	----
7	----	----	----	----	1.16	----	----	----	----
9	----	.71	.85	1.03	----	----	----	----	----
10	----	----	----	----	----	----	----	.67	.56
11	----	----	.70	.94	1.25	.90	.68	----	----
12	.57	.68	.80	1.00	1.23	1.03	.82	----	----
13	.62	.74	.86	1.03	1.23	.92	----	----	----
14	----	----	.77	.96	1.24	.95	.76	.66	.53
15	.61	.72	.86	1.03	1.27	1.07	----	.76	.65
16	----	----	----	1.04	1.22	----	----	----	----
17	----	----	----	----	----	----	----	.77	----
18	----	----	----	----	1.29	----	.89	.77	.66
19	----	----	----	----	1.28	----	----	----	----
20	----	----	----	1.12	1.38	1.15	.99	.87	.75
21	.76	.86	.98	1.13	1.36	1.19	1.06	.95	.83
22	.67	.78	.91	----	----	----	----	----	----
23	----	----	.96	----	1.33	----	----	----	----
25	----	----	----	1.13	1.35	----	.94	.81	.68
26	.71	.81	.93	1.09	1.28	.95	----	----	----
27	----	.72	.83	1.04	1.19	----	----	----	----
28	----	----	H .65	H .83	1.17	----	----	----	----
29	----	----	----	H .88	----	----	----	----	----
30	----	.60	----	----	1.22	.84	----	----	----
31	.47	.57	.71	.94	1.24	----	.80	.67	.54
Averages	0.61	0.70	0.82	1.01	1.27	1.03	0.90	0.79	0.68
	MADISON, WISC.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jul.									
4	----	----	----	----	----	S 1.13	S 1.00	----	----
5	----	S 0.74	S 0.87	----	----	----	----	----	----
16	----	----	----	S 1.04	----	----	----	----	----
21	----	S .42	M .60	M .83	----	----	----	----	----
22	S 0.39	S .46	S .52	M .83	----	----	----	S 0.59	----
24	----	----	----	----	S 1.31	M .66	M .39	M .13	M 0.02
25	S .81	S .91	S 1.01	----	----	----	----	----	----
29	----	----	M .70	M .92	----	----	----	----	----
Averages	0.60	0.83	0.74	0.91	1.31	0.90	0.70	0.36	0.02

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze

HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze--Indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY 1972

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	703	647	733	667	614	682	611	713	556	631	697	657	706	743	716	520	616	489	626	450	509	569	522	660	460	699	678	719	649	706	655	[illegible]
AMES IOWA	637	563	729	386	659	462	709	289	759	496	337	292	718	350	632	714	69	502	---	---	658	697	636	685	641	629	143	342	692	660	183	526
ANNETTE ALASKA	744	755	---	---	---	---	---	---	---	---	---	---	---	---	319	592	622	674	600	680	661	363	282	405	310	110	326	331	568	154	674	---
APALACHICOLA FLORIDA	618	653	631	658	621	354	566	649	661	637	599	646	627	660	620	354	377	664	517	586	662	647	616	605	227	532	627	620	596	521	315	570
ARGONNE NAT. LAB.	473	325	610	644	699	564	519	621	290	552	577	550	307	449	529	624	404	285	258	546	573	610	429	397	550	83	175	507	582	597	483	478
ASTORIA OREGON	736	723	726	---	157	265	409	602	485	128	170	102	351	694	702	694	687	454	---	678	432	---	159	---	493	---	---	621	---	---	297	468
ATLANTA GEORGIA	580	549	556	560	281	393	512	470	466	527	603	555	466	488	407	359	334	486	527	550	519	481	439	525	448	430	373	349	243	277	366	456
BARROW ALASKA	641	630	489	402	464	621	660	626	473	576	544	574	584	476	587	457	457	228	356	349	395	567	575	585	530	269	226	342	366	399	363	478
BETHEL ALASKA	350	393	374	693	510	693	639	709	604	---	560	418	---	419	306	318	395	120	234	279	453	666	353	245	335	526	299	193	240	622	585	432
BISMARCK N.DAK.	684	548	470	812	712	763	375	531	702	602	582	771	610	659	558	717	618	728	170	667	199	528	759	744	299	559	529	545	732	398	608	586
BLUE HILL MASS.	313	634	407	625	186	609	516	462	600	511	558	610	136	547	568	474	423	584	475	297	297	631	357	496	485	493	498	485	476	578	354	474
BOISE IDAHO	817	825	809	789	526	750	774	694	538	756	732	755	763	769	774	773	765	745	762	677	638	762	745	730	736	748	729	716	580	344	692	717
BROOKINGS S. D.	666	236	607	426	130	593	500	533	571	562	497	424	573	155	595	592	262	622	321	231	444	505	609	630	507	217	352	439	591	530	451	463
BROWNSVILLE TEXAS	631	502	618	711	504	534	732	620	728	646	594	692	482	678	575	319	306	536	---	584	178	364	434	460	649	700	580	643	575	685	691	565
BURLINGTON VERMONT	453	616	61	692	450	737	705	577	674	162	656	618	358	277	602	339	---	625	283	756	304	524	400	400	432	313	509	454	615	673	501	492
CAPE HATTERAS N.C.	670	657	667	548	496	68	390*	745	708	468	98	169	533	577	680	660	620	322	725	656	409	383	529	568	468	470	134	242	282	649	641	491
CARIBOU MAINE	42	338	273	---	483	571	551	474	449	317	305	521	423	492	385	158	205	458	79	493	137	585	556	321	542	376	464	368	157	350	465	378
CHARLESTON S.C.	646	528	595	589	633	100	640	633	681	232	246	335	487	547	499	548	522	490	634	593	543	477	534	526	534	501	388	359	603	605	559	510
CLEVELAND OHIO	692	213	113	553	112	721	591	520	421	550	638	402	---	505	275	419	---	---	543	516	564	532	631	447	568	352	135	539	---	---	624	468
COLUMBIA MISSOURI	398	411	212	387	695	760	501	357	616	653	660	525	694	684	298	676	672	451	622	704	729	702	622	346	684	565	321	134	552	712	631	548
DAVIS CALIFORNIA	734	753	748	748	759	757	731	744	750	736	736	724	744	735	689	708	709	715	729	701	715	709	715	739	735	738	719	721	612	685	713	724
DODGE CITY KANSAS	689	728	264	533	720	671	660	760	679	571	---	705	727	790	605	---	431	---	794	728	713	772	775	656	728	708	---	706	750	785	704	680
EL CENTRO CALIF. NPF	700	698	667	598	605	607	570	643	652	665	659	631	638	618	619	606	619	641	649	652	656	655	492	583	614	620	619	555	488	550	601	618
EL PASO TEXAS	719	692	681	690	549	621	677	635	522	689	626	672	567	686	668	683	687	602	404	676	665	594	684	679	689	640	626	592	646	669	635	641
ELY NEVADA	634	521	557	556	573	633	678	649*	692*	617	695	---	713	709	713	710	718	694	653	295	605	694	693	649	640	620	693	675*	606	449	530	629
EPPLEY NEWPORT R.I.	346	659	339	646	182	623	475	623	623	523	572	613	115	359	410	289	479	577	319	209	314	611	452	581	487	565	444	596	460	551	226	460
FAIRBANKS ALASKA	544	682	541	652	571	656	666	680	609	569	540	533	572	---	---	189	446	415	413	328	423	509	---	---	---	524	540	422	493	538	328	515
FLAMING GORGE UTAH	787	611	791	756	752	708	378	597	440	306	483	767	711	770	785	756	656	727	420	505	663	715	665	339	395	428	472	790	715	518	587	613
FORT WORTH TEXAS	679	617	700	265	678	678	623	579	598	556	573	611	533	646	656	590	558	515	543	554	460	529	623	559	635	654	640	613	621	610	633	578
FRESNO CALIFORNIA	705	709	729	692	721	741	682	501	718	717	713	706	692	683	658	687	707	682	703	679	701	694	696	703	700	698	706	682	427	501	682	678
GAINESVILLE FLORIDA	565	627	667	613	543	346	579	631	429	488	573	555	457	339	515	359	460	607	328	644	580	593	595	480	359	309	537	618	598	638	351	515
GENEVA NEW YORK	646	635	57	---	464	466	653	491	571	346	630	566	421	293	512	271	593	490	509	500	597	619	577	663	424	717	623	634	676	640	404	523
GLASGOW MONTANA	476	373	465	748	709	642	370	701	671	696	376	524	246	408	599	389	504	359	502	249	298	536	690	603	583	599	562	666	655	504	590	526
GLOUCESTER POINT VA	700	746	682	638	119	320	658	716	633	660	528	119	419	587	615	628	656	631	724	640	569	581	659	527	505	664	259	256	47	216	263	515
GRAND JUNCTION COLO.	---	687	648	694	645	585	722	600	364	656	733	771	756	762	765	769	711	700	576	616	549	737	671	269	619	---	696	729	728	670	614	657
GREAT FALLS MONTANA	269	370	587	775	742	414	769	709	465	673	465	228	250	504	648	354	664	83	326	170	494	550	689	---	720	677	567	722	616	522	465	516
GREENSBORO N.C.	662	633	638	543	209	563	634	638	626	601	296	295	678	611	547	550	607	575	425	684	593	531	579	559	563	592	429	269	269	312	352	518
INDIANAPOLIS INDIANA	686	290	578	276	---	527	483	547	388	589	622	588	569	607	105	473	389	555	598	568	563	608	554	225	617	360	351	392	610	596	504	494
LAKE CHARLES LA.	459	436	508	96	294	541	449	464	479	591	506	392	578	277	612	318	428	488	532	487	276	652	609	597	579	568	609	570	291	151	357	458
LAKELAND FLORIDA	623	547	553	617	475	584	595	533	482	530	548	452	390	510	577	475	373	319	299	475	484	559	466	610	399	465	535	581	598	369	614	504
LANDER WYOMING	735	145	390	767	765	501	644	644	558	643	576	662	736	681	823	695	350	720	399	469	665	744	716	594	477	503	517	713	682	294	515	591
LARAMIE WYOMING	649	595	287	448	724	580	364	637	404	472	582	748	770	665	715	698	434	630	521	566	687	641	623	517	398	501	509	735	726	549	397	573
LAS VEGAS NEVADA	682	706	736	667	632	659	634	669	714	717	724	728	713	725	697	567	663	661	688	724	744	725	729	685	536	665	714	720	608	575	660	680
LITTLE ROCK ARKANSAS	518	427	192	230	542	616	626	454	505	453	603	525	548	409	464	565	499	472	505	568	495	595	542	516	587	528	565	409	250	491	553	492
LOS ANGELES CALIF.	---	---	---	---	---	---	---	---	---	---	---	---	613	464	524	711	705	676	519	447	629	721	740	727	714	717	718	633	604	682	686	---
LOS ANGELES CALIF.U	554	629	693	657	682	632	518	668	672	632	655	621	630	541	467	644	635	553	317	310	600	695	711	695	718	685	702	597	603	656	648	614
MADISON WISCONSIN	446	514	584	643	676	390	478	563	410	552	595	444	493	301	590	719	122	463	280	645	611	618	506	624	624	72	464	463	647	657	259	498
MANHATTAN KANSAS	574	680	295	452	713	689	308	638	703	552	257	590	626	678	197	512	474	358	625	664	648	668	633	481	570	585	147	332	539	679	557	530
MATANUSKA ALASKA	296	479	645	733	730	706	714	701	714	658	558	550	431	---	---	---	465	159	142	500	618	652	306	628	484	566	313	181	467	596	578	523
MEDFORD OREGON	739	717	709	703	696	712	732	632	749	703	711	713	704	712	713	714	713	716	711	712	708	699	691	672	683	683	685	613	427	590	692	689
MIAMI FLORIDA	584	638	530	611	532	464	372	329	407	327	231	323	290	472	614	334	480	531	34	507	573	578	562	276	355	379	615	622	616	563	---	458
MIDLAND TEXAS	575	698	531	235	280	571	522	692	455	681	619	634	645	651	703	612	475	513	379	508	523	587	607	652	644	633	677	668	672	616	629	580
NASHVILLE TENNESSEE	531	426	628	190	559	604	563	623	578	559	594	423	602	592	418	204	576	573	577	603	621	507	488	555	438	588	472	231	153	291	376	488
NEW YORK CENTRAL PRK	352	493	294	561	56	560	359	371	536	506	498	473	61	497	532	454	434	381	471	409	322	561	534	582	418	447	422	611	462	442	42	424
NORTH OMAHA NEBRASKA	613	422	777	585	757	513	738	589	745	424	244	298	672	410	633	738	251	681	466	562	700	714	623	713	445	692	268	316	577	697	184	550

SOLAR RADIATION TOTALS-- Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY 1972

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	587	442	556	212	345	601	595	643	481	553	622	602	474	544	446	271	247	579	579	603	572	519	397	514	305	465	269	232	278	239	408	457
OKLAHOMA CITY OKLA.	450	308	519	293	679	679	514	289	623	701	545	352	632	634	590	609	604	368	582	582	539	591	615	604	625	641	568	344	560	625	552	542
PAGE ARIZONA	508	615	671	418	512	604	546	547	583	---	682	638	672	673	525	647	448	501	660	627	655	495	406	527	597	642	647	622	528	555	---	578
PALMER ALASKA	318	508	628	639	658	640	643	660	637	593	483	593	420	561	422	348	416	183	190	451	582	582	402	586	422	526	324	198	430	533	557	488
PHOENIX ARIZONA	693	712	697	689	638	650	621	487	675	662	661	660	659	632	646	632	628	621	652	663	662	665	606	338	630	631	618	619	620	574	620	631
PORTLAND MAINE	340	635	283	552	220	548	518	549	628	350	529	617	297	433	544	440	421	520	130	497	150	576	479	473	483	453	563	226	397	607	396	447
RAPID CITY S.DAK.	---	206	370	658	694	376	560	669	595	584	629	619	520	364	592	621	455	627	291	270	449	499	615	530	247	492	369	620	629	577	130	495
RENO NEVADA	633	612	610	620	636	640	584	513	628	631	642	634	635	625	619	609	584	616	618	461	604	607	566	618	617	605	604	601	386	202	567	585
RICHLAND 25 NW WASH.	793	792	785	739	737	700	748	118	796	523	431	535	748	755	756	738	748	566	676	346	614	724	647	344	734	722	724	712	706	699	631	654
RIVERSIDE CALIFORNIA	572	612	654	614	526	594	547	632	646	650	647	633	622	568	527	616	626	580	550	578	594	579	638	653	604	645	654	603	502	567	624	602
RUSTON LOUISIANA	---	635	260	278	659	669	692	508	---	551	614	630	568	533	461	598	499	627	663	601	490	673	547	516	551	604	582	561	240	434	519	544
SAINT CLOUD MINN.	695	310	472	588	632	410	663	216	584	536	408	559	667	272	611	539	167	710	371	300	440	452	698	687	696	315	309	468	664	534	530	500
SALT LAKE CITY	743	766	761	753	574	675	626	574	508	706	717	729	732	729	735	731	733	706	---	605	683	726	711	639	620	591	694	703	675	495	657	677
SAN ANTONIO TEXAS	699	625	586	591	393	727	679	609	568	552	530	557	617	639	539	381	385	348	437	569	452	341	587	681	689	641	626	601	669	668	667	569
SANTA MARIA CALIF.	624	634	650	684	632	629	545	546	701	713	698	696	709	694	645	642	628	560	441	311	681	650	542	596	627	649	---	674	356	443	664	609
SAULT STE MARIE MICH	684	726	662	757	681	751	430	555	136	426	346	340	571	117	691	641	305	626	683	208	564	276	324	708	549	690	688	690	347	466	---	521
SEATTLE TACOMA WASH.	785	789	782	770	650	489	506	398	541	313	194	95	627	754	750	741	734	464	734	740	697	736	415	399	611	663	618	711	711	656	693	605
SEATTLE WASH. UNIV.	681	668	654	645	549	431	412	414	602	297	183	140	218	644	644	625	616	442	625	615	596	596	346	284	466	547	569	603	594	547	568	510
SPOKANE WASHINGTON	774	773	768	764	735	613	717	333	630	561	341	302	587	733	742	633	726	405	524	281	347	689	616	246	708	693	705	694	---	676	497	594
STERLING VIRGINIA	682	588	581	679	123	342	585	550	628	629	638	378	586	619	674	---	---	561	627	610	578	670	638	598	520	722	242	367	196	115	291	518
TALLAHASSEE FLORIDA	611	613	611	611	360	342	652	644	575	668	648	636	420	548	410	400	528	629*	457	475	661	613	562	435	231	472	457	604	541	547	226	522
TAMPA FLORIDA	687	661	526	623	673	660	556	553	500	487	670	559	488	568	450	327	462	337	268	502	564	447	473	540	626	347	583	638	639	581	641	537
TUCSON ARIZONA	743	742	731	723	688	678	545	447	581	552	692	699	674	672	660	592	399	506	596	680	679	645	566	444	651	664	642	639	539	655	660	625
UPPER MARLBORO MD	---	---	---	---	---	---	517	567	601	626	599	292	381	613	672	515	476	442	543	497	535	661	581	554	503	681	234	227	---	114	---	497
WAKE ISLAND PACIFIC	671	634	629	653	676	625	657	637	658	559	571	644	661	670	658	620	642	631	523	467	521	209	466	448	640	661	653	651	550	104	177	567

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

U Indicates Urban sites.

Tucson is corrected by a factor of 1.2 from July 1971 on.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

JULY 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	199	327	406	404	419	364	391	398	346	307	286	345	228	328	235	172	218	46	66	243	318	318	162	303	209	318	170	76	248	340	326	273

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 A) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	18.25	17.30	22.18	11.58	17.79	13.77	20.23	8.89	20.96	14.62	10.84	9.38	22.91	10.97	17.18	19.50	2.92	14.99	8.65	19.01	19.01	20.11	17.55	19.62	18.04	15.84	5.36	10.72	17.43	16.09	6.09	15.65

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

Data not received in time for publication.

[illegible] ozone in the atmosphere, i.e., [illegible] contained in a vertical [illegible] of the atmosphere at the [illegible] of the station. The amount of [illegible] standard temperature and pressure [illegible] ozone layer [illegible] centimeter thick. The code [illegible]

DESCRIPTION OF CHARTS

CHART I. A. NORMAL DAILY AVERAGE TEMPERATURE (°F. 1931-60) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN (°F. 1931-60) FOR MONTH. Chart I-A is reproduced from Environmental Data Service Publication "Climatic Maps of the United States." Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin," a publication of Environmental Data Service.

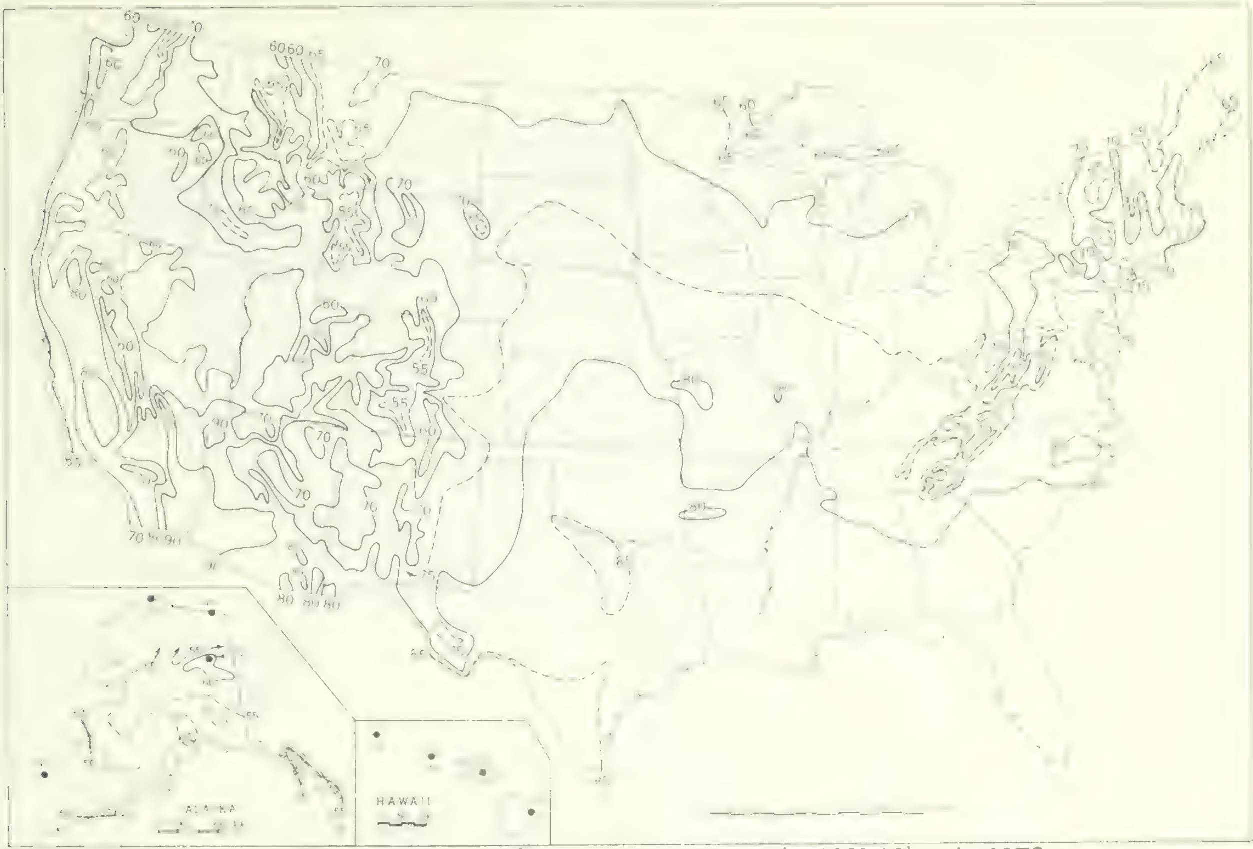
CHART II. A. TOTAL PRECIPITATION. Chart II. A. is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART II. B. PERCENTAGE OF NORMAL PRECIPITATION. Chart II. B. is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

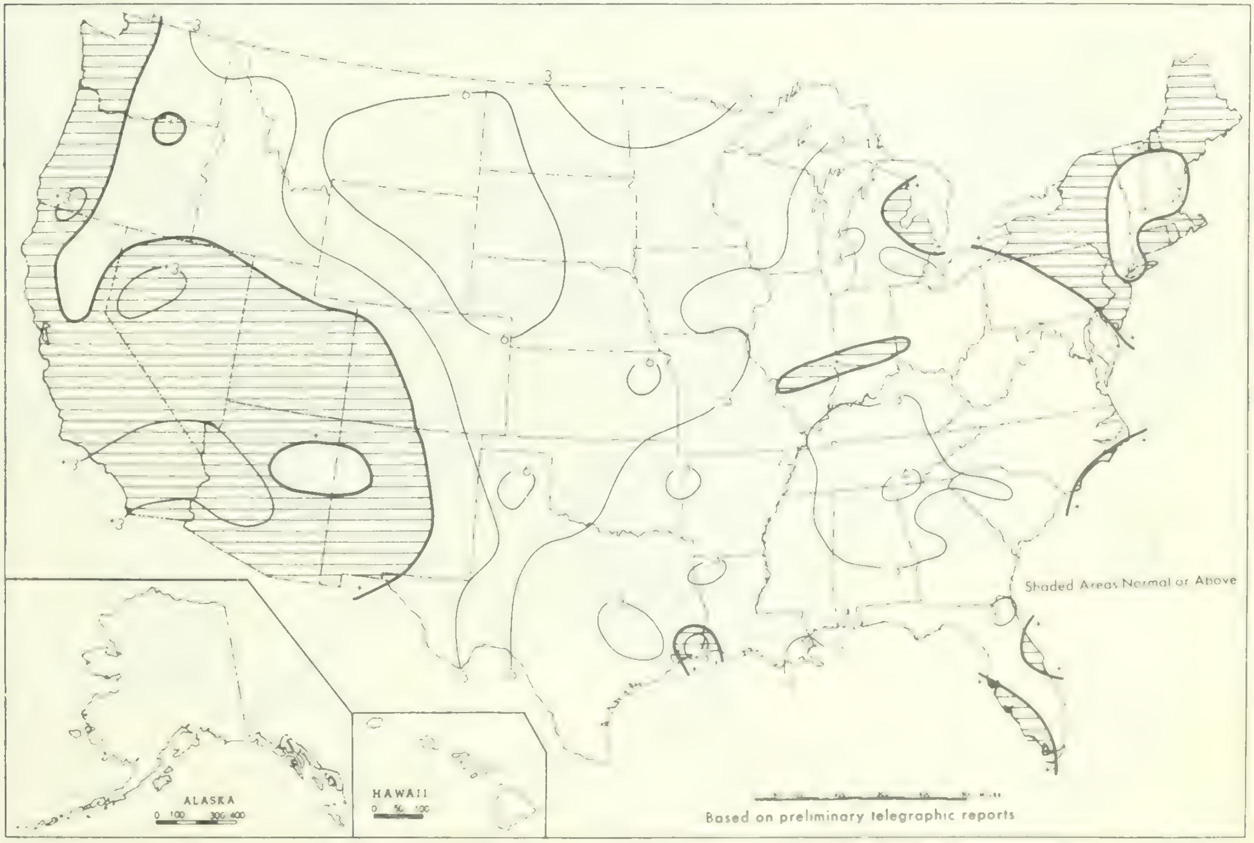
CHART III. TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IV. TRACKS OF CENTERS OFCYCLONES AT SEA LEVEL. Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m., e.s.t., positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), July.



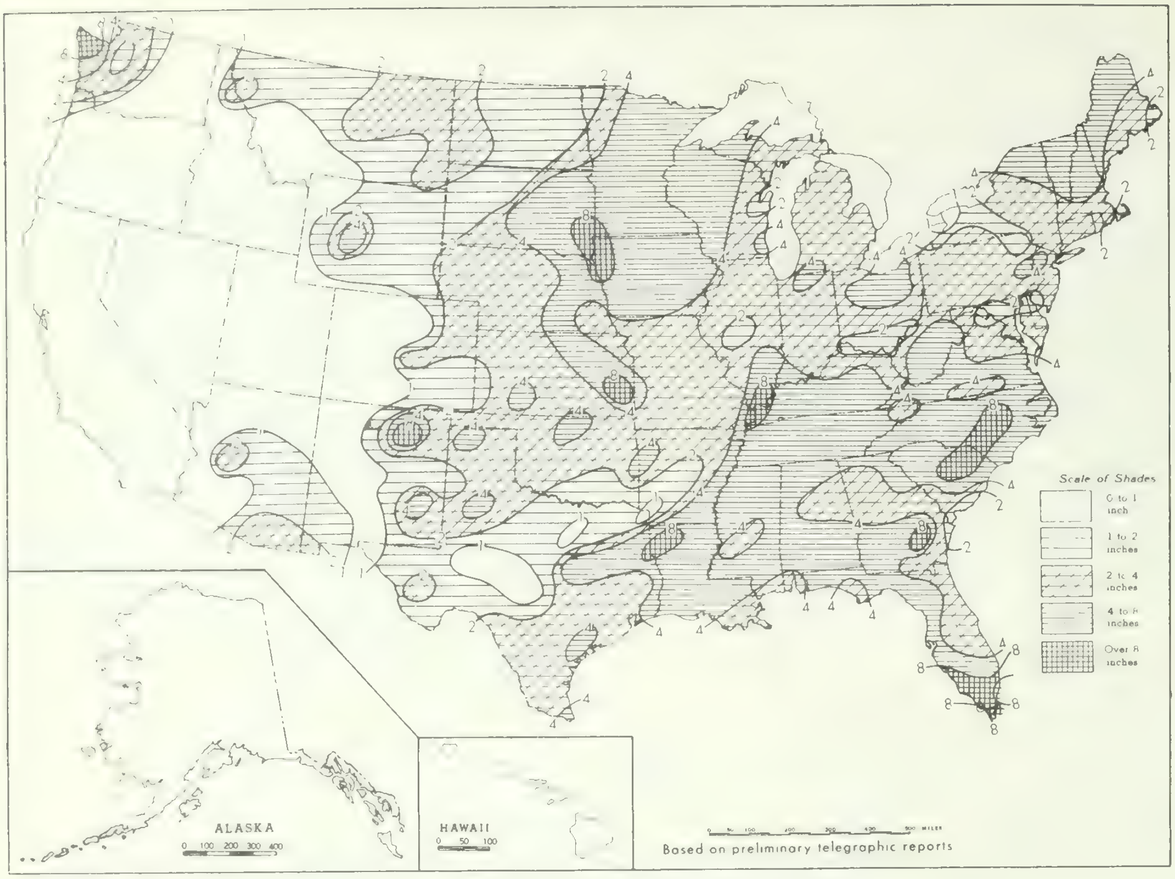
B. Temperature Departure from 30 - Year Mean (°F 1931-60), July 1972



Shaded Areas Normal or Above

Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), July 1972.



B Percentage of Normal Precipitation, July 1972.

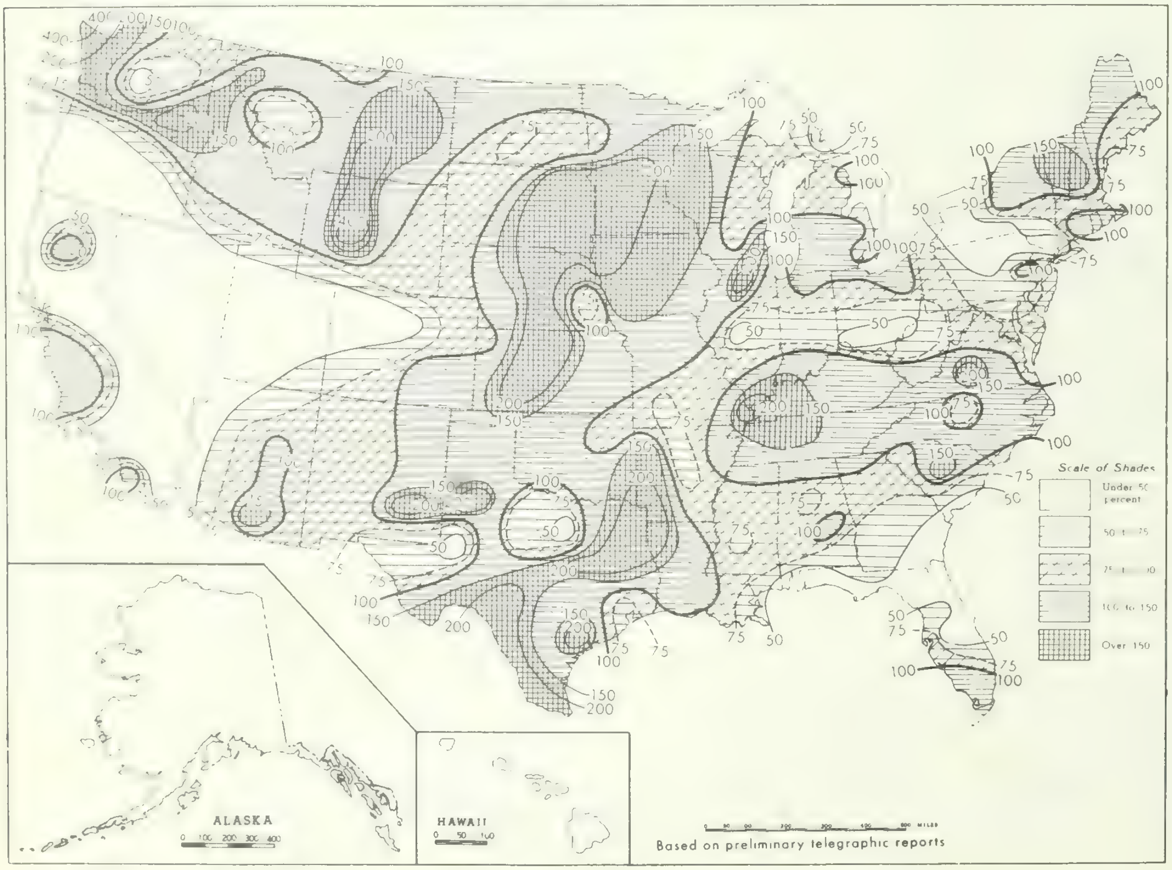
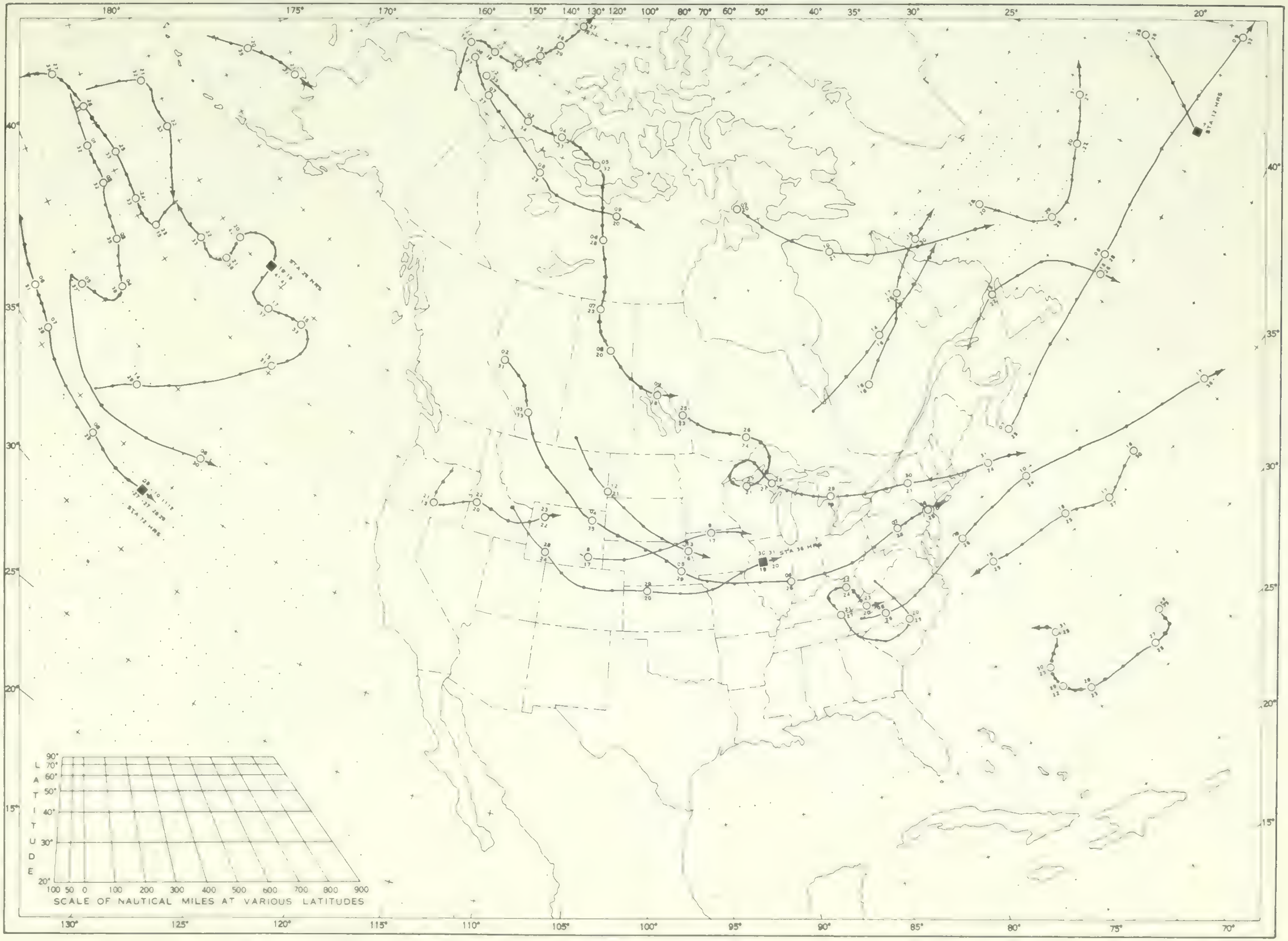
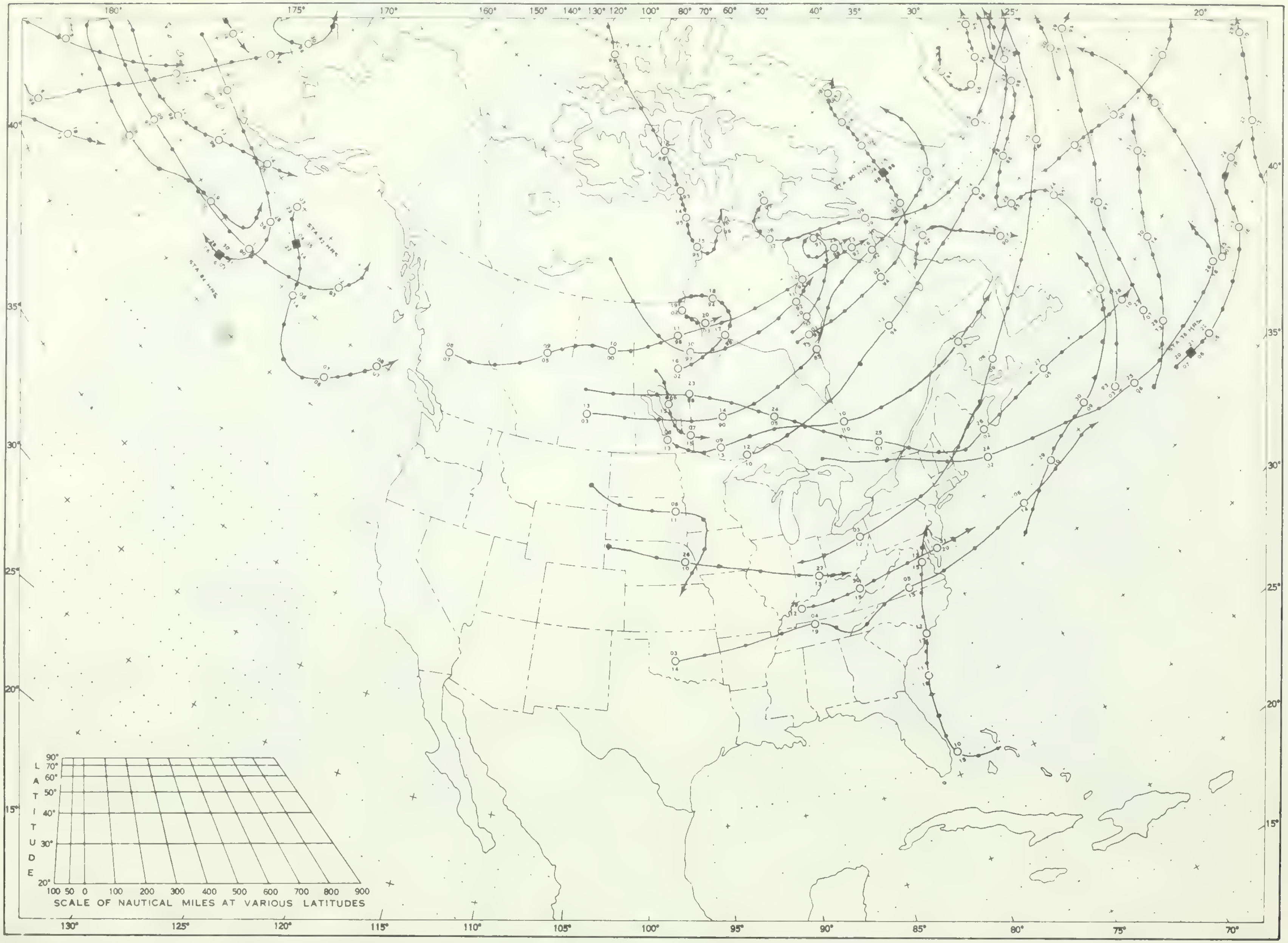


Chart III. Tracks of Centers of Anticyclones at Sea Level, July 1972.



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV Tracks of Centers of Cyclones at Sea Level, July 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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National Oceanic and Atmospheric Administration
Environmental Data Service

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

NOTICE

Effective with the July 1972 issue of this publication, the Climatological Data tables in English Units are discontinued.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$$°F. = \frac{9}{5} \times °C + 32$$

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

Snowfall, sunshine, solar radiation, and pressure surface maps are also discontinued. See the explanatory page "Description of Charts," which appears in the July 1972 issue, and will be carried subsequently in the January and July issues.

Effective with the September 1972 issue, the Solar Radiation Totals Table is discontinued.

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

AUGUST 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

TEMPERATURE: August was a cool month over most of the Nation. The western portions of the central and southern Great Plains averaged 3° to 6° cooler than normal. The Northwest and the Deep South averaged slightly warmer than normal. The Far West averaged warmer than normal early and late in August and cooler than normal at midmonth. The opposite regime prevailed over mid-America. This area was cool early and late in August and warm in the third week.

Storm systems sweeping across the eastern half of the Nation caused quick temperature changes and some large diurnal temperature ranges. The Southwestern Deserts continued hot. Furnace Creek, Death Valley, Calif., registered 121° on the 8th. The soil temperature was 194°. In contrast, autumn temperatures were noted in the high Rocky Mountains. Big Piney, Wyo., and Leadville, Colo., registered 30° on the 21st and 22d, respectively.

PRECIPITATION: Early in August an active cold front stretched from the Great Lakes to the central Great Plains. Numerous thunderstorms occurred along the front as it moved southeastward to the Gulf and Atlantic Coasts. Some of the thunderstorms produced heavy rain; some were accompanied by hail and strong winds. One thunderstorm uprooted trees near Lost Nation, Iowa. Others drenched spots in southern Illinois and in eastern Kentucky. More fronts swept eastward from the western Great Plains to the Atlantic Ocean in the second week of August. Thunderstorms occurred along the fronts and from the southern Great Plains to the Atlantic Seaboard in the warm, humid air that covered the Southland. Heavy thunderstorms spotted parts of the central and eastern portions of the Nation in the third week of August. The central Great Plains received no rain or only light scattered sprinkles. Heavier showers fell from the northern Great Plains to the Great Lakes and in the warm, humid areas in the South. Severe thunderstorms hit Wisconsin and Michigan on the 18th, 19th, and 20th. Frontal thunderstorms continued in the fourth week of August. One of these dumped 1.30 inches of rain at St. Cloud, Minn., in 18 minutes. When rain falls at such intensity, it falls as streams rather than drops. These downpours are called "cloudbursts." The last few days of the month saw more thunderstorms, some moderate to heavy. Tropical Storm Gwen, about 300 miles south-southwest of San Diego, Calif., brought some heavy showers to the mountains in the Southwest. Heavy rains also fell in the Southeast. Savannah, Ga., received 4.14 inches in 6 hours early on the 29th and 3.26 inches fell at Orlando, Fla., on the afternoon of the 30th. Practically no rain fell in the entire month in the Far West. Spots in California received no rain. Monthly totals elsewhere in the Far West were generally less than 1 inch. The greatest monthly totals were in northern Florida where some localities received more than 16 inches.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

AUGUST 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Whatley	101	21	Guntersville	53	15	Headland	7.72	Brundidge	.17
Alaska	Sourdough 1 N	88	3	Clear Water	20	30	Little Port Walter	23.94	Cape Sarichef	.00
Arizona	3 Stations	120	1	Sunrise Mountain	31	28	Portal 4 SW	6.43	Red Sands Trading Post	.00
Arkansas	6 Stations	105	21+	Calico Rock	49	28	[illegible]	6.77	Damascus	.23
California	Death Valley	122	7+	Bodie	21	15	Lucerne Valley	2.26	199 Stations	.00
Colorado	7 Stations	102	13+	Fraser	24	25+	Flagler 2 NW	4.62	Montrose No 1	.12
Connecticut	2 Stations	93	25	Coventry	38	5	Bakersville	6.72	[illegible]	.77
Delaware	Milford 2 WSW	96	26	2 Stations	45	11	Lewes 1 SW	5.84	Wilmington Newc WSO AP	.25
Florida	Saint Augustine	102	19	3 Stations	60	22+	Sanford Exp Station	16.86	Tavernier	.52
Georgia	3 Stations	101	21+	Clayton 1 W	55	30	Savannah WSO AP	12.62	Mount Vernon 3 WNW	.14
Hawaii	2 Stations	94	19+	Mauna Loa Slope Obs, Hawaii	33	11	Honomu Mauka 138, Hawaii	21.78	2 Stations	.00
Idaho	Brownlee Dam	110	9	Dixie	25	31	Idaho Falls 2 ESE	2.66	Bruneau	.00
Illinois	5 Stations	98	20+	Tiskilwa	41	4	Aurora College	14.49	Sparta	1.79
Indiana	4 Stations	97	21+	3 Stations	40	10	Rochester	7.82	[illegible] 1 N	.66
Iowa	2 Stations	99	20+	Corning	40	9	Delaware 3 WSW	9.95	Hawarden	1.26
Kansas	3 Stations	105	21	4 Stations	47	26+	Parallel	11.21	Paola	1.29
Kentucky	4 Stations	98	19+	Falmouth 5 WNW	42	10	Mount Sterling	5.42	Nolin River Reservoir	.45
Louisiana	2 Stations	101	20+	Ashland 2 S	59	31	Springville Fire Tower	10.47	Oaknolia	.36
Maine	2 Stations	89	24+	2 Stations	32	15	Fort Fairfield	6.49	Saco	.45
Maryland	2 Stations	96	25+	Oakland 1 SE	40	11	Cambridge 4 W	5.82	Centreville	.84
Massachusetts	Chester 2	96	25	Chester 2	33	5	Turners Falls	4.59	Provincetown 1 N	.74
Michigan	Three Rivers	94	18	2 Stations	30	10+	Gladwin	10.26	Stambaugh 1 S	1.42
Minnesota	2 Stations	100	17+	Wannaska 8 SE	28	3	Duluth WSO AP	10.31	Wheaton	.52
Mississippi	Macon 2 NE	102	9	2 Stations	56	29+	Brooklyn 2 SE	6.28	Van Vleet	.24
Missouri	Eldon	105	18	Berryman 6 NW	45	10	Fisk	6.29	California	.80
Montana	Paradise	105	8	Elliston	27	18	Lewistown 10 S	5.70	Whitewater	T
Nebraska	Chadron FAA AP	104	12	Mullen 21 NW	34	23	Wymore 2 N	6.39	[illegible]	.22
Nevada	Sunrise Manr Las Vegas	115	1	3 Stations	28	24+	Logandale Un Exp Farm	2.00	[illegible] Stations	.00
New Hampshire	2 Stations	91	26+	Mount Washington	29	11	Mount Washington	8.31	Durham	1.16
New Jersey	Hammonton 2 NNE	97	27	Pemberton 3 E	40	11	Chatsworth	9.59	Sandy Hook	.26
New Mexico	Lake Avalon	107	1	2 Stations	33	25+	Maljamar 4 SE	10.88	Tohatchi 1 ESE	.58
New York	3 Stations	95	26+	Bolivar	33	5	Turin 1 N	7.09	New York Ave V Brklyn	.32
North Carolina	2 Stations	98	20+	Celo 2 S	45	30	Southport 5 N	8.00	Mount Holly 4 NE	.28
North Dakota	Watford City 14 S	107	12	Grand Forks FAA AP	33	3	Stanley 3 NNW	6.15	Ashley	.46
Ohio	3 Stations	97	19+	Mansfield 6 W	38	10	Columbus Valley Cross	11.15	Piketon AEC Pump Sta	.71
Oklahoma	Chattanooga 3 NE	108	9	Boise City 2 E	48	25	Hooker 1 N	7.86	Fanshawe	.52
Oregon	2 Stations	112+	8+	Mc Dermitt 26 N	20	17	Port Orford 5 E	2.47	5 Stations	.00
Pennsylvania	3 Stations	96	26+	Bradford FAA AP	32	5	Montrose	5.34	State College	.39
Puerto Rico	Arecibo 2 SE, P.R.	97	4	Adjuntas Substation, P.R.	57	24+	Humacao, P.R.	11.70	Ensenada, P.R.	.40
Rhode Island	Providence WSO AP	90	26	Kingston	41	16	Providence WSO AP	2.98	Block Island WSO AP	.99
South Carolina	3 Stations	99	19+	3 Stations	57	23	Hilton Head	13.47	Antreville	.61
South Dakota	Fort Sully 8 NE	108	13	Pactola Dam	34	25+	Spearfish 1 W	5.11	Redfield 6 E	.06
Tennessee	Waverly 4 W	99	19	Mountain City No 2	48	30	Bolton	7.02	Rogersville 1 NE	.43
Texas	Pecos	113	1	Bravo	47	25	Jayton	12.62	Cuero 3 E	.07
Utah	2 Stations	110	12+	Soldier Creek	27	24	Blowhard Mtn Radar	3.04	Saltair Salt Plant	.03
Vermont	Woodstock 2 WSW	90	26	3 Stations	34	5	Rochester	4.92	West Windsor	1.42
Virginia	3 Stations	96	25	2 Stations	45	11+	Burkes Garden	6.90	Wise 1 SE	.33
Washington	3 Stations	110	9+	Boundary Dam 1 W	32	31	Disautel 9 NE	2.93	Sunnyside	.10
West Virginia	Grantsville 2 NW	96	26	Canaan Valley	34	11	Webster Springs 1 E	8.96	Renick No 2	1.17
Wisconsin	Portage	98	19	3 Stations	33	10+	Wisconsin Dells	11.49	Luck	2.62
Wyoming	Echeta 2 NW	106	12	Bondurant 3 NW	22	7	Pine Bluffs	5.96	Dixon	T

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10		
ALABAMA	M.	Mb.	Mb.	C	C	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	995.3	1017.3	32.2	19.7	26.0	-1.3	36.1	20	15.0	29	17	0	19.4	71	51	-72	42	6	8	0	0	0.3	34	13.9	N	26	8	17	6	5.1	74
HUNTSVILLE	190	994.6	1017.4	30.7	18.4	24.6	-2.2	34.4	20	13.9	29+	6	0	19.4	77	57	-26	33	8	9	0	0	0.1	5	13.4	29	1	13	14	4	4.4	
MOBILE	64	1009.1	1016.8	34.1	23.0	28.6	0.7	37.2	7	20.0	30	28	0	22.8	77	60	-104	24	11	13	0	0	0.3	34	15.6	7	24	8	13	10	5.7	
MONTGOMERY	56	1009.8	1017.0	33.1	21.7	27.4	-0.2	35.6	20+	18.9	29	28	0	21.7	75	77	-27	42	4	10	0	0	0.4	36	12.5	W	26	13	16	2	4.1	65
ALASKA																																
ANCHORAGE	35	1006.1	1011.1	17.3	10.0	13.7	0.4	23.9	10	5.0	28	4	0	10.0	80	36	-30	12	12	1	0	0	1.0	17	10.7	14	20+	4	5	22	8.1	59
ANNETTE	34	1014.6	1018.5	18.0	11.2	14.6	-0.1	23.3	20	7.8	12	3	0	12.2	88	251	61	78	15	0	0	0	1.8	15	10.7	15	25	2	6	23	8.4	
BARROW	9	1008.8	1009.5	7.8	1.7	4.8	1.5	17.8	2	-1.7	12	0	9	3.3	92	28	6	13	13	0	5	T	1.2	9	13.0	26	9	1	5	25	8.9	
BARTER ISLAND	12	1007.8	1009.8	7.4	2.8	5.2	0.7	12.2	21+	0.0	31+	0	2	4.4	95	14	-13	7	9	0	T	T	1.4	8	15.6	29	9	2	5	24	8.7	
BETHEL	38	1002.4	1008.2	16.9	9.1	13.0	1.7	26.1	4	5.0	31+	5	0	9.4	81	67	-40	19	16	3	0	0	1.7	18	14.8	20	19	2	6	23	8.2	
BETTLES	196	985.4	1009.4	18.5	8.1	13.3		25.0	4+	2.8	30	10	0	8.9	77	69		25	10	1	0	0	0.5	18	9.4	23	7	4	9	18	7.5	
BIG DELTA	386			19.9	9.1	14.5		23.9	11+	3.3	29	11	0			24		11	9	0	0	0										
COLD BAY	29	1003.7	1007.5	12.4	7.6	10.0	-0.7	16.7	5+	5.0	30	0	0	8.3	92	98	-10	23	20	0	0	0	2.0	20	18.3	16	20+	0	1	30	9.7	
FAIRBANKS	133	992.9	1009.6	20.3	9.5	14.9	2.6	25.6	2+	3.9	30+	10	0	9.4	73	28	-28	6	15	2	0	0	0.1	1	10.3	23	7	4	8	19	7.4	
GULKANA	479			18.8	7.1	12.9		25.0	11	0.6	24	8	0			19		19	6	1	0	0	2.6	19	11.2	20	20	4	8	19	7.2	
HOMER	20	1007.8	1011.3	15.7	8.1	11.9		21.1	11	3.9	28+	1	0	9.4	86	87	15	18	22	0	0	0	0.1	27	10.3	19	20	4	3	24	8.1	
JUNEAU	4	1015.2	1016.1	16.6	9.4	13.0	0.7	24.4	1	5.6	1	5	0	10.0	86	219	91	42	22	0	0	0	2.2	10	12.5	12	5	1	6	24	8.8	23
KING SALMON	15	1006.1	1008.0	15.9	9.0	12.4	-0.1	23.9	10	5.0	25	1	0	9.4	85	50	-38	13	20	1	0	0	1.6	15	13.9	9	29	0	3	28	9.3	
KOTZEBUE	3	1007.5	1007.8	15.5	10.0	12.8	2.4	22.8	2	5.6	30	3	0	10.0	84	30	-25	5	13	0	0	0	1.4	26	14.3	17	18	3	9	19	7.6	
MC GRATH	105	996.6	1009.2	19.2	9.3	14.2	1.9	26.7	4	2.8	30+	9	0	6.7	63	66	-30	13	14	0	0	0	0.5	18	6.7	8	29+	5	4	22	7.7	
NOME	4	1006.8	1007.5	15.3	8.1	11.7	2.3	25.6	3+	-0.6	26	4	1	8.3	79	35	-61	10	12	0	0	0	0.4	20	13.4	19	18	6	3	22	7.9	30
ST. PAUL ISLAND	7	1006.4	1007.3	10.1	5.3	7.7	-0.9	13.3	3+	1.7	9	0	0	7.2	97	43	-41	13	14	0	0	0	1.8	32	15.6	3	29	2	1	28	9.1	
SHEMYA	37	1009.1	1012.8	11.2	8.3	9.8	-0.1	15.6	28	6.7	4	0	0	8.3	91	34	-20	17	12	1	0	0	2.1	28	12.5	19	18+	0	3	28	9.5	
SUMMIT	732	926.2	1010.8	15.6	6.2	10.9		21.7	10+	-0.6	30	4	2	6.7	77	42		11	16	0	0	0	1.7	23	10.7	22	23+	2	6	23	8.0	
TALKEETNA	105			19.4	7.6	13.6	0.9	27.8	3	1.1	26	12	0			78	-57	46	14	0	0	0			7.2	2	3					
UNALAKLEET	5			17.4	10.1	13.8		26.7	2+	4.4	26	5	0			28		6	15	0	0	0			13.0	21	18	6	5	20	7.4	
YAKUTAT	9	1013.5	1014.7	14.7	9.4	12.1	-0.1	21.1	10	3.3	28	1	0	11.1	93	532	254	117	25	0	0	0	1.7	11	13.0	12	22	2	2	27	9.1	
ARIZONA																																
FLAGSTAFF	2135	791.1	1015.4	25.9	8.3	17.2	-0.6	31.7	1	4.4	27	0	0	3.9	46	72	-1	26	9	11	0	0	1.0	21	8.9	NW	8+	14	12	5	4.3	76
PHOENIX	340	971.2	1008.8	39.0	25.3	32.2	1.3	46.7	1	22.2	19	31	0	13.3	34	30	2	17	3	6	0	0	0.3	17	24.1Y	SE	12	22	6	3	2.6	88
TUCSON	788	924.5	1010.0	34.8	21.7	28.3	-0.1	41.7	1	17.8	16	28	0	13.9	46	74	1	18	12	9	0	0	1.0	19	18.8	E	9	20	8	3	3.2	85
WINSLOW	1492	852.7	1012.4	32.2	16.7	24.4	-1.0	37.8	1	11.7	27	18	0	9.4	45	18	-18	7	9	13	0	0	0.8	20	15.6	24	9	14	14	3	4.1	
YUMA	59	1001.4	1008.3	39.0	25.5	32.3	-0.8	46.7	1	21.1	17	31	0	16.1	43	7	-6	7	1	1	0	0	2.9	17	14.8	E	6	26	4	1	1.9	93
ARKANSAS																																
FORT SMITH	136	1000.0	1016.2	34.0	19.2	26.6	-1.3	39.4	21	15.0	27+	25	0	17.8	64	29	-45	21	4	3	0	0	0.3	2	14.8	W	22	9	14	8	5.1	75
LITTLE ROCK	78	1007.1	1016.4	33.9	20.6	27.3	-0.1	39.4	21	16.7	30	26	0	20.0	70	91	19	28	9	8	0	0	0.7	18	17.0	NW	6	15	9	7	4.7	86
CALIFORNIA																																
BAKERSFIELD	145	993.9	1011.2	35.6	20.9	28.2	0.6	40.6	8+	14.4	16+	24	0	11.7	39	T	0	T	0	1	0	0	2.0	33	13.4	6	28	26	4	1	1.2	
BISHOP	1252	872.7		34.8	12.5	23.7	0.2	41.1	9	5.0	15	20	0			2	-1	2	2		0	0						23	6	2	2.5	
BLUE CANYON	1609			25.8	14.7	20.2	0.9	33.3	7	5.6	15	2	0			2	1	2	1		0	0			7.2	19	15+	22	8	1	2.2	
EUREKA U	13			17.2	11.9	14.6	0.8	23.3	7	9.4	17	0	0			2	-1	1	3		0	0			12.5	SW	20+	7	13	11	6.0	59
FRESNO	100	999.7	1011.4	35.4	17.6	26.5	0.4	40.6	5	12.2	16	26	0	12.2	44	0	T	0	0	0	0	0	2.2	29	9.8	NW	14	26	5	0	1.1	95
LONG BEACH	8	1011.5	1012.8	28.1	18.4	23.3	0.9	36.7	22	14.4	17+	6	0	15.6	68	6	5	6	1	2	0	0	1.3	21	7.6	26	26	18	9	4	3.5	
LOS ANGELES	30	1008.8	1012.3	26.0	19.3	22.7	2.1	32.2	30	16.7	16+	1	0	17.2	75	2	1	2	1	0	0	0	2.5	24	12.5Y	SW	26	15	12	4	3.8	
LOS ANGELES U	82			30.7	19.8	25.2	2.4	38.9	22	17.8	20+	9	0			9	8	8	3		0	0			8.0	SW	26	19	8	4	3.3	81
MT SHASTA R	1080	892.3	1014.4	29.1	10.8	19.9	0.7	39.4	7+	2.8	17	11	0			8	4	7	2		0	0										
OAKLAND	2	1014.2	1014.3	21.7	15.3	18.5	0.6	25.0	5	12.8	5	0	0	13.9	79	T	-1	T	0	0	0	0	3.6	29	10.3	27	14	17	13	1	3.6	
RED BLUFF	104	998.3	1010.8	36.9	18.5	27.7	0.5	45.6	6	12.8	17	27	0	9.4	36	T	-1	T	1	0	0	0	1.1	16	10.3	SE	16	23	7	1	2.2	94
SACRAMENTO	5	1010.8	1011.6	34.0	14.7	24.4	1.0	41.1	25	11.7	16+	22	0	12.2	55	0	-1	0	0	0	0	0	2.8	20	9.8	SW	18	24	7	0	1.6	98
SANDBERG R	1377	862.9		27.9	15.1	21.5	-1.4	34.4	6	7.2	25+	3	0	7.2	45	2	T	1	3		0	0	1.3	30	16.1	31	22	22	5	4	2.3	
SAN DIEGO	4	1011.5	1012.6	25.4	19.2	22.3	0.2	32.2	22+	16.7	21	2	0	16.7	72	1	-2	1	1	0	0	0	2.0	26	9.4	S	2	12	13	6	4.8	72
SAN FRANCISCO	2	1013.9	1014.5	22.2	13.3	17.8	0.7	26.1	25	11.7	16+	0	0	12.2	77	T	-1	T	0	0	0	0	4.4	29	13.9	27	23	19	12	0	2.7	
SAN FRANCISCO U	16			18.4	12.9	15.7	0.4	21.7	22+	11.1	4+	0	0			1	0	1	1		0	0			14.8	W	1					80
SANTA MARIA	72			23.2	12.2	17.7	0.8	33.9	21	8.3	16	1	0			T	-1	T	0		0	0						21	9	1	3.0	
STOCKTON	7	1011.5	1012.6	34.5	16.7	25.6	1.1	40.6	6	12.2	16	24	0	11.7	49	0	0	0	0	0	0	0	3.1	30	9.4	27	18+	26	5	0	1.5	
COLORADO																																
ALAMOSA	2297	776.8		25.9	7.6	16.8	-0.4	30.0	11	1.7	25	0	0			29	5	7	13		0	0						10	14	7	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature													Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days								No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
	Elevation (ground)	Station Q	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy, 4-7	Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
COLORADO	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
COLORADO SPRINGS	1873	815.4	1015.7	26.7	13.0	19.8	-0.8	32.2	15+	6.1	25	3	0	9.4	56	90	35	26	13	16	0	0	1.3	7	17.9	36	2	9	10	12	5.6	
DENVER	1610	839.5	1013.9	29.6	13.7	21.7	-0.3	36.7	12+	7.2	25	10	0	10.6	58	69	36	27	12	13	0	0	0.4	24	18.8	SW	16	9	15	7	5.3	65
GRAND JUNCTION	1476	853.0	1011.8	33.1	16.9	25.1	0.9	38.9	11	10.6	24	19	0	5.6	32	7	-20	6	4	5	0	0	0.9	12	20.1	SW	8	13	12	6	4.4	71
PUEBLO	1428	857.8	1013.5	31.8	15.1	23.4	-0.2	36.7	12	8.3	25	20	0	11.1	52	50	3	24	7	9	0	0	1.0	8	26.4	N	2	13	11	7	4.8	82
CONNECTICUT																																
BRIDGEPORT	2	1016.3	1017.0	27.3	18.0	22.7	0.3	31.7	25	10.6	11	0	0	17.2	73	20	-93	13	6	3	0	0	1.7	23	12.1	6	15	10	13	8	5.2	
HARTFORD	52	1009.8	1016.3	28.3	15.1	21.7	-0.1	33.9	25	8.3	16+	3	0	16.1	75	88	-14	29	10	4	0	0	1.1	22	10.7	SW	28	8	8	15	6.3	60
DELAWARE																																
WILMINGTON	23	1014.9	1017.9	29.5	18.8	24.2	0.7	34.4	26	11.1	11	5	0	17.8	70	6	-136	4	5	3	0	0	1.1	22	9.4	23	7	7	15	9	5.5	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1005.8	1017.4	29.7	16.1	22.9		35.0	25	8.3	11	4	0	17.8	78	53		14	7	3	0	0	0.6	21	8.9	36	26	7	15	9	5.9	
WASHINGTON NATIONAL	3	1014.9	1017.3	29.2	19.6	24.4	-0.3	33.3	26	13.9	16+	3	0	18.3	70	72	-53	44	8	3	0	0	0.8	19	8.9	SE	13	9	13	9	5.6	65
FLORIDA																																
APALACHICOLA U	4			31.9	24.4	28.2	0.7	36.1	20	21.7	24	11	0			177	-20	61	14	17	0	0			14.8	NW	7	6	17	8	5.9	87
DAYTONA BEACH	9	1016.3	1017.7	31.3	22.2	26.8	-0.3	34.4	3	20.6	27+	12	0	21.7	79	211	49	102	16	16	0	0	0.4	11	13.4	27	7	5	12	14	6.7	
FORT MYERS	5	1016.9	1017.2	33.2	23.4	28.3	0.2	35.0	10+	21.7	27+	26	0	23.3	82	412	225	143	15	25	0	0	0.5	10	12.5	13	26	4	15	12	6.4	
JACKSONVILLE	8	1016.3	1017.4	31.9	22.0	27.0	-0.9	35.6	5	20.6	21+	16	0	22.2	82	248	74	60	17	16	0	0	0.5	18	19.7	NW	6	4	17	10	6.5	49
KEY WEST	1	1015.9	1016.6	31.5	26.7	29.1	0.4	32.2	25+	23.3	27	10	0	22.8	70	90	-20	56	9	14	0	0	3.0	14	11.6	SE	11	10	15	6	5.3	78
LAKELAND U	65			32.3	22.6	27.5	-0.2	35.6	5	21.1	23	23	0			124	-56	35	16		0	0						4	20	7	6.2	52
MIAMI	2	1016.9	1017.1	30.9	24.3	27.6	-0.3	31.7	10+	22.8	31+	0	0	22.8	78	165	-12	62	16	14	0	0	1.7	11	12.5	22	28	3	18	10	6.2	
ORLANDO	33	1013.2	1017.5	33.2	23.3	28.2	0.0	36.7	3	21.1	30	25	0	22.2	75	409	233	90	16	22	0	0	0.6	16	14.3	32	19	2	16	13	7.0	
PENSACOLA	34	1012.9	1017.1	33.3	24.4	28.8	1.3	37.8	20	21.7	30	25	0	21.7	69	79	-98	32	6	12	0	0	0.4	34	7.6	28	26+	7	13	11	6.1	
TALLAHASSEE	17	1014.6	1016.9	34.1	21.4	27.8	0.5	37.8	20	18.9	13	27	0	22.8	81	133	-43	43	12	19	0	0	0.4	36	10.3	15	31	1	24	6	5.9	
TAMPA	6	1017.3	1017.4	32.6	23.0	27.8	0.1	35.6	12+	21.1	19+	22	0	22.8	82	248	39	87	17	24	0	0	0.1	21	10.3	27	24	1	14	16	7.6	60
WEST PALM BEACH	5	1016.3	1016.9	32.8	24.1	28.4	0.1	35.0	29+	22.2	31+	27	0	22.2	72	70	-101	16	14	16	0	0	1.3	12	10.7	26	31	2	15	14	6.6	
GEORGIA																																
ATHENS	244	989.2	1017.4	31.2	20.0	25.6	-0.5	35.0	9	17.8	22+	9	0	20.0	76	67	-25	29	5	4	0	0	0.4	4	7.2	28	8	8	19	4	5.0	
ATLANTA	308	981.0	1017.2	30.4	20.3	25.4	-0.3	33.3	19+	18.3	28+	6	0	19.4	74	71	-21	23	8	10	0	0	0.5	2	21.0	W	20	10	13	8	5.1	67
AUGUSTA	41	1011.5	1016.8	32.9	20.8	26.9	0.1	37.8	9	17.2	22	24	0	21.1	78	62	-37	41	9	10	0	0	0.4	4	10.3	22	2	6	20	5	5.7	
COLUMBUS	117	1003.1		33.1	22.2	27.7	0.6	36.1	20	18.9	29	26	0	21.1	71	26	-91	24	4	2	0	0	0.6	2	10.3	36	4	11	19	1	4.5	
MACON	108	1004.4	1017.0	33.5	20.3	26.9	-0.4	36.7	8	16.1	22	28	0	21.1	76	90	-17	50	9	10	0	0	0.6	1	11.2	NE	16	3	25	3	5.7	72
ROME	194			32.0	19.3	25.7	-0.1	34.4	19+	16.1	31	15	0			27	-69	21	4		0	0										
SAVANNAH	14	1015.6	1017.2	32.6	21.8	27.2	0.0	36.7	8	20.6	31+	18	0	22.2	80	321	152	112	14	14	0	0	0.7	10	16.5	NE	11	2	16	13	6.9	67
HAWAII																																
HILO	8	1012.9	1014.1	29.0	20.4	24.7	0.4	31.1	31	17.8	26+	0	0	21.1	81	223	-68	59	22	1	0	0	0.5	36	11.2	NW	19	7	11	13	6.2	49
HONOLULU	2	1013.5	1014.1	31.3	23.3	27.3	0.9	32.2	15+	20.0	4	3	0	19.4	64	12	-11	5	8	0	0	0	5.5	5	12.5	NE	19	9	17	5	4.9	72
KAHULUI	15	1011.2	1013.6	30.8	21.4	26.2	0.1	34.4	6	17.2	4	4	0	20.6	72	21	12	15	7	0	0	0	5.2	4	13.4	E	16+	16	9	6	4.3	70
LIHUE	31	1010.8	1015.8	29.3	23.9	26.6	0.8	30.0	29+	21.7	5	0	0	21.7	75	32	-30	10	18	0	0	0	4.6	4	10.7	NE	20	4	21	6	5.6	68
IDAHO																																
BOISE	865	914.3	1012.3	32.3	14.9	23.6	1.3	38.9	11	9.4	18	15	0	6.1	34	1	-3	1	1	1	0	0	0.8	31	16.5	SW	9	19	9	3	2.9	86
LEWISTON	431			32.5	15.3	23.9	1.9	41.1	8	8.9	31+	17	0			17	6	16	6		0	0			17.4Y		20	21	5	5	2.6	
POCATELLO	1358	863.9	1013.5	30.4	11.2	20.8	-0.3	37.2	9	6.1	24	9	0	4.4	40	35	21	29	8	7	0	0	0.8	24	15.6	S	28+	15	11	5	3.8	75
ILLINOIS																																
CAIRO U	96			30.0	20.7	25.3	-1.3	34.4	20+	15.6	10	9	0			115	36	43	10		0	0			17.9	SW	22	15	11	5	4.5	71
CHICAGO O HARE	201	991.5	1015.5	27.8	18.6	23.2	1.4	33.9	18	10.6	9+	5	0	18.3	75	177	96	64	12	9	0	0	1.5	23	17.9	33	14	8	6	17	6.4	
CHICAGO MIDWAY	185	993.9	1016.0	27.6	18.4	23.0	-0.4	35.0	18	9.4	10	3	0	17.8	74	157	77	48	14	8	0	0	1.6	21	16.1	SE	25	9	8	14	6.2	73
MOLINE	177	994.2	1015.5	28.4	18.2	23.3	0.2	34.4	19+	10.0	9	7	0	18.3	76	208	119	110	10	6	0	0	1.3	22	13.9	NW	6	7	12	12	5.8	64
PEORIA	199	992.6	1016.1	27.7	17.1	22.4	-1.1	33.3	18+	8.9	9	4	0	17.2	76	108	35	45	10	6	0	0	1.2	21	11.2	NW	6	5	14	12	6.1	58
ROCKFORD	221	988.8	1015.5	26.2	17.4	21.8	-0.7	32.8	18+	9.4	9+	2	0	18.3	82	231	126	108	12	9	0	0	1.3	22	12.1	1	14	6	10	15	6.6	
SPRINGFIELD	179	994.2	1016.1	28.7	17.7	23.2	-0.8	33.9	18	9.4	9	7	0	18.9	79	115	45	47	8	7	0	0	1.2	21	12.5	NW	12	9	11	11	5.5	63
INDIANA																																
EVANSVILLE	116	1[illegible]3.1	1017.0	28.6	17.9	23.2	-1.9	33.3	19	10.6	10	3	0	19.4	[illegible]0	63	-15	28	6	3	0	0	0.6	24	11.6	NW	3	11	10	10	5.3	72

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind						No. of days (sunrise to sunset)			Sky cover tenths sunrise to sunset	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile 1.6 kilometers							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10		
INDIANA	M	Mb.	Mb	C.	C	C.	C	C.		C.				C	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p s.		M.p.s							%
FORT WAYNE	241	987.1	1016.6	27.3	15.7	21.5	- 1.0	32.8	18+	6.7	10	2	0	16.7	77	84	7	28	11	6	0	0	1.4	24	9.8	NW	7	4	12	15	6.6	65
INDIANAPOLIS	241	988.2	1016.9	28.4	17.2	22.8	- 0.3	33.3	19+	10.0	10	3	0	17.8	75	75	- 2	27	11	8	0	0	1.0	22	9.4	S	23	7	11	13	6.2	58
SOUTH BEND	236	988.2	1015.7	25.8	15.8	20.8	- 1.4	32.2	18+	7.8	10	2	0	17.8	83	98	8	30	16	8	0	0	1.5	22	11.2	27	8	5	10	16	6.8	
IOWA																																
BURLINGTON	211			27.9	17.7	22.8	- 0.8	33.9	18	10.0	9	8	0	17.8	74	118	26	53	7	7	0	0	1.2	23	13.0	3	5	9	11	11	5.5	
DES MOINES	286	981.7	1016.0	27.5	17.4	22.4	- 0.9	34.4	20	10.0	9	8	0	17.8	77	169	76	67	12	10	0	0	1.3	22	18.3	SW	1	12	9	10	4.9	61
DUBUQUE	322	977.3		27.0	17.0	22.0	0.6	33.9	17	9.4	9	4	0			153	58	76	11		0	0						9	9	13	6.1	
SIOUX CITY	334	976.3	1015.4	28.2	17.2	22.7	- 1.2	35.6	13	10.6	9	11	0	17.2	73	53	- 14	24	12	5	0	0	0.7	20	14.8	W	10	16	5	10	4.6	67
WATERLOO	265	984.1	1015.4	26.9	16.4	21.7	- 0.3	34.4	17	7.8	9	7	0	17.2	76	94	7	34	10	2	0	0	1.5	23	11.2	32	8	8	10	13	5.8	
KANSAS																																
CONCORDIA	448	963.1	1015.0	29.8	17.8	23.8	- 2.3	36.1	20	12.2	23	11	0	16.7	69	169	89	96	8	8	0	0	1.8	18	11.6	SW	6	15	7	9	4.3	78
DODGE CITY	787	926.2	1014.7	30.4	17.9	24.2	- 2.1	35.6	20	12.8	25	17	0	13.3	56	101	41	70	10	7	0	0	2.4	18	18.8	SW	21	12	9	10	5.3	71
GOODLAND	1114	890.3	1014.7	29.1	14.6	21.8	- 1.9	35.0	12	8.9	25	12	0	12.9	66	62	5	34	6	4	0	0	2.7	17	14.3	31	21+	12	11	8	4.6	
TOPEKA	267	984.8	1015.9	29.8	17.6	23.7	- 2.1	36.7	21+	11.7	9	12	0	18.3	74	83	- 26	37	8	4	0	0	1.0	19	11.2	N	2	12	12	7	5.1	68
WICHITA	403	968.2	1014.8	32.7	18.9	25.8	- 1.3	38.3	20	13.9	26	19	0	16.1	60	84	11	45	6	7	0	0	2.1	18	17.0	W	24	13	7	11	5.5	68
KENTUCKY																																
COVINGTON	265	986.1	1017.1	29.1	16.9	23.0	- 0.4	34.4	19+	10.0	10	3	0	17.2	74	67	1	40	10	6	0	0	1.2	23	14.3	36	19	7	12	12	6.0	
LEXINGTON	294	982.7	1017.6	27.9	17.5	22.7	- 1.7	32.8	19	11.1	10	2	0	18.3	79	100	19	34	9	8	0	0	1.0	21	9.4	29	25+	8	12	11	5.7	
LOUISVILLE	145	999.3	1016.6	29.9	19.1	24.5	- 0.1	34.4	19+	12.8	10	6	0	18.3	70	62	- 13	30	8	5	0	0	0.9	22	12.5	NE	19	9	12	10	5.4	63
LOUISIANA																																
ALEXANDRIA	28	1012.9	1017.2	33.3	20.5	26.9	- 0.9	35.0	21+	17.2	31	28	0	21.1	77	47	- 41	15	12	14	0	0	0.3	23	10.7	18	2	8	14	9	4.9	
BATON ROUGE	20	1014.2	1017.0	33.9	22.6	28.2	0.2	37.2	5	20.0	31	29	0	21.1	70	50	- 83	22	8	11	0	0	0.4	32	11.6	36	26	13	15	3	4.3	
LAKE CHARLES	3	1015.6	1016.8	32.2	22.1	27.2	- 0.7	34.4	5	20.0	31	22	0	22.8	83	169	47	72	9	16	0	0	0.7	11	17.4	12	27	7	14	10	5.5	
NEW ORLEANS	1	1015.9	1016.8	32.9	21.6	27.3	- 0.4	35.6	5	18.9	31+	22	0	23.3	82	125	- 11	35	11	11	0	0	0.5	34	9.4	12	26+	15	9	7	4.5	
SHREVEPORT	77	1007.5	1016.5	34.2	22.1	28.1	- 0.7	37.2	21	18.3	31	31	0	21.1	72	32	- 33	11	7	6	0	0	1.1	19	8.9	20	13+	11	14	6	5.2	78
MAINE																																
CARIBOU	190	990.9		21.6	10.0	15.8	- 1.2	25.6	31+	3.9	17+	0	0			129	36	43	12		0	0						4	14	13	6.7	
PORTLAND	13	1013.5	1015.9	24.7	12.3	18.5	- 0.8	30.0	28	6.1	11+	0	0	13.3	76	20	- 41	7	9	2	0	0	1.8	23	11.6	W	8	8	14	9	5.6	69
MARYLAND																																
BALTIMORE	45	1011.9	1017.4	29.7	18.5	24.1	0.2	34.4	26+	12.2	11	8	0	17.2	70	56	- 75	26	7	5	0	0	0.9	23	13.4	W	7	10	14	7	5.2	68
MASSACHUSETTS																																
BLUE HILL OBS R	192			25.2	14.8	20.0	- 0.8	30.6	26+	8.9	5	0	0			42	- 60	16	8		0	0			17.0	S	9					67
BOSTON	5	1015.2	1016.1	26.7	17.2	21.9	- 0.1	31.1	28+	12.2	5	0	0	14.4	66	21	- 72	8	10	1	0	0	1.3	24	13.0	SW	9	7	14	10	5.9	65
WORCESTER	301	981.0	1017.6	24.4	14.3	19.4	- 0.8	30.0	26+	7.8	11	0	0	12.8	67	73	- 34	33	9	3	0	0	1.7	26	11.2	30	10	8	11	12	5.8	
MICHIGAN																																
ALPENA	210	990.9	1016.0	22.8	11.8	17.3	- 0.7	30.0	21	5.0	5+	0	0	13.9	81	123	46	34	12	3	0	0	0.3	22	8.9	SW	21	6	10	15	6.8	50
DETROIT	189			25.7	16.8	21.3	- 1.4	29.4	18+	10.0	10	0	0	16.1	74	125	52	48	12	10	0		1.1	21	10.3	19	22					
DETROIT METRO	193	992.2	1016.0	26.4	14.8	20.6	- 0.9	31.1	18+	7.2	10+	0	0	15.6	76	78	6	24	15	10	0	0	1.0	22	10.3	NE	14	9	7	15	6.2	61
FLINT	235	988.2	1015.8	24.7	14.9	19.8	- 1.1	29.4	22+	6.1	10	0	0	15.6	77	116	36	37	15	8	0	0	1.3	22	12.5	26	24	8	8	15	6.4	
GRAND RAPIDS	239	987.1	1016.0	25.8	14.9	20.4	- 0.9	31.7	22+	7.2	10	0	0	16.1	79	127	59	29	15	10	0	0	1.3	21	15.6	NW	19	4	9	18	7.2	50
HOUGHTON LAKE	350	974.6	1016.2	23.5	12.5	18.0	- 0.6	28.9	30+	3.3	4	0	0	15.0	82	118	50	41	14	7	0	0	0.8	23	7.6	11	26+	6	10	15	6.8	
LANSING	256	984.8	1016.0	25.4	13.5	19.5	- 1.7	31.1	18	4.4	10	0	0	16.1	80	129	51	37	15	9	0	0	1.2	22	13.9	SW	22	6	5	20	7.1	50
MARQUETTE U	206			21.6	13.1	17.4	- 1.4	32.2	30	8.3	7+	1	0			105	28	36	13		0	0			10.3	SW	31+	8	5	18	6.7	47
MUSKEGON	191	993.2	1016.1	24.8	15.4	20.1	- 1.2	29.4	25+	8.3	10+	0	0	16.1	79	169	96	61	11	14	0	0	1.4	21	10.3	20	21+	5	10	16	6.8	
SAULT STE MARIE	220	988.5	1014.9	21.5	11.4	16.4	- 1.3	28.9	30	5.0	8+	0	0	13.9	85	115	41	28	13	4	0	0	0.2	30	10.3	NW	3	4	8	19	7.6	44
MINNESOTA																																
DULUTH	435	964.8	1015.6	22.2	11.1	16.6	- 1.1	31.1	17	3.3	7+	0	0	12.8	80	262	165	87	15	9	0	0	0.6	12	18.3	NW	16	3	12	16	7.0	47
INTERNATIONAL FALLS	359	972.2	1014.7	25.4	11.9	18.7	1.4	31.7	29+	4.4	3	0	0	11.7	66	67	- 25	20	10	6	0	0	0.4	14	12.5	18	31+	9	9	13	6.0	
MINNEAPOLIS	254	985.1	1014.9	26.2	15.8	21.0	- 0.1	36.1	20+	7.2	7	5	0	15.6	74	63	- 18	21	10	6	0	0	0.4	19	14.3	SW	21	7	9	15	6.5	62
ROCHESTER	395	968.5	1015.5	25.4	14.8	20.1	- 0.9	33.9	17	6.1	9	3	0	16.1	80	54	- 43	27	11	3	0	0	1.4	22	10.7	36	6	8	8	15	6.4	
ST CLOUD	313	978.3	1015.2	25.7	13.4	19.6	- 0.8	35.0	16	6.1	4	4	0			125	31	45	8		0	0						7	8	16	6.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow Ice pellets				Fastest mile (1.6 kilometers)							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
MISSISSIPPI	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s		M.p.s							%
JACKSON	94	1005.4	1017.1	34.3	22.1	28.2	0.4	37.2	21	18.9	30	29	0	21.7	74	72	- 12	31	10	11	0	0	0.2	28	14.8	SW	25+	12	17	2	4.1	81
MERIDIAN	88	1006.4	1017.2	34.7	20.8	27.8	0.4	37.2	8+	17.2	30	30	0	20.0	69	43	- 47	38	4	5	0	0	0.3	34	8.9	36	11	6	23	2	5.1	
MISSOURI																																
COLUMBIA REGIONAL	270	985.1	1016.8	31.2	18.6	24.9	0.4	37.2	20+	11.7	9	13	0	17.2	68	28	- 69	7	7	5	0	0	1.0	21	15.2	N	6	8	10	13	5.9	63
KANSAS CITY	226	989.2	1015.5	30.0	20.3	25.2	- 1.4	36.1	20+	13.9	9	13	0	17.8	66	74	- 22	35	8	7	0	0	1.2	21	17.9	NW	22	11	10	10	5.2	59
ST JOSEPH	247			29.9	17.3	23.6	- 1.7	35.6	20	8.9	9	14	0			115	8		6				0.9	19	7.6	31	22+	15	8	8	4.4	
ST LOUIS	163	996.6	1016.6	30.6	18.7	24.6	- 0.3	36.7	19	12.2	10	14	0	19.4	75	68	- 8	38	8	6	0	0	0.8	20	11.6	SW	2	7	11	13	5.9	62
SPRINGFIELD	386	972.6	1016.9	31.4	18.1	24.8	- 0.8	37.8	21	12.2	28	15	0	16.7	65	85	1	47	11	10	0	0	1.5	19	10.7	N	21	14	9	8	5.0	73
MONTANA																																
BILLINGS	1087	893.0	1014.8	28.6	13.8	21.2	- 1.0	34.4	11+	7.8	31	9	0	9.4	53	41	18	29	7	9	0	0	1.1	23	18.8	NW	9	12	12	7	4.8	71
GLASGOW	696	933.6	1014.0	29.4	14.0	21.7	1.8	37.2	12	6.1	31	8	0	10.6	55	61	23	26	5	7	0	0	1.2	9	12.5	32	30+	13	13	5	4.4	
GREAT FALLS	1116	890.3	1014.8	28.0	13.7	20.9	1.6	35.6	11+	9.4	31	5	0	10.0	55	32	0	13	8	4	0	0	1.1	27	15.6	W	22	14	6	11	4.7	79
HAVRE	788	923.8	1013.9	30.8	14.1	22.5	3.1	37.8	9	7.2	31	17	0	9.4	49	44	16	18	6	10	0	0	0.4	28	18.8	NW	8	12	11	8	4.8	82
HELENA	1167	882.5	1015.9	26.9	10.8	18.9	- 0.1	33.9	9	6.1	3	4	0	7.2	53	41	19	16	8	9	0	0	1.3	29	13.4	S	9	14	9	8	4.4	65
KALISPELL	904	912.3	1015.5	29.4	10.1	19.8	2.5	35.0	29+	5.6	3	10	0	8.9	57	26	- 2	9	10	10	0	0	0.6	2	12.5	3	1	16	8	7	4.0	
MILES CITY	801	922.5	1013.6	29.5	15.1	22.3	- 0.2	37.2	12+	9.4	24+	8	0	11.1	54	85	53		7	8	0		1.3	3								
MISSOULA	972	905.5	1015.8	29.1	9.1	19.1	0.9	35.6	8	5.0	24	10	0	8.3	55	6	- 12	3	5	3	0	0	0.9	32	12.5	SW	19+	17	8	6	3.8	78
NEBRASKA																																
GRAND ISLAND	561	950.2	1015.2	29.1	16.2	22.7	- 1.4	36.1	20	10.0	26	11	0	14.4	63	36	- 23	17	7	3	0	0	1.4	19	11.2	19	10	13	11	7	4.4	
LINCOLN U	351			29.3	18.8	24.1	- 1.3	36.7	20	12.2	26	12	0			96	10	53	10		0	0			13.4	W	20	14	8	9	4.4	61
NORFOLK	471			28.6	15.9	22.2	- 1.9	36.1	20+	9.4	26	11	0			68	2	63	7		0	0						15	7	9	4.4	
NORTH PLATTE	846	919.4	1015.3	29.4	13.6	21.6	- 2.1	35.0	18+	5.0	23	13	0	13.3	63	24	- 30	10	4	4	0	0	1.3	13	14.8	N	31+	13	12	6	4.4	74
OMAHA	298	980.4	1015.2	28.8	17.4	23.1	- 1.4	37.2	20	9.4	9	12	0	17.8	76	66	- 35	33	11	4	0	0	0.6	19	13.4	NW	6	14	8	9	4.9	70
SCOTTSBLUFF	1206	881.1	1014.5	29.7	13.7	21.7	- 0.9	37.2	12	8.9	25	10	0	11.1	57	43	18	12	10	6	0	0	0.8	9	11.2	29	19+	15	10	6	4.3	
VALENTINE	789			29.3	14.0	21.7	- 1.1	37.8	13	5.6	24	13	0			25	- 33	9	8		0	0			12.5	S	19+	17	7	7	3.9	76
NEVADA																																
ELKO	1539	845.6	1013.3	29.7	9.1	19.4	0.1	35.6	9	2.2	24+	9	0	0.0	30	7	T	6	5	5	0	0	0.2	8	13.0	18	12	17	11	3	3.5	
ELY	1906	811.0	1012.5	28.6	6.7	17.7	- 1.3	35.6	9	0.6	24	8	0	0.0	36	12	- 1	5	7	7	0	0	2.4	19	18.3	SE	18	15	9	7	3.9	81
LAS VEGAS	659	935.7	1010.0	37.7	22.8	30.3	- 0.4	43.9	1	17.8	16	28	0	7.2	27	21	9	10	4	7	0	0	1.5	20	17.4	NE	25	20	9	2	2.5	89
RENO	1342	866.2	1013.2	32.0	7.5	19.8	1.2	39.4	8	3.3	16	12	0	2.2	36	4	- 1	2	4	6	0	0	0.5	27	16.5	NW	14	19	12	0	2.3	93
WINNEMUCCA	1311	868.9	1012.6	34.2	11.0	22.6	2.8	41.1	9	1.7	16	22	0	0.6	25	T	- 4	T	0	0	0	0	1.2	35	13.4	SW	18	24	6	1	1.9	87
NEW HAMPSHIRE																																
CONCORD	104	1003.7	1016.3	25.2	10.4	17.8	- 1.8	31.1	25+	2.2	5	0	0	15.0	83	54	- 21	29	9	5	0	0	0.[illegible]	24	11.2	W	28+	8	13	10	5.8	60
MT WASHINGTON OBS	1909			11.2	4.3	7.8	- 0.9	17.8	23	- 1.7	11	0	5			211	42	47	20	4	T	T			39.8Y	W	10	4	7	20	7.8	33
NEW JERSEY																																
ATLANTIC CITY	20	1014.9	1017.3	29.2	16.9	23.1	- 0.1	35.0	26	8.3	11	8	0	16.7	71	11	-113	7	4	3	0	0	1.2	21	10.3	18	12	5	15	11	6.0	64
ATLANTIC CITY U	3			25.1	19.3	22.2	- 0.9	28.9	26+	13.9	11	0	0			37	- 93	37	2						13.9	S	7					
NEWARK	2	1015.9	1016.9	28.9	19.9	24.4	0.8	34.4	25	13.3	11	4	0	16.7	64	58	- 54	55	3	3	0	0	1.3	22	10.7	29	25	8	15	8	5.7	
TRENTON U	17			28.6	19.0	23.8	0.6	33.9	25	13.3	11+	3	0			30	- 91	26	5		0	0			12.5	S	7	11	11	9	5.2	68
NEW MEXICO																																
ALBUQUERQUE	1619	840.5	1013.1	30.2	16.6	23.4	- 1.2	37.2	1	14.4	26+	10	0	10.6	51	74	41	24	12	9	0	0	1.3	12	18.8	E	16	14	11	6	4.7	73
CLAYTON	1515			27.7	14.3	21.0	- 1.9	31.7	6	8.3	25	0	0			85	31	25	9		0	0						10	12	9	5.2	
ROSWELL	1101			31.7	17.2	24.4	- 0.3	37.2	1	15.0	26+	17	0			85	44	25	10		0	0			13.4	N	6					66
NEW YORK																																
ALBANY	84	1006.1	1016.6	26.0	13.1	19.6	- 1.6	30.6	25	5.0	16	0	0	12.8	68	38	- 40	11	10	3	0	0	0.9	21	8.9	NW	9+	6	12	13	6.5	61
BINGHAMTON	485	959.4	1017.5	23.8	13.7	18.8	- 0.4	29.4	1	6.7	5	0	0	14.4	79	96	6	30	12	7	0	0	1.6	24	10.7	W	9	7	9	15	6.5	65
BUFFALO	215	990.9	1016.3	24.7	14.9	19.8	- 0.4	30.6	24	7.2	5	0	0	14.4	73	106	29	22	16	7	0	0	2.5	23	18.3	SW	24	6	9	16	6.7	58
NEW YORK U	40	1013.5	1017.1	29.1	19.3	24.2	0.3	34.4	24	13.9	11	3	0	15.6	63	49	- 64	26	6	2	0	0	0.9	23	8.5	NE	15+					65
NEW YORK KENNEDY	4	1016.6	1017.3	27.9	19.6	23.8	0.2	32.2	26	12.8	16	1	0	17.2	69	11	-116	5	4	1	0	0	1.9	21	11.2	30	9	7	20	4	5.2	
NEW YORK LA GUARDIA	3	1015.9	1016.8	27.3	18.9	23.1	- 1.0	31.7	24	13.9	5	0	0	15.6	66	24	-105	18	3	5	0	0	1.4	21	11.6	NW	10	8	14	9	5.5	
ROCHESTER	167	996.6	1016.6	27.0	14.9	21.0	0.1	32.2	31+	7.2	5	2	0	16.1	77	80	11	21	11	4	0	0	1.5	24	12.1	W	24+	7	10	14	6.3	67
SYRACUSE	125	1001.4	1016.2	26.2	15.1	20.7	- 0.6	30.6	25+	7.8	15	0	0	15.6	75	96	13	26	13	6	0	0	0.9	25	13.0	W	9	7	8	16	6.7	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NORTH CAROLINA	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ASHEVILLE	652	944.1	1018.9	27.9	17.0	22.5	0.6	31.1	19	12.8	30	0	0	18.9	84	48	-78	26	11	9	0	0	0.4	36	10.3	35	9	3	14	14	6.7	59
CAPE HATTERAS R	2	1017.3	1017.5	29.2	22.2	25.7	0.4	32.8	4	18.3	19+	1	0	21.7	79	45	-118	12	11	12	0	0	0.4	5	13.4	6	15	3	16	12	6.6	68
CHARLOTTE	224	990.5	1017.5	30.3	19.8	25.1	-0.9	33.3	24+	15.6	22	9	0	18.9	71	15	-92	8	5	2	0	0	0.4	10	13.0	W	9	7	14	10	5.9	69
GREENSBORO	273	986.8	1018.0	29.7	18.6	24.2	-0.4	33.9	19	14.4	22	8	0	18.3	73	18	-99	6	6	7	0	0	0.1	9	14.3	W	7	6	15	10	6.1	62
RALEIGH	132	1002.0	1017.6	29.6	18.8	24.2	-0.7	32.8	4	15.0	11	4	0	18.9	77	106	-26	29	10	9	0	0	0.2	12	16.1	20	8	3	17	11	6.3	65
WILMINGTON	9	1015.9	1017.4	31.5	21.0	26.3	-0.1	36.1	4	16.7	17	12	0	22.8	85	125	-50	45	15	10	0	0	0.4	10	14.3	N	19	3	13	15	6.7	53
NORTH DAKOTA																																
BISMARCK	502	955.3	1014.0	29.5	13.6	21.6	0.8	37.8	15	3.9	3	13	0	12.8	61	43	-1	27	5	4	0	0	0.4	7	21.0	SW	17	8	15	8	5.3	71
FARGO	273	981.7	1014.1	28.1	14.7	21.4	0.6	35.0	15	3.3	3	9	0	15.0	70	88	13	25	9	7	0	0	0.5	18	16.1	N	21	8	13	10	5.5	60
WILLISTON	579	946.8	1014.4	28.5	12.9	20.7	0.6	37.8	12	7.8	31	7	0	12.2	65	82	44	62	9	10	0	0	0.7	33	15.2	N	14	8	15	8	5.5	74
OHIO																																
AKRON	368	973.2	1017.3	26.3	15.7	21.0	-0.9	29.4	24+	7.8	5	0	0	15.6	74	81	2	26	13	6	0	0	1.0	22	10.3	24	7	8	10	13	6.1	
CINCINNATI ABBE OB	232			29.7	17.3	23.5	-0.8	35.0	17	10.6	10	11	0			55	-28	31	9		0	0			8.5	N	19					59
CLEVELAND	237	988.5	1017.3	25.6	15.4	20.5	-0.8	30.0	24	7.8	5	0	0	15.6	76	162	79	34	13	7	0	0	1.4	20	17.4	S	26	10	9	12	5.6	64
COLUMBUS	247	987.5	1017.3	26.9	15.3	21.2	-1.7	32.8	17	7.2	10	1	0	15.6	74	202	130	96	12	8	0	0	0.6	19	13.9	SW	26+	6	14	11	6.0	56
DAYTON	305	981.4	1017.1	29.1	15.6	22.3	-0.8	35.6	18	7.2	5	5	0	16.7	73	80	6	33	13	5	0	0	1.0	23	18.8	NW	19	8	13	10	5.6	70
MANSFIELD	395			26.8	15.9	21.4	-1.5	30.6	18+	8.9	5	0	0	16.7	76	146	64	98	11	5	0	0	1.4	21	12.5	32	17	8	10	13	6.1	
TOLEDO	204	991.5	1016.3	26.2	14.2	20.2	-1.4	31.7	14	6.1	5	0	0	16.1	79	114	29	61	12	10	0	0	1.3	23	16.5	NW	18	7	11	13	6.4	59
YOUNGSTOWN	359	974.9	1017.2	25.7	13.9	19.8	-1.3	30.6	24	6.7	11+	0	0	15.6	79	28	-61	6	12	4	0	0	1.0	23	12.1	27	7	7	13	11	6.0	
OKLAHOMA																																
OKLAHOMA CITY	392	970.2	1015.7	33.4	20.3	26.9	-1.3	37.8	21+	16.1	26+	22	0	16.7	58	46	-18	19	7	7	0	0	2.2	16	19.2	W	24	10	12	9	5.4	74
TULSA	198	991.9	1015.6	33.9	21.2	27.6	0.1	40.0	21	15.6	28+	21	0	18.3	61	131	54	56	8	5	0	0	2.1	19	12.1	NW	21	15	5	11	4.9	71
OREGON																																
ASTORIA	2	1016.3	1017.2	23.2	11.7	17.4	1.3	33.9	7	7.2	31	1	0	13.3	82	9	-28	6	5	1	0	0	1.9	31	8.9	32	27+	12	11	8	4.7	
BURNS U	1265	874.0	1014.7	29.4	10.7	20.1	0.5	37.2	8	2.2	17	10	0	3.9	38	8	1	5	4		0	0	1.3	31				21	6	4	2.9	
EUGENE	109	1001.7	1015.2	29.8	11.3	20.6	1.8	41.1	7	5.6	13	12	0	11.1	63	43	33	36	3	2	0	0	1.3	32	9.8	32	31	17	6	8	4.1	
MEACHAM	1234			25 1	11.	81										15	1	10	4		0	0			7.6	28	9	21	6	4	2.5	
MEDFORD	396	967.2	1014.0	33.7	11.8	22.8	1.3	42.8	7	6.7	17	19	0	9.4	50	9	5	5	4	1	0	0	1.4	31	11.6	22	16	24	2	5	2.4	
PENDLETON	452	961.7	1014.2	32.9	16.2	24.6	2.4	43.9	8	9.4	31+	18	0	5.6	32	9	2	7	4	3	0	0	0.8	26	12.5	26	15	23	6	2	2.2	
PORTLAND	6	1014.2	1015.6	29.4	14.7	22.1	2.8	40.0	7	10.6	18	11	0	11.7	58	17	1	13	4	2	0	0	2.5	32	10.3	NW	27	18	7	6	3.7	79
SALEM	60	1007.8	1015.3	29.9	10.3	20.1	1.2	40.0	7	4.4	13	13	0	7.8	50	4	-8	4	2	1	0	0	1.4	35	8.9	1	31	15	7	9	4.0	
SEXTON SUMMIT R	1169	885.2	1014.3	25.3	12.7	19.0	1.7	36.1	7	5.0	15	5	0			23	17	13	2		0	0			20.1	20	16	23	3	5	2.1	
PACIFIC AREA																																
GUAM TAGUAC R	110	997.0	1009.5	29.2	22.7	26.0	-0.3	31.7	23	20.6	20	0	0	23.9	89	459	133	161	27	5	0	0	1.7	8	9.8	SE	18	0	6	25	8.9	37
JOHNSTON	2			28.8	25.6	27.2	-0.3	30.0	17	23.9	2					176	118	158			0	0			46.9	NW	19					
KOROR R	29	1006.1	1009.9	30.8	24.3	27.6	0.3	32.2	21+	22.8	30+	2	0	23.9	83	403	3	80	23	9	0	0	2.3	26	11.2	SW	28	0	0	31	9.8	49
KWAJALEIN	2	1008.8	1009.7	30.6	25.5	28.1	0.3	31.7	24+	23.3	1	0	0	23.9	81	240	-4	70	20	0	0	0	2.2	8	10.7	13	16	3	8	20	7.9	
MAJURO	3	1010.2	1010.4	29.8	24.8	27.3	0.6	30.6	26+	23.3	6+	0	0	23.9	80	275	-21	50	25	1	0	0	2.1	7	10.3	NE	19	1	10	20	7.8	59
PAGO PAGO	4	1012.2	1012.4	29.1	23.7	26.4		31.1	5	20.0	2	0	0	22.2	78	142		52	11	0	0	0	3.4	10	11.2	N	4	3	19	9	6.4	52
PONAPE R	37	1004.1	1009.2	30.5	22.7	26.6	0.3	32.2	30+	21.1	26	3	0	23.3	87	314	-100	65	24	2	0	0	0.8	18	7.6	NW	10+	1	8	22	8.3	72
TRUK MOEN ISLAND	2	1009.5	1009.7	29.7	24.3	27.1	0.2	31.1	29+	23.3	12+	0	0	24.4	85	294	-31	48	23	0	0	0	1.4	25	14.3	NW	2	0	2	29	9.5	65
WAKE	3	1012.5	1012.8	31.7	25.3	28.5	0.5	32.8	30+	23.3	12	14	0	22.2	71	37	-143	18	11	0	0	0	4.5	9	11.2	NE	20+	12	9	10	5.6	73
YAP R	13			30.5	23.9	27.2	-0.2	32.2	12	22.8	29+	1	0			282	-92	53	27	5	0	0			11.2	NW	20	0	3	28	9.0	71
PENNSYLVANIA																																
ALLENTOWN	118	1003.4	1017.2	27.9	15.5	21.7	-0.5	33.9	25	8.3	11	3	0	15.0	69	57	-56	39	5	4	0	0	1.1	26	11.2	29	9	11	12	8	5.0	
ERIE	223	990.2	1016.8	23.6	14.3	18.9	-0.8	30.0	24	6.7	5	0	0	14.4	78	76	1	30	10	4	0	0	1.5	22	10.3	24	26+	7	10	14	5.9	
HARRISBURG	103	1004.4	1016.9	29.1	17.5	23.3	-0.1	35.0	25	10.0	11	5	0			64	-29	45	5	3	0	0	0.7	26	11.2	NW	9	9	14	8	5.2	71
PHILADELPHIA	2	1016.3	1017.1	29.8	19.0	24.4	1.3	35.6	26	12.8	11	6	0	16.1	64	96	-22	65	3	2	0	0	1.4	22	19.2	N	26	9	14	8	5.5	69
PITTSBURGH	347	974.3	1017.5	27.0	15.8	21.4	-0.1	32.2	24	8.9	11	1	0	15.0	70	45	-39	13	11	5	0	0	1.4	25	10.3	23	7	7	11	13	6.2	49
SCRANTON	283	983.1	1016.9	26.8	14.9	20.9	-0.2	32.8	25	7.2	5	1	0	14.4	70	42	-49	19	9	3	0	0	1.1	21	10.7	S	7	6	15	10	5.7	65
WILLIAMSPORT	160	998.3	1017.2	26.6	15.7	21.2	-0.8	31.1	24	7.8	5	0	0	16.1	76	43	-49	15	10	8	0	0	0.5	26	12.5	33	3	5	15	11	6.1	
RHODE ISLAND																																
BLOCK ISLAND	34			25.6	16.9	21.3	0.4	30.0	26+	10.6	6	0	0			25	-73	23	5		0	0										
PROVIDENCE	16	1014.6	1016.8	26.7	16.2	21.4	0.1	32.2	26	10.0	16	1	0	15.6	72	76	-25	22	8	3	0	0	1.4	23	10.3	4	15	8	14	9	5.9	67

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	°C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.2	1017.3	32.0	21.8	26.9	0.4	36.1	19+	19.4	13+	15	0	21.7	78	115	- 53	24	14	10	0	0	0.3	15	22.4Y	N	8	6	16	9	6.0	56
CHARLESTON U	3			30.7	23.6	27.2	- 0.1	36.1	3	21.1	31+	10	0			133	- 21	34	13		0	0			16.1	NW	8					
COLUMBIA	65	1009.5	1017.4	31.9	20.4	26.2	- 0.8	36.1	19+	16.7	22	14	0	21.7	83	73	- 73	29	9	10	0	0	0.4	6	15.6	35	19	10	12	9	5.6	61
GRNVLLE-SPRTNBRG	292	983.4	1017.5	29.9	19.3	24.6	- 1.1	33.9	19	16.7	22	4	0	19.4	78	82	- 33	64	6	6	0	0	0.4	3	9.8	N	7	10	12	9	5.5	58
SOUTH DAKOTA																																
ABERDEEN	395	967.8	1013.9	29.5	14.4	22.0	0.1	36.7	19	5.6	9	14	0	16.1	72	13	- 42	6	8	7	0	0	0.8	13	11.2	17	30	10	13	8	5.0	
HURON	390	968.2	1013.8	28.3	14.6	21.4	- 1.2	35.6	17+	6.1	9	12	0	15.0	69	18	- 35	11	5	2	0	0	1.3	17	16.1	S	30	13	9	9	4.7	68
RAPID CITY	964	905.9	1014.6	28.4	12.8	20.6	- 1.6	36.7	13	6.1	24+	9	0	11.7	62	63	32	42	10	6	0	0	0.8	35	17.0	W	2	11	15	5	4.1	77
SIOUX FALLS	432	964.4	1015.0	27.7	15.1	21.4	- 0.7	36.7	17	6.1	9	12	0	15.0	70	67	- 24	37	12	6	0	0	1.1	21	13.4	16	30	14	7	10	4.8	
TENNESSEE																																
BRISTOL	459	964.8	1018.1	28.9	17.3	23.2	- 0.6	32.2	25	13.3	30	1	0	18.3	81	69	- 28	29	13	7	0	0	0.3	29	6.7	24	9+	3	17	11	6.5	
CHATTANOOGA	203	992.9	1017.1	29.8	18.0	23.9	- 2.7	32.8	19	14.4	29	3	0	19.4	79	135	39	48	8	6	0	0	0.2	24	11.6	NE	20	11	13	7	4.9	67
KNOXVILLE	299	983.7	1018.2	29.3	19.4	24.4	- 0.8	32.2	19	16.1	30+	1	0	19.4	78	41	- 47	19	7	5	0	0	0.7	29	15.2	N	9	8	14	9	5.5	66
MEMPHIS	79	1006.8	1016.8	31.8	21.2	26.5	- 0.4	35.0	22+	17.8	28	12	0	18.3	64	49	- 26	26	5	5	0	0	0.7	19	14.3	34	6	12	15	4	4.5	81
NASHVILLE	180	995.6	1016.9	30.6	19.7	25.1	- 1.1	33.9	19	15.6	8	8	0	19.4	74	109	37	31	7	9	0	0	0.9	22	16.5	N	12	11	17	3	4.6	67
OAK RIDGE R	276			29.8	18.5	24.2	- 0.3	33.9	19	13.9	29	4	0			45	- 72	32	8		0	0			9.8Y		2	6	10	15	6.6	
TEXAS																																
ABILENE	544	953.6	1015.0	31.8	20.2	26.1	- 2.3	37.2	6	17.2	16	19	0	18.3	68	125	88	73	9	5	0	0	3.2	17	13.0	SW	10+	11	7	13	6.2	77
AMARILLO	1098	893.3	1014.2	29.8	16.7	23.3	- 3.1	35.0	21	11.1	25	9	0	13.3	59	44	- 22	15	9	11	0	0	3.6	18	13.0	NW	31+	8	13	10	5.5	76
AUSTIN	182	993.9	1015.6	33.8	22.9	28.4	- 0.9	36.1	28+	21.1	16	27	0	20.0	67	64	15	21	9	12	0	0	2.1	17	13.9	N	22	8	12	11	5.6	72
BROWNSVILLE	6	1014.6	1015.2	32.7	23.0	27.9	- 1.1	34.4	27+	20.6	6	27	0	22.2	75	23	- 47	14	3	2	0	0	3.3	14	13.9	SE	25	10	16	5	5.0	86
CORPUS CHRISTI	12	1013.9	1015.5	33.7	23.8	28.8	- 0.2	35.6	28	21.7	6	29	0	23.3	77	95	25	94	3	1	0	0	3.8	13	13.0	SE	25	13	12	6	4.8	81
DALLAS	147	998.6	1015.5	35.6	24.4	30.0	0.6	39.4	6	21.7	24	29	0	20.0	59	37	- 12	19	6	3	0	0	2.9	16	16.5	S	9	9	9	13	6.2	70
DEL RIO	313	978.7	1014.0	32.6	21.6	27.1	- 2.8	36.1	1	19.4	17+	24	0	20.0	68	146	107	49	10	7	0	0	3.9	13	11.2	24	16	8	14	9	5.8	
EL PASO	1194	883.2	1012.3	31.4	19.3	25.4	- 1.5	38.3	1	16.7	26+	14	0	15.0	58	66	36	45	14	15	0	0	1.1	12	16.5	W	14	11	15	5	5.0	76
FORT WORTH	164	995.6	1015.7	35.4	23.1	29.3	- 0.4	40.0	6	20.0	24	30	0	20.0	62	21	- 22	10	6	8	0	0	2.4	16	12.5	17	3	8	10	13	6.3	
GALVESTON U	2			31.4	26.4	28.9	0.4	33.9	27	22.8	2	7	0			36	- 76	20	6		0	0			13.0	NE	14					78
HOUSTON INTERCON	29	1012.9	1016.6	32.5	21.1	26.8	- 1.2	34.4	21+	17.8	30	22	0	22.2	81	99	- 3	61	9	15	0	0	0.8	12	10.3	24	12+	5	17	9	6.0	65
LUBBOCK	992	905.5	1014.7	29.2	17.9	23.6	- 2.4	35.0	1	14.4	3	7	0	16.7	71	137	94	69	9	9	0	0	2.8	16	14.3	32	21	9	8	14	6.1	
MIDLAND	869	917.4	1014.1	30.1	18.4	24.3	- 3.6	36.1	1	15.6	17	8	0	16.1	68	97	59	36	11	12	0	0	3.5	14	13.4	1	6	6	11	14	6.3	
PORT ARTHUR	5	1016.3		31.9	21.6	26.8	- 1.2	34.4	27+	20.0	31+	17	0	22.8	83	147	8	44	13	16	0	0	0.7	13	13.4	SE	27	10	13	8	5.0	68
SAN ANGELO	580	949.2	1014.4	32.8	20.4	26.6	- 2.9	37.2	6+	17.8	17	24	0	18.3	67	93	61	40	9	4	0	0	3.0	18	15.6	4	8	9	8	14	6.1	
SAN ANTONIO	240	988.5	1015.8	32.8	22.9	27.8	- 0.9	35.0	22	20.6	31+	25	0	21.7	73	108	48	59	6	8	0	0	2.5	14	14.3	SE	7	6	16	9	6.0	67
VICTORIA	32	1011.5	1015.7	33.5	23.7	28.6	0.1	35.6	28+	21.7	31	28	0	22.8	76	111	32	97	6	11	0	0	1.9	14	16.5Y	SE	3	6	15	10	6.3	
WACO	153	998.0	1015.6	35.2	22.9	29.1	- 0.6	38.3	28	21.7	24+	28	0	20.0	63	45	3	21	6	5	0	0	3.4	16	13.4	17	3	9	14	8	5.5	
WICHITA FALLS	303	979.0	1014.8	35.2	20.7	27.9	- 1.9	40.6	6	17.2	24	26	0	17.8	60	45	T	15	8	10	0	0	2.7	16	14.8	33	21	6	11	14	6.2	
UTAH																																
MILFORD	1533	847.3		31.1	11.7	21.4	- 0.9	37.8	10	6.1	20	14	0			64	45	27	6		0	0			16.1	NW	18	17	9	5	3.4	80
SALT LAKE CITY	1286	872.0	1012.5	33.0	15.7	24.3	0.7	38.9	11+	8.9	24	20	0	6.1	35	5	- 17	3	5	9	0	0	1.6	15	16.5	S	28	16	12	3	3.5	85
WENDOVER	1291	871.0	1013.3	31.3	17.8	24.6	- 0.6	38.3	6	12.2	24	11	0	1.7	28	21	12	19	4		0	0						21	4	6	3.1	
VERMONT																																
BURLINGTON	101	1003.4	1015.7	23.9	13.0	18.5	- 0.8	30.6	25	6.1	16+	0	0	14.4	78	60	- 26	17	10	3	0	0	1.2	21	17.0	NW	9	4	9	18	7.0	52
VIRGINIA																																
LYNCHBURG	279			29.1	17.7	23.4	- 0.4	32.8	25+	12.8	11	5	0			31	- 81	25	8		0	0			8.0	NE	15	8	13	10	5.5	59
NORFOLK	7	1016.3	1017.4	28.8	19.9	24.3	- 0.9	33.3	27	15.0	17	5	0	20.0	79	41	-111	12	9	8	0	0	0.6	10	13.9	NE	15	8	14	9	5.5	70
RICHMOND	50	1011.2	1017.4	29.4	18.5	24.0	- 0.4	32.8	26+	12.2	11	4	0	19.4	80	98	- 43	71	7	3	0	0	0.3	19	9.4	NW	2	6	18	7	5.8	72
ROANOKE	350	976.6	1017.9	28.9	16.8	22.9	- 1.2	33.9	18	12.8	11+	2	0	17.8	77	67	- 51	22	8	6	0	0	0.5	29	16.1	36	19	8	12	11	5.9	
WALLOPS ISLAND	3			27.8	20.5	24.2		32.8	9	14.4	11	2	0			44		28	3		0	0			16.5Y	NE	15					
WASHINGTON																																
OLYMPIA	59	1009.5	1016.6	26.7	9.0	17.9	0.4	35.6	8+	3.3	13	3	0	11.7	73	18	- 5	10	5	2	0	0	0.4	2	8.9	24	9	16	5	10	4.4	
QUILLAYUTE	55	1010.2	1017.7	22.9	9.6	16.3	0.9	32.2	6	3.9	30	1	0	11.1	78	11	- 41	4	7	1	0	0	0.8	29	9.4	NE	31	9	14	8	5.3	58
SEATTLE-TACOMA	122	1000.3	1016.6	25.3	13.2	19.3	1.4	35.0	7	10.0	13	3	0	12.2	69	29	5	13	6	0	0	0	1.3	35	11.2	N	29	14	9	8	4.2	74
SPOKANE	718	931.6	1013.9	29.6	13.8	21.7	1.7	39.4	8	8.3	31	10	0	7.8	46	22	12	13	6	6	0	0	0.3	24	14.8	SW	20	18	11	2	3.2	81
STAMPEDE PASS R	1206	881.8		19.8	10.4	15.1	2.0	30.6	7	5.6	30+	0	0			32	- 20	18	8		0	0						17	6	8	3.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower			Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10		
WASHINGTON	M.	Mb.	Mb.	C	C.	C	C	C.		C.				C	%	Mm.	Mm	Mm			Mm	Mm	M p s.		M p.s							%
WALLA WALLA U	289			31.6	17.1	24.3	1.1	42.2	8	10.6	31	14	0			9	1	5	6		0	0			8.0	SE	20	22	7	2	2.3	85
YAKIMA	321	976.0	1013.8	32.3	11.7	22.0	1.7	41.1	8+	6.7	18	15	0	8.3	47	17	11	13	5	2	0	0	1.9	30	12.5	24	15	22	3	6	2.4	
WEST INDIES																																
SAN JUAN P.R.	4	1013.9	1016.6	31.6	25.5	28.6	1.4	34.4	2	22.8	11	9	0	21.1	67	78	-103	16	20	4	0	0	4.2	9	13.9	SE	17	2	14	15	7.3	47
WEST VIRGINIA																																
BECKLEY	763	931.3	1017.7	25.4	15.4	20.4	-0.6	28.9	24	8.3	10	0	0	16.7	82	90	-25	31	13	8	0	0	1.2	19	10.3	30	19+	3	10	18	7.4	
CHARLESTON	286	983.7	1017.3	28.0	17.2	22.6	-0.6	30.6	24	10.0	11+	0	0	18.9	83	105	5	36	11	9	0	0	0.5	23	8.0	22	7	1	16	14	6.9	
ELKINS	594	948.5		26.2	13.7	20.0	-0.4	30.0	23	6.7	11	0	0			53	-54	23	12		0	0						1	12	18	7.5	
HUNTINGTON	252	987.8	1017.5	27.8	16.9	22.4	-0.9	32.8	18	10.0	10	1	0	18.3	83	52	-19	19	10	7	0	0	1.0	21	9.4	28	27+	3	13	15	7.0	
PARKERSBURG U	187			28.1	17.5	22.8	-0.7	31.7	24+	10.6	11+	0	0			202	106	64	14		0	0			12.5	NW	18+					63
WISCONSIN																																
GREEN BAY	208	989.8	1015.0	25.9	14.1	20.1	-0.4	33.3	17	5.0	4	2	0	15.0	76	149	79	36	19	7	0	0	0.3	29	9.8	N	8	6	7	18	7.2	49
LA CROSSE	198	991.2	1015.5	27.0	16.4	21.7	-0.3	35.6	17+	7.2	9	6	0	17.8	83	152	59		12	7	0		0.5	19								
MADISON	262	984.1	1015.3	26.4	14.9	20.7	-0.2	34.4	17	4.4	9	4	0	16.1	79	190	104	46	13	13	0	0	1.3	22	18.3	NW	14	6	8	17	6.7	51
MILWAUKEE	205	990.5	1015.3	25.0	16.2	20.6	0.7	32.8	17	8.9	5	1	0	17.2	83	122	45	34	13	6	0	0	1.1	23	13.0	SW	11	6	11	14	6.6	56
WYOMING																																
CASPER	1627	840.5	1014.9	28.7	11.3	20.0	-1.2	36.7	12	6.1	25	7	0	8.3	56	39	20	22	6	7	0	0	0.9	29	13.9	27	29	13	12	6	4.6	
CHEYENNE	1867	816.1	1016.0	25.5	10.7	18.1	-1.7	32.8	12	4.4	25	1	0	7.2	56	46	10	15	13	12	0	0	0.8	28	17.0	N	10	11	7	13	5.7	59
LANDER	1696	832.4	1015.2	27.7	11.6	19.6	-0.8	35.0	12	7.2	23	5	0	5.6	45	26	14	9	9	11	0	0	0.6	27	17.0	SW	14	11	15	5	4.6	64
SHERIDAN	1208	880.8	1015.4	29.2	11.4	20.3	-0.6	36.1	12	6.7	26+	10	0	10.0	57	24	2	12	10	16	0	0	1.0	30	15.6	NW	11	12	10	9	4.8	66

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C. or above for Alaskan Stations.
Y Peak Gust
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CORRECTION

CLIMATOLOGICAL DATA Table - JULY 1972 and JUNE 1972 (English Units). The column headings "Average Speed" and "Prevailing direction" should be "Resultant Speed" and "Resultant direction", respectively. The column headed "Snow, Sleet" should be "Snow, Ice Pellets".

HEATING DEGREE DAYS

(Base 65°F.)

A[illegible] 1[illegible]7.

State and station	Current season		Normals July through this month
	This month	Period July through this month	
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	252	437	493
ANNETTE	201	399	450
BARROW	750	1431	1643
BARTER ISLAND	731	1516	1510
BETHEL	293	521	713
BETTLES	272	395	
BIG DELTA	209	338	
COLD BAY	457	957	899
FAIRBANKS	184	247	503
GULKANA	295	467	
HOMER	351	747	
JUNEAU	293	500	639
KING SALMON	319	617	635
KOTZEBUE	304	496	827
MC GRATH	219	348	546
NOME	365	651	977
ST. PAUL ISLAND	595	1276	1144
SHEMYA	471	1037	1052
SUMMIT	411	686	
TALKEETNA	257	388	539
UNALAKLEET	257	450	
YAKUTAT	342	616	685
ARIZONA			
FLAGSTAFF	78	100	114
PHOENIX	0	▨	▨
TUCSON	0	0	0
WINSLOW	0	0	▨
YUMA	0	▨	0
ARKANSAS			
FORT SMITH	0	1	0
LITTLE ROCK	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	1	1	0
BLUE CANYON	62	82	84
EUREKA U	204	421	527
FRESNO	0	0	▨
LONG BEACH	0	0	0
LOS ANGELES	0	0	35
LOS ANGELES U	0	0	0
MT SHASTA R	67	81	59
OAKLAND	20	67	103
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG R	30	48	0
SAN DIEGO	0	▨	6
SAN FRANCISCO	42	106	159
SAN FRANCISCO U	139	283	366
SANTA MARIA	56	109	192
STOCKTON	0	0	0
COLORADO			
ALAMOSA	97	152	164
COLORADO SPRINGS	34	75	34
DENVER	15	57	15
GRAND JUNCTION	0	0	0
PUEBLO	2	18	0
CONNECTICUT			
BRIDGEPORT	2	9	0
HARTFORD	9	15	6
DIST.OF COLUMBIA			
WASHINGTON DULLES	3	5	
WASHINGTON NATIONAL	0	0	0
DELAWARE			
WILMINGTON	0	0	0
FLORIDA			
APALACHICOLA U	0	▨	▨
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	▨	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	0
SAVANNAH	0	0	0
IDAHO			
BOISE	0	11	0
LEWISTON	1	14	0
POCATELLO	9	39	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	10	25	12
CHICAGO MIDWAY	12	27	0
MOLINE	7	15	9
PEORIA	19	28	6
ROCKFORD	26	43	15
SPRINGFIELD	11	14	0
INDIANA			
EVANSVILLE	3	5	0
FORT WAYNE	17	32	9
INDIANAPOLIS	4	12	0
SOUTH BEND	35	59	6
IOWA			
BURLINGTON	8	18	0
DES MOINES	10	17	9
DUBUQUE	20	40	43
SIOUX CITY	5	11	9
WATERLOO	28	51	31
KANSAS			
CONCORDIA	2	7	0
DODGE CITY	0	6	0
GOODLAND	24	52	6
TOPEKA	0	10	0
WICHITA	0	2	0
KENTUCKY			
COVINGTON	3	5	0
LEXINGTON	1	11	0
LOUISVILLE	0	0	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	145	200	193
PORTLAND	53	80	65
MARYLAND			
BALTIMORE	0	2	0
MASSACHUSETTS			
BLUE HILL OBS R	30	42	22
BOSTON	4	7	9
WORCESTER	41	57	40
MICHIGAN			
ALPENA	108	180	173
DETROIT	18	39	0
DETROIT METRO	28	52	11
FLINT	40	74	33
GRAND RAPIDS	41	69	35
HOUGHTON LAKE	92	169	138
LANSING	56	112	28
MARQUETTE U	121	224	140
MUSKEGON	44	85	40
SAULT STE MARIE	122	227	201
MINNESOTA			
DULUTH	146	280	180
INTERNATIONAL FALLS	74	146	183
MINNEAPOLIS	52	86	53
ROCHESTER	71	110	59
ST CLOUD	76	124	75
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	▨	0
MISSOURI			
COLUMBIA REGIONAL	0	2	0
KANSAS CITY	0	1	0
ST JOSEPH	4	10	6
ST LOUIS	0	2	0
SPRINGFIELD	0	9	0
MONTANA			
BILLINGS	26	111	21
GLASGOW	11	82	78
GREAT FALLS	23	132	81
HAVRE	9	83	81
HELENA	49	185	90
KALISPELL	26	139	149
MILES CITY	10	65	12
MISSOULA	39	120	108
NEBRASKA			
GRAND ISLAND	9	15	6
LINCOLN U	6	8	4
NORFOLK	2[illegible]	32	9
NORTH PLATTE	15	39	6
OMAHA	7	13	6
SCOTTSBLUFF	14	55	[illegible]
VALENTINE	36	68	21
NEVADA			
ELKO	28	45	43
ELY	86	102	71
LAS VEGAS	0	0	0
RENO	26	34	13[illegible]
WINNEMUCCA	6	7	34
NEW HAMPSHIRE			
CONCORD	82	109	56
MT WASHINGTON OBS	579	1053	1029
NEW JERSEY			
ATLANTIC CITY	8	13	0
ATLANTIC CITY U	0	2	0
NEWARK	0	0	0
TRENTON U	0	3	0
NEW MEXICO			
ALBUQUERQUE	3	3	0
CLAYTON	14	39	6
ROSWELL	0	0	0
NEW YORK			
ALBANY	38	54	19
BINGHAMTON	56	75	87
BUFFALO	33	49	56
NEW YORK U	0	2	0
NEW YORK KENNEDY	0	0	0
NEW YORK LA GUARDIA	0	4	0
ROCHESTER	24	31	40
SYRACUSE	23	32	34
NORTH CAROLINA			
ASHEVILLE	0	3	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	▨	1	0
RALEIGH	0	0	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	39	80	62
FARGO	41	66	65
WILLISTON	25	100	74
OHIO			
AKRON	16	41	9
CINCINNATI ABBE OB	1	12	0
CLEVELAND	27	59	21
COLUMBUS	18	40	6
DAYTON	6	21	6
MANSFIELD	16	25	0
TOLEDO	36	64	16
YOUNGSTOWN	39	90	25
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	65	164	276
BURNS U	41	88	49
EUGENE	27	50	68
MEACHAM	103	219	208
MEDFORD	11	13	0
PENDLETON	4	9	0
PORTLAND	6	16	53
SALEM	42	76	68
SEXTON SUMMIT R	111	151	162
PENNSYLVANIA			
ALLENTOWN	11	15	0
ERIE	47	102	60
HARRISBURG	▨	1	0
PHILADELPHIA	0	0	0
PITTSBURGH	11	31	9
SCRANTON	20	41	19
WILLIAMSPORT	19	31	0
RHODE ISLAND			
BLOCK ISLAND	4	8	16
PROVIDENCE	10	18	16
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GRNVLLE-SPRTNBRG	0	0	0
SOUTH DAKOTA			
ABERDEEN	35	54	50
HURON	38	64	21
RAPID CITY	43	117	34
SIOUX FALLS	43	72	44
TENNESSEE			
BRISTOL	0	8	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	
MEMPHIS	0	0	0
NASHVILLE	0	0	0
OAK RIDGE R	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	2	15	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON INTERCON	0	0	0
LUBBOCK	0	2	0
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	6	6	0
SALT LAKE CITY	0	0	0
WENDOVER	0	0	0
VERMONT			
BURLINGTON	69	95	93
VIRGINIA			
LYNCHBURG	0	2	0
NORFOLK	0	0	0
RICHMOND	0	0	0
ROANOKE	1	11	0
WALLOPS ISLAND	0	1	
WASHINGTON			
OLYMPIA	69	154	139
QUILLAYUTE	131	291	334
SEATTLE-TACOMA	32	80	118
SPOKANE	18	54	34
STAMPEDE PASS R	218	459	564
WALLA WALLA U	3	15	0
YAKIMA	11	37	12
WEST VIRGINIA			
BECKLEY	10	45	34
CHARLESTON	2	18	0
ELKINS	13	43	34
HUNTINGTON	2	10	0
PARKERSBURG U	3	13	0
WISCONSIN			
GREEN BAY	54	91	78
LA CROSSE	32	53	31
MADISON	42	86	65
MILWAUKEE	32	72	90
WYOMING			
CASPER	42	109	22
CHEYENNE	75	160	50
LANDER	46	102	25
SHERIDAN	28	123	56

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sities.

COOLING DEGREE DAYS

(Base 65°F.)

AUGUST 1972

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	434	1302	
HUNTSVILLE	354	1142	
MOBILE	575	2150	
MONTGOMERY	514	1739	
ALASKA			
ANCHORAGE	0	5	
ANNETTE	0	15	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	1	18	
BETTLES	0	89	
BIG DELTA	1	57	
COLD BAY	0	0	
FAIRBANKS	0	95	
GULKANA	0	5	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	1	15	
MC GRATH	0	24	
NOME	2	26	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	19	
UNALAKLEET	6	35	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	20	100	
PHOENIX	780	3232	
TUCSON	563	2148	
WINSLOW	347	1036	
YUMA	784	3281	
ARKANSAS			
FORT SMITH	471	1409	
LITTLE ROCK	507	1691	
CALIFORNIA			
BAKERSFIELD	559	2007	
BISHOP	306	1026	
BLUE CANYON	178	451	
EUREKA U	1	1	
FRESNO	464	1595	
LONG BEACH	285	870	
LOS ANGELES	251	537	
LOS ANGELES U	391	1210	
MT SHASTA R	160	363	
OAKLAND	37	117	
RED BLUFF	533	1690	
SACRAMENTO	349	1085	
SANDBERG R	215	754	
SAN DIEGO	230	582	
SAN FRANCISCO	16	87	
SAN FRANCISCO U	0	30	
SANTA MARIA	30	54	
STOCKTON	413	1272	
COLORADO			
ALAMOSA	18	55	
COLORADO SPRINGS	124	390	
DENVER	207	533	
GRAND JUNCTION	381	1234	
PUEBLO	294	901	
CONNECTICUT			
BRIDGEPORT	253	612	
HARTFORD	203	605	
DELAWARE			
WILMINGTON	334	890	
DIST.OF COLUMBIA			
WASHINGTON DULLES	268	771	
WASHINGTON NATIONAL	346	981	
FLORIDA			
APALACHICOLA U	553	2015	
DAYTONA BEACH	477	2100	
FORT MYERS	570	2833	
JACKSONVILLE	491	1822	
KEY WEST	610	3447	
LAKELAND U	520	2335	
MIAMI	523	2813	
ORLANDO	561	2660	
PENSACOLA	592	2092	
TALLAHASSEE	533	1867	
TAMPA	536	2361	
WEST PALM BEACH	573	2871	
GEORGIA			
ATHENS	413	1188	
ATLANTA	396	1124	
AUGUSTA	486	1436	
COLUMBUS	526	1674	
MACON	488	1537	
ROME	416	1167	
SAVANNAH	503	1730	
HAWAII			
HILO	365	2118	
HONOLULU	506	2705	
KAHULUI	446	2297	
LIHUE	472	2513	
IDAHO			
BOISE	303	777	
LEWISTON	321	764	
POCATELLO	152	335	
ILLINOIS			
CAIRO U	398	1385	
CHICAGO O HARE	289	748	
CHICAGO MIDWAY	278	794	
MOLINE	294	876	
PEORIA	253	769	
ROCKFORD	229	636	
SPRINGFIELD	291	957	
INDIANA			
EVANSVILLE	285	958	
FORT WAYNE	202	630	
INDIANAPOLIS	266	838	
SOUTH BEND	180	527	
IOWA			
BURLINGTON	265	804	
DES MOINES	247	800	
DUBUQUE	234	628	
SIOUX CITY	259	880	
WATERLOO	224	614	
KANSAS			
CONCORDIA	315	1003	
DODGE CITY	334	1052	
GOODLAND	224	700	
TOPEKA	309	1015	
WICHITA	421	1280	
KENTUCKY			
COVINGTON	268	770	
LEXINGTON	250	725	
LOUISVILLE	351	1039	
LOUISIANA			
ALEXANDRIA	487	1757	
BATON ROUGE	558	2164	
LAKE CHARLES	503	2037	
NEW ORLEANS	507	2009	
SHREVEPORT	553	1960	
MAINE			
CARIBOU	11	118	
PORTLAND	71	188	
MARYLAND			
BALTIMORE	331	885	
MASSACHUSETTS			
BLUE HILL OBS R	131	376	
BOSTON	213	592	
WORCESTER	109	374	
MICHIGAN			
ALPENA	57	165	
DETROIT	190	602	
DETROIT METRO	160	491	
FLINT	130	397	
GRAND RAPIDS	163	461	
HOUGHTON LAKE	78	239	
LANSING	127	346	
MARQUETTE U	73	189	
MUSKEGON	149	377	
SAULT STE MARIE	24	79	
MINNESOTA			
DULUTH	59	113	
INTERNATIONAL FALLS	100	262	
MINNEAPOLIS	208	559	
ROCHESTER	178	493	
ST CLOUD	152	393	
MISSISSIPPI			
JACKSON	561	1907	
MERIDIAN	536	1701	
MISSOURI			
COLUMBIA REGIONAL	375	1123	
KANSAS CITY	389	1340	
ST JOSEPH	304	1099	
ST LOUIS	358	1189	
SPRINGFIELD	366	1186	
MONTANA			
BILLINGS	192	445	
GLASGOW	205	374	
GREAT FALLS	175	389	
HAVRE	249	486	
HELENA	89	163	
KALISPELL	113	187	
MILES CITY	238	572	
MISSOULA	85	228	
NEBRASKA			
GRAND ISLAND	257	873	
LINCOLN U	333	1113	
NORFOLK	243	811	
NEBRASKA			
NORTH PLATTE	202	581	
OMAHA	280	920	
SCOTTSBLUFF	207	547	
VALENTINE	231	621	
NEVADA			
ELKO	96	239	
ELY	58	191	
LAS VEGAS	675	2604	
RENO	113	381	
WINNEMUCCA	250	713	
NEW HAMPSHIRE			
CONCORD	60	296	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	282	717	
ATLANTIC CITY U	224	521	
NEWARK	347	943	
TRENTON U	313	825	
NEW MEXICO			
ALBUQUERQUE	294	1046	
CLAYTON	169	569	
ROSWELL	350	1378	
NEW YORK			
ALBANY	112	390	
BINGHAMTON	90	373	
BUFFALO	123	393	
NEW YORK U	338	892	
NEW YORK KENNEDY	309	805	
NEW YORK LA GUARDIA	274	672	
ROCHESTER	179	558	
SYRACUSE	160	509	
NORTH CAROLINA			
ASHEVILLE	237	587	
CAPE HATTERAS R	422	1141	
CHARLOTTE	385	1053	
GREENSBORO	328	874	
RALEIGH	336	966	
WILMINGTON	453	1343	
NORTH DAKOTA			
BISMARCK	227	438	
FARGO	217	551	
WILLISTON	167	327	
OHIO			
AKRON	169	468	
CINCINNATI ABBE OB	296	851	
CLEVELAND	157	465	
COLUMBUS	183	520	
DAYTON	237	737	
MANSFIELD	198	621	
TOLEDO	148	473	
YOUNGSTOWN	125	355	
OKLAHOMA			
OKLAHOMA CITY	483	1625	
TULSA	524	1717	
OREGON			
ASTORIA	23	43	
BURNS U	141	317	
EUGENE	159	332	
MEACHAM	116	203	
MEDFORD	265	677	
PENDLETON	358	856	
PORTLAND	221	487	
SALEM	148	286	
SEXTON SUMMIT R	155	327	
PACIFIC AREA			
GUAM TAGUAC R	436	3252	
JOHNSTON			
KOROR R	523	4093	
KWAJALEIN	549	4163	
MAJURO	508	3950	
PAGO PAGO	456	3678	
PONAPE R	469	3804	
TRUK MOEN ISLAND	493	3954	
WAKE	571	3331	
YAP R	505	3973	
PENNSYLVANIA			
ALLENTOWN	208	650	
ERIE	88	287	
HARRISBURG	287	810	
PHILADELPHIA	344	918	
PITTSBURGH	192	513	
SCRANTON	167	472	
WILLIAMSPORT	183	511	
RHODE ISLAND			
BLOCK ISLAND	174	390	
PROVIDENCE	190	506	
SOUTH CAROLINA			
CHARLESTON	488	1509	
CHARLESTON U	498	1622	
COLUMBIA	445	1387	
GRNVLLE-SPRTNBRG	356	1030	
SOUTH DAKOTA			
ABERDEEN	245	596	
HURON	222	559	
RAPID CITY	178	367	
SIOUX FALLS	219	584	
TENNESSEE			
BRISTOL	274	699	
CHATTANOOGA	316	882	
KNOXVILLE	347	976	
MEMPHIS	464	1573	
NASHVILLE	387	1202	
OAK RIDGE R	330	901	
TEXAS			
ABILENE	436	1837	
AMARILLO	285	970	
AUSTIN	571	2320	
BROWNSVILLE	542	2794	
CORPUS CHRISTI	588	2783	
DALLAS	661	2334	
DEL RIO	496	2416	
EL PASO	401	1596	
FORT WORTH	618	2192	
GALVESTON U	597	2382	
HOUSTON INTERCON	482	2074	
LUBBOCK	297	1278	
MIDLAND	338	1608	
PORT ARTHUR	479	1906	
SAN ANGELO	468	2038	
SAN ANTONIO	539	2221	
VICTORIA	582	2532	
WACO	608	2256	
WICHITA FALLS	543	1981	
UTAH			
MILFORD	185	641	
SALT LAKE CITY	340	973	
WENDOVER	355	1082	
VERMONT			
BURLINGTON	81	328	
VIRGINIA			
LYNCHBURG	290	785	
NORFOLK	343	992	
RICHMOND	326	976	
ROANOKE	262	724	
WALLOPS ISLAND	334	763	
WASHINGTON			
OLYMPIA	50	83	
QUILLAYUTE	21	63	
SEATTLE-TACOMA	91	201	
SPOKANE	213	420	
STAMPEDE PASS R	47	56	
WALLA WALLA U	344	858	
YAKIMA	221	530	
WEST INDIES			
SAN JUAN P.R.	578	3929	
WEST VIRGINIA			
BECKLEY	132	337	
CHARLESTON	247	695	
ELKINS	111	281	
HUNTINGTON	234	691	
PARKERSBURG U	261	755	
WISCONSIN			
GREEN BAY	156	473	
LA CROSSE	230	646	
MADISON	180	438	
MILWAUKEE	166	391	
WYOMING			
CASPER	142	297	
CHEYENNE	69	149	
LANDER	127	294	
SHERIDAN	145	283	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

AUGUST 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama															1	4													
Alaska*																													
Arizona	4	3										5				4												5	5
Arkansas								3			2	4				4													
California										7	90	5		2	2											4	?	5	
Colorado								?	3	1	4	4	?	2	1														
Connecticut	2	2			5											3												4	
Delaware												3																	
Florida	1	1			4							5		4	11	5													
Georgia	1	1			[illegible]							4				4											1	4	
Hawaii																											2	5	
Idaho									4		2	4	3	1	1	5	3											2	3
Illinois	2	2		1	6			4	4	1	10	6	5	1		5													
Indiana	1	1			5			4	4		1	4	4			3	3												
Iowa	2	2			5			6	7			4	5		1	4												6	5
Kansas	4	3			5			5	6			5	6			5												5	5
Kentucky	2	2		1	5			?	?		1	?	?		2	5	?											6	C
Louisiana								?	?			5																	
Maine								4				4				3													
Maryland												3				3													
Massachusetts	4	2	1	7	5				3			4				5												4	4
Michigan	5	4			6							5		1	1	5													6
Minnesota									5			5				5												7	
Mississippi								°3	C			4		2	6	2												?	3
Missouri									4	4	1	6	4	1		4													
Montana								3	5			2				2													
Nebraska	1	1						5	6			5	4			5												5	5
Nevada														1	2													?	
New Hampshire	2	2			3				4			4	3			4													4
New Jersey												6				3													
New Mexico							1	6	C			4																	
New York	2	1	1	2	5							5	4		4	5													
North Carolina	1	1							5			5		7	4	6												5	4
North Dakota	1	1						3	5			4	3	1		4												3	3
Ohio	6	2			5		?	4	4		?	4	?		2	4	?												
Oklahoma	1	1		1								4		1	1	4													
Oregon										9	10	5			3	4													
Pacific																												?	
Pennsylvania											6	°5	C	2	1	4												4	
Puerto Rico*																													
Rhode Island								5	5			4	4			4												3	
South Carolina	1	1			4					2	1	4		1	1	5												4	
South Dakota	1	1			3			5	5			5				4													
Tennessee								?	?			5		1		5												°6	C
Texas	13	8			4			5	5		8	5		2	3	5	3									1	30	6	5
Utah												4	2	1	3	4	3												
Vermont	1	1			4			2	4			5	3			4													4
U.S. Virgin Is.*																													
Virginia												4			4														
Washington*																													
West Virginia																												7	
Wisconsin	2	2			4			5	5		1	6				5												6	7
Wyoming								°4	C																				

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5 Million
7	$5 Million to $50 Million
8	$50 Million to $500 Million
9	$500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

AUGUST 1972

Elmer R. Nelson, Office of Hydrology

The most damaging floods during August were the flash floods in Minnesota, Iowa, and Texas.

Of these, the most destructive flash flood was in northeastern Minnesota in the city of Duluth. The Defense Civil Preparedness Agency estimated the damage at $18 million. The downtown area of Duluth was devastated by the flash flood and was declared a disaster area.

Extensive flash flooding occurred on the Little Maquoketa River near Dubuque, Iowa, due to heavy rains. The flood damage was estimated at approximately $1.5 million.

Excessive rains caused sharp rises and flash flooding on Deep Creek and Dry Run Creek, tributaries of the Colorado River of Texas. Water ran as high as 7 feet deep in Snyder, Tex. There was one death near Snyder when a car was washed off the road. Flood damage was estimated at $1.5 million to $2 million.

Only flood events resulting in loss of life and/or flood damage during the month are summarized. They are listed by drainage basins below:

Date August	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	ST. LAWRENCE DRAINAGE		
	Lake Superior		
20	Severe flash flooding occurred in Duluth, Minn., from heavy rain early in the morning. Two and ninety-five hundredths (2.95) inches of rain occurred within a 2-hour period at the Duluth International Airport. Unofficial reports indicate 3 to 4 inches of rain occurred in the hardest hit area between 26th Ave. West and 16th Ave. East. The downtown area was devastated by the flash flood. The city was declared a disaster area. In the major damage area, two small creeks are routed underground through the urban area. Culverts carrying the flow from these creeks were severely burdened, causing the excess flow to travel overland with devastating results. The major damage was along 6th Avenue East.	0	$18,000
	Lake Erie		
7, 19	Flash floods occurred in western Ohio in the lower reaches of the Maumee River Basin.	0	Minor
	ATLANTIC SLOPE DRAINAGE		
7	Minor flooding occurred along the Reedy River in Greenville, S. C., from 3 inches of rainfall that fell within a few hours during the evening. The rainfall totalled 4.5 inches along the western tributaries of the Broad River. A moderate rise occurred, but no overflow. The only damage that resulted from this storm was to a bridge project at Columbia, S. C.	0	5
11	Locally heavy rain caused street flooding in sections of Augusta, Ga. Except for minor fluctuations caused by reservoir releases and a few locally heavy showers, main streams in Georgia showed little change or a slow falling trend during the month.	0	16
	MISSISSIPPI SYSTEM		
	Upper Mississippi Basin		
2 - 3	Extensive flash flooding occurred on the Little Maquoketa River near Dubuque, Iowa, due to 7 inches of rain.	0	$ 1,500
25-26	Flash flooding occurred on tributaries to the Rock River in northern Illinois due to rainfall amounts in excess of 5 inches. About 50 camping units were stranded near Erie, Ill., when the Rock River inundated the access road to the camping site.	0	N.A.

AUGUST 1972

Date August	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	MISSISSIPPI SYSTEM - Cont'd.		
	Upper Mississippi Basin - Cont'd.		
26-30	Heavy rains on the 23d, 24th, and 26th over northern Illinois caused a 2-ft. overflow on the upper Illinois River.	0	Minor
	Missouri Basin		
2	Minor flash flooding occurred in the Billings-Laurel, Mont., areas.	0	Minor
24-26	Near record flooding occurred on Fancy Creek at Winkler, Kans., with a crest of 21.1 feet, 10.1 feet above flood stage. This compares with the record high crest of 22.3 feet in August 1944. Mill Creek at Washington, Kans., crested 9 feet above its natural banks and was the most significant overflow since September 1956. Both streams were confined to agricultural flooding which produced moderate losses on Fancy Creek, but only minor crop damage on Mill Creek. The only flooding on major streams occurred on the Republican River just above Milford Reservoir, with Clay Center cresting 2 feet out of its banks on the 26th.	0	$ 32
2-4	Two to 3 inches of rain during the night of the 2d-3d in northeast Kansas caused minor flooding on Stranger Creek at Easton, Kans., and on the lower Vermillion at Frankfort, Kans.	0	20
	Ohio Basin		
3-4	Some flash flooding occurred in and around Morehead, Ky., along Tripplett Creek, a tributary of the Licking River, due to 4 to 6 inches of rain on the 3d-4th. This resulted in a minor rise coming down the Licking River during the following 2 or 3 days.	0	Minor
	Arkansas Basin		
3	Heavy rains produced flash flooding along the St. Charles and Huerfano Rivers in southeastern Colorado. Several roadbeds were damaged and ranches and farms south and east of Pueblo, Colo., experienced some crop damage. Residents along the St. Charles River reported that the water was the highest in 10 years.	0	N.A.
	WEST GULF OF MEXICO DRAINAGE		
13-16	Extensive lowland flooding occurred along the Double Mountain Fork of the Brazos River at and above Aspermont, Tex., on the 13th-14th. Flooding continued downstream on the Brazos River to near Seymour, Tex., on the 15th-16th. The flooding was due to 8 to 10 inches of rain over a 30-mile-wide area west of Rotan, Tex., to west of Aspermont, Tex., on the 13th-14th. Flood damage in Fisher County was estimated at several thousands of dollars.	0	N.A.
12-13	Excessive rains caused sharp rises, with flash flooding on Deep Creek and Dry Run Creek, tributaries of the Colorado River of Texas. Major flooding occurred in Snyder, Tex., where water ran as high as 7 feet deep	1	1,750

Date August	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	WEST GULF OF MEXICO DRAINAGE-Cont'd		
	through the town. It was the highest water in 10 years. Approximately 30 businesses and many residences were heavily damaged. Colorado City on the Colorado River in Texas was only slightly affected. There was some overflow north of Colorado City. Eight of 10 families were evacuated from the lowlands. No estimates of damages to crops in either Scurry or Mitchell County are included in the damage.		
12-15	Flash flooding occurred on the West Nueces on the 12th due to 4 to 5 inches of rain. Brief moderate flooding occurred on the Nueces near Uvalde, Tex., during the night of the 12th and the morning of the 15th. A crest, 8 feet above flood stage, passed Crystal City, Tex., in the morning of the 14th. Considerable flooding occurred at Asherton, Tex., on the night of the 14th-15th.	0	N.A.
24-26	Heavy rains of 4 to 5 inches on the 24th caused flash flooding on the upper Frio and Sabinal Rivers, and Seco and Hondo Creeks. The high water closed roads between Sabinal and Concan, and Sabinal and Utopia, and south of Sabinal. Additional heavy rains over the same area during the night of the 25th caused flash flooding in the early morning of the 26th. The effect downstream was to prolong the flow rather than to cause new crests.	0	N.A.
	GULF OF CALIFORNIA DRAINAGE		
	Colorado Basin		
11, 12	Flash flooding occurred in Tucson, Ariz. Several other reports of flash flooding were received from southern Yavapai County and in southeastern Arizona.	0	N.A.
26	Another storm system developed in southeastern Arizona on the 26th, with some flash flooding reported in Graham, Greenlee, and Cochise Counties.	0	N.A.
	GREAT BASIN		
4	Flash floods occurred on four washes near Castle Dale, Utah.	0	$ 5
27	A flash flood occurred 40 miles south of Tooele, Utah.	0	1
	PACIFIC SLOPE DRAINAGE		
	Columbia Basin		
13-14	Minor flash flooding occurred in southeastern Idaho in the foothills along Marsh Creek and other small tributaries of the Portneuf. Some mountain roads were littered with debris and a few homes were damaged by water.	0	Minor
	ALASKA		
23	Heavy rains on the 23d caused rising stages of streams to bankfull conditions on the eastern Kenai Peninsula. A culvert near Moose Pass collapsed, causing a washout on the Achorage-Seward Highway.	0	Minor

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NOTES:
N.A.--Flood damages not available

FLOOD STAGE DATA

(All dates in August unless otherwise specified)

AUGUST 1972

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft	
ATLANTIC SLOPE DRAINAGE					
Roanoke:					
Williamston, N. C.	10	Jun 29	14	11.4	Jul 12
Reedy:					
Greenville, S. C.	9	7	7	E 9.3	7
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Rum:					
St. Francis, Minn.	8.5	Jul 28	3	11.2	Jul 29
Little Maquoketa:					
Durango, Iowa	15	2	2	23.1	2
Maquoketa:					
Maquoketa, Iowa	13	13	13	13.1	13
Wapsipinicon:					
DeWitt, Iowa	10	7	8	10.4	[illegible]
Green:					
Geneseo, Ill.	8	27	27	9.2	27
Rock:					
Joslin, Ill.	12	27	30	14.2	29
Moline, Ill.	12	29	30	12.1	29
Pope Creek:					
Keithsburg, Ill.	17	6	7	25.6	6
Henderson Creek:					
Oquawka, Ill.	21.5	6	7	22.8	6
Iowa:					
Marshalltown, Iowa	13	2	10	15.2	6
South Skunk:					
Oskaloosa, Iowa	15	8	8	15.8	8
Middle:					
Indianola, Iowa	19	6	6	20.7	6
Illinois:					
Morris, Ill.	13	26	28	15.1	27
LaSalle, Ill.	20	27	30	22.1	27

* Provisional

_____ Highest Stage of Record

E Estimated

M Missing

U Unknown

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM					
Missouri Basin					
Republican:					
Clay Center, Kans.	15	25	26	17.1	26
Mill Creek:					
Washington, Kans.	18	25	25	27.0	25
Black Vermillion:					
Frankfort, Kans.	19	3	3	19.95	3
Fancy Creek:					
Winkler, Kans.	11	25	25	21.1	25
Stranger Creek:					
Easton, Kans.	15	4	4	19.55	4
Ohio Basin					
Guyandot:					
Logan, W. Va.	23	19	19	26.0	19
WEST GULF OF MEXICO DRAINAGE					
Double Mountain Fork:					
Aspermont, Tex.	U	13	14	U	U
Brazos:					
Seymour, Tex.	12	15	16	M	M
Sabinal:					
Sabinal, Tex.	12	24	24	15.1	24
Frio:					
Derby 1 S, Tex.	6	25	27	7.4	26
Tilden, Tex.	12	Sep 1	Sep 1	18.65	Sep 1
Nueces:					
Uvalde 9 SW, Tex.	11	12	13	15	13
Crystal City, Tex.	4	13	15	12	14
Asherton (nr.), Tex.	20	14	15	24.6	14
Tilden 11 S, Tex.	14	26	27	14.5	27

RAWINSONDE DATA

Average monthly values

AUGUST 1972

ALBANY, N. Y.
[illegible] MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	66	16.3	14.3	[illegible]	.9
1000	28	158	16.0	13.4	24	.6
950	31	586	16.2	11.8	27	2.8
900	31	1,045	14.0	9.2	29	5.5
850	31	1,526	11.5	4.2	29	6.7
800	31	2,031	9.1	-.8	29	7.4
750	31	2,564	6.9	-4.6	28	8.3
700	31	3,129	4.2	-10.0	28	9.2
650	31	3,728	1.2	-15.1	28	10.5
600	31	4,369	-2.2	-20.0	28	12.1
550	31	[illegible]	-6.0	-25.8	28	13.4
500	31	5,795	-10.5	-31.4	28	14.4
450	31	6,598	-15.7	-36.6	28	15.8
400	31	7,475	-22.2	-40.2	28	17.3
350	31	8,446	-29.5	-43.3	28	19.2
300	31	9,524	-38.0	-49.7	28	20.7
250	31	10,757	-46.7		28	23.4
200	31	12,206	-55.7		28	23.5
175	31	13,[illegible]	-57.7		28	22.7
150	31	14,022	-59.1		28	18.9
125	31	15,161	-60.7		28	16.3
100	31	16,548	-60.8		29	12.2
80	30	17,940	-59.1		29	6.1
70	30	18,781	-57.2		31	2.8
60	30	19,759	-55.9		36	1.5
50	29	20,922	-54.2		07	2.6
40	29	22,359	-52.3		09	4.7
30	29	24,231	-49.8		09	7.9
25	29	25,428	-48.2		09	8.9
20	28	26,908	-46.2		09	10.5
15	24	28,835	-44.0		09	11.7
10	17	31,581	-40.3		09	13.7
7	9	34,028	-36.8			
5						

ALBUQUERQUE, N. MEX.
841 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	18.2	10.4	09	2.1
1000						
950						
900						
850						
800	31	2,046	17.1	7.1	16	2.0
750	31	2,594	14.0	4.3	19	1.7
700	31	3,173	10.2	1.8	23	.9
650	31	3,765	6.1	-2.3	31	1.0
600	31	4,437	1.5	-6.8	34	1.3
550	31	5,132	-3.4	-10.7	32	1.1
500	31	5,879	-8.0	-17.9	26	1.2
450	31	6,690	-13.1	-25.0	25	2.1
400	31	7,578	-18.7	-33.6	25	3.5
350	31	8,563	-25.7	-38.6	24	4.9
300	31	9,659	-33.9	-48.2	25	6.1
250	31	10,912	-43.3		26	7.7
200	31	12,379	-53.8		28	10.4
175	31	13,227	-59.0		28	10.9
150	31	14,182	-64.0		30	7.8
125	31	15,284	-69.0		31	4.2
100	31	16,614	-69.4		01	.9
80	31	17,954	-66.5		07	3.1
70	31	18,767	-64.1		07	5.7
60	31	19,718	-61.3		08	8.0
50	30	20,857	-58.9		09	9.8
40	29	22,264	-56.3		09	11.7
30	29	24,108	-52.4		09	13.3
25	29	25,291	-50.8		09	14.0
20	26	26,745	-48.5		09	14.6
15	26	28,649	-46.0		08	17.6
10	21	31,366	-42.2		09	21.6
7	7	33,829	-37.5			
5						

AMARILLO, TEXAS
894 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	18.2	13.5	18	2.9
1000						
950						
900						
850	31	1,528	18.9	11.5	21	7.9
800	31	2,048	16.3	8.2	21	6.4
750	31	2,595	13.1	5.4	21	3.0
700	31	3,172	9.5	1.5	22	2.8
650	31	3,783	5.4	-1.3	22	1.8
600	31	4,432	1.0	-6.0	22	1.3
550	31	5,127	-3.4	-11.2	23	1.3
500	31	5,875	-7.7	-19.4	24	1.1
450	31	6,688	-12.4	-27.1	23	1.3
400	31	7,578	-18.3	-34.5	23	2.4
350	31	8,564	-25.5	-40.1	25	3.3
300	31	9,660	-34.1	-46.8	26	4.8
250	31	10,911	-43.8		27	6.0
200	31	12,374	-54.5		28	7.3
175	31	13,220	-59.4		30	6.9
150	31	14,174	-64.4		30	6.1
125	31	15,277	-69.0		32	4.5
100	31	16,606	-69.6		03	1.8
80	31	17,945	-66.5		06	4.3
70	31	18,759	-64.0		07	5.0
60	31	19,709	-61.4		08	7.1
50	31	20,847	-58.9		09	9.0
40	30	22,253	-56.5		09	11.2
30	29	24,093	-52.8		09	12.9
25	28	25,274	-51.3		09	14.2
20	27	26,732	-49.1		09	15.6
15	24	28,633	-46.3		08	17.5
10	16	31,348	-41.9		09	20.4
7						
5						

* ANCHORAGE, ALASKA
1006 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	12.4	9.4	14	2.1
1000	28	108	13.1	8.0	15	2.1
950	31	531	12.1	5.8	15	3.0
900	31	982	9.2	4.1	14	4.1
850	31	1,453	5.9	1.6	14	4.1
800	31	1,947	2.7	-.5	14	4.6
750	31	2,467	-.5	-3.3	14	5.1
700	31	3,016	-3.2	-10.2	15	4.8
650	31	3,599	-6.4	-14.1	16	4.2
600	31	4,221	-10.0	-17.1	17	4.7
550	31	4,887	-14.0	-21.8	18	4.3
500	31	5,605	-18.7	-27.6	19	3.8
450	31	6,382	-24.0	-32.9	20	4.2
400	31	7,231	-30.4	-38.6	21	4.2
350	31	8,170	-37.4	-43.2	21	4.0
300	31	9,213	-45.5		23	4.4
250	31	10,409	-52.4		23	4.7
200	31	11,853	-51.4		24	5.5
175	31	12,723	-50.2		24	5.3
150	31	13,730	-50.0		24	5.1
125	31	14,922	-50.3		24	4.5
100	31	16,378	-50.2		23	3.3
80	31	17,837	-49.9		23	2.7
70	31	18,711	-49.7		22	2.7
60	31	19,720	-49.7		19	1.8
50	31	20,914	-49.7		16	.9
40	31	22,375	-49.5		12	1.7
30	31	24,262	-48.7		10	2.9
25	30	25,466	-47.3		09	2.9
20	29	26,948	-45.8		08	3.2
15	27	28,869	-43.5		07	3.9
10	25	31,604	-40.3		08	4.8
7	18	34,030	-36.8		08	4.2
5	10	36,286	-33.5			

* ANNETTE, ALASKA
1014 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	12.2	11.4	13	1.5
1000	31	156	12.3	10.9	15	2.0
950	31	585	10.4	8.3	18	3.0
900	31	1,034	8.1	5.4	19	3.7
850	31	1,505	6.0	1.2	21	4.2
800	31	2,000	3.6	-.9	22	5.2
750	31	2,522	1.2	-3.6	23	5.2
700	31	3,074	-2.1	-10.2	23	5.8
650	31	3,660	-5.1	-12.4	23	6.7
600	31	4,285	-8.6	-17.1	23	6.7
550	31	4,955	-12.6	-20.3	23	7.6
500	31	5,676	-17.2	-25.5	23	9.2
450	31	6,458	-22.5	-30.5	24	10.0
400	31	7,313	-28.6	-35.7	24	9.5
350	31	8,258	-35.6	-42.6	24	10.0
300	31	9,310	-43.6	-45.7	25	9.4
250	31	10,514	-51.5		25	9.1
200	31	11,953	-53.3		29	6.3
175	31	12,815	-52.5		27	5.7
150	31	13,812	-52.5		27	5.3
125	31	14,989	-52.9		26	5.6
100	31	16,429	-52.8		25	4.6
80	30	17,868	-53.1		24	3.4
70	30	18,728	-53.3		23	2.0
60	30	19,722	-52.8		20	1.0
50	30	20,901	-52.2		10	1.3
40	29	22,349	-51.6		10	2.1
30	28	24,224	-49.7		07	4.2
25	26	25,422	-47.9		07	4.0
20	24	26,898	-45.7		07	5.8
15	24	28,826	-42.8		08	6.1
10	21	31,602	-37.5		09	7.3
7	10	34,031	-33.8			
5						

ATHENS, GEORGIA
989 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	20.6	19.1	02	.9
1000						
950	31	598	21.8	17.7	02	.8
900	31	1,067	19.5	15.0	30	1.0
850	31	1,557	16.3	11.0	29	1.5
800	31	2,071	13.4	7.2	29	2.0
750	31	2,613	10.4	1.0	[illegible]	2.6
700	31	3,184	7.5	-5.8	28	2.8
650	31	3,790	3.7	-7.9	28	2.7
600	31	4,436	.2	-12.8	28	3.1
550	31	5,129	-3.6	-18.3	29	3.9
500	31	5,876	-7.7	-24.7	29	3.1
450	31	6,688	-12.8	-30.6	30	2.9
400	31	7,576	-18.9	-36.8	33	2.7
350	31	8,560	-25.9	-42.6	33	3.7
300	31	9,654	-34.5	-50.5	31	5.1
250	31	10,901	-44.7		31	6.1
200	31	12,357	-55.9		32	7.1
175	31	13,197	-61.3		33	7.1
150	31	14,142	-65.9		34	5.5
125	31	15,241	-68.4		36	3.9
100	31	16,577	-68.6		04	2.6
80	31	17,923	-65.6		07	3.5
70	31	18,740	-63.5		07	5.4
60	30	19,691	-61.0		08	7.7
50	30	20,832	-58.2		08	9.9
40	29	22,245	-55.7		09	11.7
30	28	24,088	-52.5		09	13.7
25	27	25,272	-50.6		09	15.2
20	26	26,736	-48.6		09	15.8
15	24	28,634	-46.8		09	17.7
10	22	31,346	-42.5		09	22.4
7						
5						

* BARROW, ALASKA
1009 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	3.5	2.9	09	.9
1000	30	86	4.3	2.7	11	.4
950	31	502	5.0	1.1	23	1.8
900	31	943	4.5	-1.9	25	2.9
850	31	1,408	2.7	-4.5	26	4.1
800	31	1,896	.5	-6.1	26	4.6
750	31	2,412	-2.0	-9.8	26	4.5
700	31	2,958	-4.9	-12.6	26	5.3
650	31	3,537	-8.2	-17.5	25	6.6
600	31	4,155	-11.7	-22.0	26	6.9
550	31	4,816	-16.0	-27.1	26	7.7
500	31	5,527	-20.9	-31.3	26	8.5
450	30	6,299	-26.2	-36.9	26	8.3
400	30	7,140	-32.5	-43.6	27	9.5
350	30	8,070	-39.5	-48.0	26	11.0
300	30	9,105	-47.4		26	11.5
250	29	10,294	-52.7		27	12.7
200	29	11,741	-48.8		26	10.0
175	29	12,622	-47.6		26	9.2
150	29	13,641	-47.3		26	7.8
125	29	14,847	-47.4		27	5.8
100	29	16,323	-47.3		26	4.1
80	28	17,800	-47.0		26	4.0
70	28	18,685	-46.7		26	2.7
60	27	19,710	-46.6		25	1.8
50	24	20,918	-46.5		27	1.0
40	23	22,400	-46.5		27	.3
30	18	24,313	-46.7		12	1.6
25	17	25,529	-45.7		09	1.7
20	11	27,040	-44.0			
15						
10						
7						
5						

BARTER IS., ALASKA
1008 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	4.3	3.9	11	1.4
1000	25	98	5.2	4.3	12	1.8
950	31	501	7.6	1.5	20	.5
900	31	947	7.3	.1	25	3.3
850	31	1,415	5.1	-1.6	26	5.3
800	31	1,908	2.2	-4.3	26	5.5
750	31	2,427	-1.0	-7.4	25	6.6
700	31	2,974	-4.5	-10.9	26	6.7
650	31	3,554	-7.6	-15.4	26	6.2
600	31	4,173	-11.3	-18.9	26	6.9
550	31	4,836	-15.7	-23.1	27	6.8
500	31	5,548	-20.5	-29.7	27	7.6
450	31	6,32[illegible]	-25.8	-34.8	26	8.6
400	31	7,163	-31.9	-40.2	26	9.0
350	31	8,095	-39.0	-45.1	26	10.0
300	31	9,132	-46.9		26	11.2
250	31	10,321	-53.6		27	11.9
200	31	11,769	-49.0		27	10.1
175	31	12,649	-47.7		27	8.8
150	31	13,668	-47.5		27	7.9
125	29	14,875	-47.8		27	6.1
100	22	16,359	-46.9		27	4.5
80	21	17,837	-46.4		27	3.2
70	19	18,730	-45.9		28	2.7
60	17	19,762	-45.3		33	.6
50	17	20,980	-45.0		35	.6
40	17	22,471	-45.1		08	1.4
30	15	24,408	-44.4		07	2.2
25	14	25,634	-43.2		07	3.1
20	12	27,143	-41.2		07	3.0
15	11	29,101	-38.9		08	4.9
10	11	31,910	-34.5			
7						
5						

BETHEL, ALASKA
1003 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	10.8	9.2	18	1.7
1000	21	101	11.6	9.1	19	2.5
950	31	496	10.8	6.0	17	3.7
900	31	946	8.3	3.9	17	4.0
850	31	1,416	5.6	.6	17	4.0
800	31	1,910	3.0	-1.8	16	4.1
750	31	2,431	.3	-4.0	16	3.9
700	31	2,981	-2.8	-7.3	15	3.4
650	31	3,566	-6.1	-11.7	16	3.5
600	31	4,188	-9.6	-18.9	16	3.8
550	31	4,855	-13.5	-25.0	16	3.8
500	31	5,574	-18.3	-30.5	16	4.4
450	31	6,352	-23.5	-36.2	16	3.8
400	31	7,203	-29.7	-42.4	15	2.8
350	31	8,144	-37.0	-47.3	15	2.8
300	31	9,190	-44.9		12	2.9
250	31	10,389	-51.9		09	2.1
200	31	11,837	-50.0		26	1.1
175	31	12,712	-49.0		26	2.5
150	31	13,725	-49.1		26	3.1
125	31	14,919	-49.9		25	2.4
100	31	16,379	-49.8		24	2.2
80	31	17,840	-49.4		24	1.3
70	31	18,716	-49.3		21	1.1
60	31	19,727	-49.2		18	1.1
50	31	20,923	-49.2		14	1.0
40	30	22,387	-48.8		09	1.4
30	30	24,281	-47.9		08	2.[illegible]
25	30	25,487	-46.9		09	2.6
20	28	26,975	-45.3		08	3.8
15	22	28,943	-42.5		08	4.7
10	11	31,717	-39.0			
7						
5						

* BISMARCK, N. DAK.
956 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	14.9	12.2	05	.9
1000						
950	28	559	15.7	12.1	04	.8
900	31	1,015	18.1	9.6	25	2.0
850	31	1,504	16.3	5.6	28	2.5
800	31	2,017	13.0	2.3	30	3.5
750	31	2,557	9.6	-1.4	30	4.2
700	31	3,126	6.0	-6.1	29	4.7
650	31	3,729	2.5	-10.6	29	5.5
600	31	4,372	-1.4	-16.8	29	6.2
550	31	5,059	-5.9	-22.1	29	6.5
500	31	5,799	-10.8	-25.9	29	7.3
450	31	6,600	-16.4	-30.1	29	9.0
400	31	7,475	-22.8	-35.7	29	10.3
350	31	8,444	-29.9	-40.6	28	11.4
300	31	9,520	-38.4	-46.9	28	12.1
250	31	10,748	-47.9		28	13.8
200	31	12,194	-54.5		28	16.3
175	31	13,046	-56.1		28	16.1
150	31	14,023	-57.6		28	13.9
125	31	15,169	-59.7		28	11.6
100	31	16,560	-60.7		29	8.6
80	31	17,952	-59.2		30	4.0
70	31	18,791	-58.0		33	2.9
60	31	19,766	-56.7		02	2.8
50	30	20,928	-54.7		05	3.4
40	30	22,362	-52.9		06	4.4
30	30	24,228	-50.3		08	5.6
25	30	25,424	-48.4		08	6.5
20	30	26,901	-46.1		08	7.5
15	30	28,824	-43.8		09	8.9
10	28	31,575	-39.4		09	10.9
7	27	34,037	-35.1		09	11.0
5	15	36,406	-32.4			

BOISE, IDAHO
915 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	17.1	4.2	14	1.5
1000						
950						
900	31	1,010	20.7	3.7	12	.7
850	31	1,504	20.7	.4	01	.8
800	31	2,025	17.5	-2.2	35	.6
750	31	2,572	13.5	-4.2	27	1.4
700	31	3,147	9.1	-6.8	26	2.6
650	31	3,756	4.3	-9.5	25	4.4
600	31	4,402	-.7	-13.6	25	6.0
550	31	5,090	-5.8	-19.7	24	6.4
500	31	5,830	-11.0	-25.9	24	7.5
450	31	6,630	-16.7	-33.0	24	7.3
400	31	7,504	-23.1	-40.2	24	8.9
350	31	8,471	-30.3	-44.5	24	9.4
300	31	9,545	-38.9	-51.8	24	10.8
250	31	10,773	-47.4		24	12.9
200	31	12,226	-53.5		25	16.3
175	31	13,081	-55.6		25	16.2
150	31	14,057	-58.8		25	14.2
125	31	15,196	-60.8		25	9.7
100	31	16,580	-61.7		24	5.2
80	31	17,960	-61.4		25	1.2
70	31	18,792	-59.9		10	1.4
60	31	19,757	-58.7		09	2.6
50	31	20,908	-56.6		08	4.0
40	31	22,331	-54.5		08	6.1
30	30	24,187	-51.0		09	7.5
25	[illegible]	25,380	-49.7		08	8.4
20	[illegible]	26,844	-48.0		09	9.7
15	26	28,752	-45.2		09	11.5
10	21	31 475	-40.8		09	11.6
7	[illegible]	33,908	-37.3			
5						

BOOTHVILLE, LA.
1017 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	26.2	23.8	28	.6
1000	30	149	26.9	23.2	29	.8
950	30	602	23.8	20.1	26	.6
900	30	1,073	20.7	16.0	16	.8
850	30	1,566	17.5	11.4	16	1.6
800	30	2,083	14.8	6.1	16	.9
750	30	2,627	11.6	1.7	10	.3
700	30	3,200	7.9	-2.1	06	1.0
650	30	3,808	4.3	-5.7	04	1.0
600	30	4,455	.4	-8.3	05	.9
550	30	5,149	-3.6	-12.2	03	1.2
500	29	5,896	-7.9	-17.8	01	1.2
450	29	6,709	-12.7	-25.2	03	1.3
400	29	7,598	-18.3	-31.8	06	1.5
350	29	8,584	-25.4	-37.8	07	1.0
300	29	9,681	-33.8	-45.8	09	1.9
250	28	10,932	-44.2		08	1.9
200	28	12,391	-55.6		08	1.3
175	27	13,231	-61.1		08	2.6
150	27	14,176	-66.4		06	3.5
125	26	15,270	-70.1		07	6.1
100	26	16,595	-70.0		07	6.7
80	26	17,931	-67.2		09	7.9
70	26	18,743	-64.1		09	9.2
60	25	19,693	-61.7		08	10.1
50	25	20,830	-59.2		08	13.8
40	25	22,235	-56.6		09	16.8
30	25	24,077	-52.4		09	17.6
25	22	25,265	-50.7		09	18.6
20	22	26,725	-49.1		09	20.0
15	22	28,627	-46.1		09	22.5
10	8	31,372	-42.0			
7						
5						

* BROWNSVILLE, TEXAS
1014 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	23.6	21.5	14	1.2
1000	31	132	25.9	23.8	16	3.9
950	31	583	22.9	20.4	16	8.2
900	31	1,054	20.4	14.4	16	8.2
850	31	1,547	17.7	9.1	16	7.3
800	31	2,063	15.1	5.0	15	6.7
750	31	2,607	12.0	.6	13	5.8
700	31	3,182	8.4	-2.0	13	5.3
650	31	3,791	4.9	-7.3	13	4.5
600	31	4,439	1.1	-13.4	13	3.7
550	31	5,134	-2.9	-19.6	13	3.3
500	31	5,882	-7.9	-24.7	12	3.1
450	30	6,693	-13.1	-29.3	12	2.9
400	30	7,580	-19.0	-35.6	11	1.9
350	30	8,564	-25.8	-40.5	10	2.0
300	30	9,660	-34.2	-46.5	08	2.5
250	30	10,909	-44.5		06	3.5
200	30	12,365	-56.1		06	4.8
175	30	13,204	-61.5		05	5.7
150	30	14,147	-66.8		06	6.3
125	30	15,239	-69.8		06	7.4
100	28	16,563	-71.0		07	7.5
80	27	17,891	-68.5		08	9.5
70	27	18,696	-66.5		08	10.8
60	26	19,633	-63.9		08	13.5
50	26	20,759	-60.7		09	15.8
40	22	22,158	-57.9		09	17.3
30	22	23,987	-54.6		09	20.6
25	22	25,159	-52.6		09	23.0
20	22	26,611	-49.5		09	24.1
15	21	28,507	-46.8		09	26.4
10	18	31,226	-42.2		09	29.6
7	14	33,660	-37.5		09	28.2
5	10	36,017	-35.0			

BUFFALO, N. Y.
991 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	16.4	13.9	21	2.4
1000						
950	31	580	17.6	12.3	25	4.4
900	31	1,040	14.7	9.5	27	5.2
850	31	1,522	12.0	5.4	27	6.6
800	31	2,029	9.8	-1.5	27	7.7
750	31	2,563	7.6	-5.6	28	8.1
700	31	3,128	4.7	-10.9	28	8.9
650	31	3,729	1.5	-15.4	28	10.3
600	31	4,370	-1.8	-20.5	28	11.7
550	31	5,057	-5.8	-24.4	28	12.3
500	31	5,797	-10.5	-30.3	28	12.5
450	31	6,600	-15.8	-33.8	28	13.3
400	31	7,477	-22.2	-37.3	28	15.3
350	31	8,449	-29.2	-45.2	29	16.6
300	31	9,528	-37.7	-50.6	29	18.8
250	31	10,760	-47.1		29	21.3
200	30	12,204	-55.1		29	24.1
175	30	13,052	-57.6		29	22.1
150	30	14,022	-59.0		29	17.7
125	30	15,161	-60.6		29	13.8
100	30	16,547	-61.1		29	8.5
80	30	17,937	-59.6		29	6.2
70	30	18,775	-57.9		31	3.7
60	30	19,751	-56.3		35	2.1
50	30	20,914	-54.6		05	2.5
40	28	22,349	-52.6		07	3.7
30	28	24,220	-49.9		08	5.8
25	27	25,418	-48.2		08	6.9
20	25	26,898	-46.0		08	8.7
15	22	28,827	-44.0		09	11.0
10	12	31,577	-39.9			
7						
5						

CAPE HATTERAS, N. C.
1017 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	23.8	21.3	35	1.3
1000	31	153	24.0	20.5	33	1.7
950	31	602	21.2	17.2	30	2.2
900	31	1,069	18.3	14.3	28	2.6
850	31	1,557	15.7	9.7	27	3.5
800	31	2,070	12.9	5.0	27	4.3
750	31	2,611	10.1	.6	27	4.6
700	31	3,182	6.8	-3.4	26	4.9
650	31	3,787	3.3	-8.3	27	5.3
600	31	4,433	.0	-12.8	27	5.1
550	31	5,125	-3.6	-18.1	27	4.9
500	31	5,872	-8.2	-21.6	26	4.7
450	31	6,683	-13.0	-29.7	26	5.0
400	31	7,570	-19.0	-34.3	27	5.1
350	31	8,554	-26.1	-38.6	27	5.7
300	31	9,647	-34.8	-48.3	26	6.8
250	31	10,893	-45.0		27	7.9
200	31	12,346	-56.2		28	8.7
175	31	13,185	-61.0		29	9.3
150	31	14,134	-64.8		29	8.1
125	31	15,241	-66.9		31	5.8
100	31	16,587	-66.6		33	2.1
80	31	17,946	-64.2		05	2.2
70	30	18,768	-62.6		08	4.2
60	30	19,724	-60.3		08	6.8
50	29	20,870	-57.6		09	9.2
40	28	22,290	-54.8		09	11.6
30	26	24,141	-51.4		09	13.5
25	26	25,330	-49.8		09	14.4
20	25	26,796	-47.6		09	15.8
15	23	28,706	-45.5		09	17.1
10	17	31,426	-41.3		09	20.9
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

• CARIBOU, MAINE 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	12.9	10.9	25	2.1
1000						
950	31	552	13.7	7.8	28	4.3
900	31	1,007	11.5	5.4	28	4.8
850	31	1,482	8.5	3.1	27	5.9
800	31	1,982	6.2	-1.0	28	7.7
750	31	2,509	3.4	-6.2	27	8.8
700	31	3,066	.7	-13.6	27	11.1
650	31	3,659	-1.8	-18.3	28	12.4
600	31	4,292	-5.3	-22.8	27	13.5
550	31	4,970	-9.3	-28.1	27	14.8
500	31	5,700	-14.1	-32.6	27	15.8
450	31	6,491	-19.3	-37.4	27	17.3
400	31	7,356	-25.6	-41.5	27	19.1
350	31	8,314	-32.7	-45.9	27	20.2
300	31	9,377	-41.0	-52.3	27	21.7
250	31	10,595	-48.9		27	22.5
200	31	12,041	-53.6		27	22.8
175	31	12,899	-54.0		27	21.6
150	31	13,868	-54.4		27	18.6
125	31	15,053	-55.8		27	15.4
100	31	16,472	-56.4		28	11.3
80	31	17,892	-55.2		28	6.6
70	31	18,747	-54.4		27	4.4
60	30	19,737	-53.3		27	2.6
50	29	20,915	-52.1		27	.2
40	29	22,366	-50.5		09	1.8
30	29	24,251	-48.3		10	4.5
25	28	25,455	-47.4		09	6.4
20	28	26,934	-46.2		10	7.2
15	25	28,868	-42.7		09	8.8
10	24	31,629	-38.7		09	10.8
7	19	34,093	-34.6		09	10.2
5	8	36,397	-32.4			

CHARLESTON, S. C. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	22.8	21.2	33	.8
1000	31	147	24.0	21.6	30	1.5
950	31	597	22.5	18.8	25	1.4
900	31	1,067	19.7	15.4	24	1.4
850	31	1,558	16.6	12.2	23	1.6
800	31	2,073	13.8	8.2	24	1.7
750	31	2,615	10.6	3.7	24	1.9
700	31	3,187	7.3	-2.5	26	2.1
650	31	3,794	4.2	-6.9	27	2.3
600	31	4,441	.5	-12.8	28	2.5
550	31	5,134	-3.5	-18.8	28	2.6
500	31	5,882	-7.5	-24.0	29	3.2
450	31	6,695	-12.5	-30.0	30	3.0
400	31	7,584	-18.7	-33.7	30	3.5
350	31	8,569	-25.6	-41.7	32	3.9
300	31	9,664	-34.2	-49.1	32	4.5
250	31	10,913	-44.3		32	4.5
200	31	12,372	-55.7		31	5.0
175	30	13,211	-61.4		32	6.5
150	30	14,157	-65.6		34	5.8
125	30	15,258	-68.1		36	3.6
100	30	16,594	-68.2		05	2.8
80	30	17,941	-65.8		07	4.6
70	30	18,757	-63.8		08	6.2
60	30	19,708	-61.1		08	8.4
50	30	20,848	-58.4		09	11.2
40	29	22,264	-55.5		09	13.3
30	29	24,113	-52.0		09	15.0
25	29	25,298	-50.4		09	16.2
20	29	26,762	-48.3		09	16.5
15	28	28,665	-46.4		09	19.0
10	23	31,381	-42.2		09	24.1
7	5	33,768	-39.7			
5						

CHATHAM, MASS. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	18.1	15.8	26	1.3
1000	31	142	18.5	13.4	27	1.7
950	31	582	17.0	10.5	27	3.1
900	31	1,042	14.7	7.1	27	4.7
850	31	1,524	12.3	2.1	27	[illegible]
800	31	2,031	10.0	-2.5	27	[illegible]
750	31	2,565	7.8	-6.5	27	8.4
700	31	3,131	4.8	-10.5	28	8.8
650	31	3,732	1.7	-15.9	28	10.4
600	31	4,373	-1.7	-16.9	27	11.6
550	31	5,061	-5.6	-23.0	27	12.6
500	31	5,802	-10.4	-27.6	27	13.4
450	31	6,605	-15.8	-33.4	27	15.4
400	31	7,482	-22.0	[illegible]	27	16.9
350	31	8,453	-29.1	-43.2	27	17.6
300	31	9,534	-37.4	-49.4	27	19.0
250	31	10,767	-47.0		27	21.2
200	31	12,214	-55.9		27	22.3
175	31	13,057	-59.0		27	20.2
150	31	14,020	-60.8		28	17.8
125	31	15,152	-61.6		27	13.6
100	31	16,533	-61.6		28	9.6
80	31	17,920	-60.0		28	4.1
70	30	18,755	-58.8		28	2.1
60	30	19,727	-56.8		07	.5
50	29	20,889	-54.9		09	2.6
40	27	22,320	-53.0		09	5.7
30	27	24,187	-50.3		09	7.4
25	27	25,381	-49.0		09	9.4
20	26	26,858	-46.8		09	10.7
15	24	28,781	-44.2		09	[illegible]
10	21	31,523	-40.3		09	15.2
7	17	33,989	-36.1		09	15.5
5	6	36,329	-32.5			

CHIHUAHUA, MEXICO 856 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	17.5	14.7	32	.4
1000						
950						
900						
850	31	1,510	18.3	13.8	29	[illegible]
800	31	2,031	17.4	10.5	19	[illegible]
750	31	2,581	14.2	[illegible]	18	2.7
700	31	3,160	11.5	5.1	18	2.8
650	31	3,774	6.6	1.5	17	2.2
600	31	4,426	1.7	-3.0	14	1.6
550	31	5,122	-2.4	-9.0	16	1.9
500	31	5,873	-6.8	-15.8	16	1.5
450	31	6,689	-11.6	-20.2	17	1.4
400	31	7,582	-17.4	-27.4	02	1.7
350	31	8,571	-24.3	-35.1	[illegible]	2.4
300	31	9,673	-32.6	-42.8	01	3.1
250	31	10,930	-42.9		36	5.7
200	31	12,398	-54.4		34	8.1
175	31	13,243	-60.0		35	9.6
150	31	14,192	-65.7		01	9.1
125	31	15,286	-71.0		03	8.8
100	31	16,602	-71.7		06	6.0
80	31	17,926	-68.9		08	7.3
70	27	18,730	-66.6		08	9.5
60	24	19,671	-63.5		08	12.0
50	29	20,797	-61.1		08	14.3
40	24	22,191	-58.5		09	16.3
30	27	24,018	-54.1		09	17.9
25	26	25,192	-52.2		09	18.8
20	24	26,643	-50.1		08	19.9
15	23	28,529	-47.4		09	22.2
10	[illegible]	31,245	-43.9			
7						
5						

• COLD BAY, ALASKA 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	8.6	8.1	19	2.8
1000	[illegible]	109	7.8	7.6	19	3.3
950	31	467	7.6	6.0	22	2.1
900	31	932	6.4	4.0	24	2.0
850	31	1,400	4.6	1.4	25	2.4
800	31	1,893	2.6	-2.3	23	2.8
750	31	2,413	-.1	-6.1	22	3.1
700	31	2,963	-3.1	[illegible]	22	2.4
650	31	3,547	-6.1	-15.2	24	3.5
600	31	4,169	-9.7	-19.1	24	[illegible]
550	31	4,836	-13.9	-24.8	24	4.5
500	31	5,554	-18.4	-29.7	25	4.9
450	31	6,332	-23.5	[illegible]	25	5.3
400	31	7,183	-29.7	-39.1	26	6.3
350	31	8,124	-36.5	-43.7	26	7.6
300	31	9,173	-44.0	-44.7	26	9.2
250	31	10,380	-49.5		26	12.0
200	30	11,838	-48.6		26	9.0
175	30	12,716	-48.9		26	7.5
150	30	13,728	-49.6		27	5.5
125	30	14,919	-50.6		26	4.6
100	29	16,372	-51.0		26	2.8
80	28	17,829	-50.6		27	1.2
70	28	18,701	-50.3		26	.4
60	28	19,707	-50.2		12	.7
50	27	20,903	-50.0		10	1.6
40	27	22,364	-49.5		09	3.3
30	27	24,254	-48.1		09	3.6
25	26	25,450	-47.2		09	4.1
20	26	26,933	-45.7		08	4.5
15	26	28,858	-43.6		08	5.2
10	21	31,604	-40.6		08	8.2
7	11	34,079	-36.0			
5	6	36,452	-32.7			

DAYTON, OHIO 983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	17.1	15.5	18	.4
1000						
950	31	590	19.5	14.7	25	2.8
900	31	1,054	17.0	12.1	27	4.3
850	31	1,541	14.7	5.3	27	5.5
800	31	2,052	12.5	-.7	28	6.2
750	31	2,591	9.6	-4.6	28	6.7
700	31	3,161	6.6	-10.7	28	7.7
650	31	3,765	3.4	-14.2	28	8.2
600	31	4,410	-.3	-17.6	28	8.3
550	31	5,101	-4.2	-22.6	28	8.5
500	31	5,846	-8.8	-28.3	28	9.2
450	31	6,654	-13.9	-33.0	28	10.5
400	31	7,539	-20.0	-39.2	29	11.5
350	31	8,518	-27.1	-44.8	28	12.4
300	31	9,607	-35.8	-51.7	29	13.1
250	31	10,848	-45.6		29	14.8
200	31	12,301	-55.8		29	17.0
175	31	13,143	-59.9		29	17.0
150	31	14,099	-62.8		29	14.4
125	31	15,217	-64.9		29	10.1
100	31	16,579	-64.2		30	5.7
80	31	17,950	-62.1		33	2.9
70	31	18,780	-60.5		01	2.6
60	31	19,746	-58.2		05	3.2
50	30	20,900	-55.7		08	5.0
40	29	22,330	-53.6		08	6.7
30	28	24,193	-50.8		08	9.0
25	28	25,386	-49.0		08	10.2
20	27	26,857	-46.9		09	11.2
15	23	28,778	-44.4		09	13.9
10	12	31,506	-40.3		09	15.3
7						

DEL RIO, TEXAS 979 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	23.1	20.5	11	3.8
1000						
950	31	575	22.3	19.7	15	7.7
900	31	1,045	20.5	17.1	17	11.1
850	31	1,539	18.4	13.0	14	10.0
800	31	2,057	15.1	9.7	16	8.6
750	31	2,602	12.3	4.2	16	6.8
700	31	3,178	9.3	-1.4	17	5.5
650	32	3,789	5.4	-5.6	17	3.8
600	32	4,438	1.0	-9.0	17	1.8
550	32	5,132	-3.3	-14.2	16	.6
500	32	5,880	-7.7	-20.2	15	2.2
450	31	6,692	-12.7	-25.2	15	1.7
400	31	7,582	-18.3	-31.4	08	1.6
350	31	8,569	-25.1	-38.3	05	1.8
300	31	9,668	-33.3	-46.6	03	1.8
250	31	10,922	-43.4		03	3.0
200	31	12,385	-55.0		04	4.4
175	31	13,228	-60.5		03	5.4
150	31	14,175	-65.7		04	7.5
125	31	15,271	-69.7		06	7.6
100	31	16,595	-70.8		07	6.9
80	31	17,925	-67.9		08	8.4
70	31	18,732	-65.8		08	9.5
60	31	19,675	-63.2		09	10.8
50	31	20,804	-60.3		09	13.4
40	31	22,205	-57.5		09	15.5
30	24	24,035	-54.2		09	18.4
25	27	25,214	-51.6		09	19.5
20	25	26,669	-49.2		09	20.3
15	23	28,565	-46.7		09	21.1
10	15	31,293	-42.3		09	27.4
7	7	33,703	-38.3			

DENVER, COLO. 841 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	15.5	11.0	21	1.5
1000						
950						
900						
850						
800	31	2,034	16.7	4.8	24	1.8
750	31	2,582	14.6	1.3	25	1.5
700	31	3,162	10.8	-2.6	25	1.9
650	31	3,775	6.1	-5.3	27	2.9
600	31	4,425	1.3	-8.6	29	3.8
550	31	5,119	-4.2	-13.0	29	4.4
500	31	5,863	-9.4	-20.3	28	5.1
450	31	6,670	-14.3	-28.5	26	5.5
400	31	7,553	-20.4	-35.5	26	6.9
350	31	8,531	-27.5	-40.8	26	8.6
300	31	9,619	-35.6	-50.0	28	11.7
250	31	10,863	-44.7		26	[illegible]
200	31	12,327	-53.4		26	15.7
175	31	13,178	-57.5		27	14.8
150	31	14,143	-61.5		27	10.9
125	31	15,263	-65.1		27	7.4
100	31	16,620	-65.7		28	3.2
80	31	17,982	-63.6		[illegible]	.7
70	31	18,805	-61.9		[illegible]	2.6
60	30	19,767	-59.2		07	4.7
50	30	20,917	-56.8		08	5.5
40	30	22,340	-54.2		08	7.5
30	30	24,199	-51.4		08	8.8
25	30	25,389	-49.5		09	10.0
20	30	26,857	-47.1		09	11.9
15	28	28,767	-45.1		09	[illegible]
10	23	31,501	-41.3		09	16.8
7	9	33,952	-38.9			

DODGE CITY, KANS. 926 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	18.6	13.1	20	2.1
1000						
950						
900	31	1,038	21.1	13.9	21	6.0
850	31	1,532	19.1	9.9	22	6.8
800	31	2,051	16.2	6.5	23	5.1
750	31	2,597	12.7	3.4	23	4.4
700	31	3,173	8.7	.4	24	3.3
650	30	3,786	4.9	-3.8	25	2.9
600	30	4,435	1.0	-8.4	25	3.4
550	30	5,130	-3.1	-14.9	26	3.2
500	30	5,878	-7.7	-21.2	26	3.4
450	30	6,690	-12.5	-28.1	27	4.2
400	30	7,579	-18.9	-34.0	27	4.9
350	30	8,562	-26.1	-39.6	28	6.4
300	30	9,657	-34.3	-47.6	27	8.9
250	30	10,905	-44.2		26	10.2
200	30	12,367	-54.3		27	11.1
175	29	13,214	-59.2		28	10.3
150	29	14,169	-63.9		29	9.5
125	27	15,276	-67.7		29	7.1
100	26	16,613	-67.9		30	2.4
80	25	17,965	-65.4		04	2.4
70	24	18,780	-63.1		06	3.7
60	24	19,735	-61.7		07	5.6
50	24	20,878	-57.3		08	7.6
40	24	22,296	-55.3		08	9.5
30	24	24,146	-52.2		09	10.6
25	24	25,330	-50.8		09	11.8
20	24	26,793	-48.4		08	13.3
15	[illegible]	28,696	-45.7		09	15.7
10	17	31,416	-41.9		09	17.5
7	7	33,830	-38.1			

EL PASO, TEXAS 883 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	20.7	14.7	[illegible]	.8
1000						
950						
900						
850	30	1,521	20.2	13.3	12	1.8
800	30	2,044	17.5	10.4	14	2.0
750	30	2,593	13.9	7.9	20	1.9
700	30	3,171	9.7	4.5	17	.3
650	30	3,784	5.9	-.2	06	1.3
600	30	4,434	1.2	-3.2	07	1.7
550	30	5,130	-2.9	-10.0	08	1.4
500	30	5,879	-7.4	-16.9	05	.7
450	30	6,693	-12.2	-23.6	33	.3
400	30	7,583	-18.0	-29.2	28	.1
350	30	8,571	-24.9	-36.2	31	1.2
300	30	9,671	-33.3	-44.5	30	2.7
250	30	10,925	-43.3		28	3.4
200	30	12,391	-54.2		31	7.4
175	30	13,237	-59.7		33	8.0
150	30	14,187	-65.7		34	6.9
125	30	15,282	-70.5		01	6.1
100	30	16,600	-70.8		07	4.0
80	30	17,930	-68.6		08	5.4
70	28	18,737	-65.6		08	8.2
60	28	19,680	-63.1		09	10.0
50	25	20,809	-60.6		09	12.6
40	28	22,206	-58.2		09	14.9
30	28	24,035	-53.7		09	16.4
25	28	25,213	-51.8		09	17.2
20	26	26,669	-49.7		09	18.1
15	25	28,562	-47.5		08	21.1
10	20	31,270	-43.6		09	25.4
7	10	33,687	-39.0			

ELY, NEV. 811 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	10.2	-.8	20	3.5
1000						
950						
900						
850						
800	31	2,027	15.4	1.8	19	3.1
750	31	2,576	14.4	-.9	18	2.0
700	31	3,154	10.2	-3.7	22	3.2
650	31	3,765	5.6	-7.2	22	3.4
600	31	4,414	.6	-11.6	22	4.0
550	31	5,106	-4.7	-16.1	21	5.4
500	30	5,847	-10.1	-21.8	22	6.5
450	30	6,651	-15.5	-29.5	24	6.5
400	30	7,530	-21.8	-36.0	25	8.3
350	30	8,501	-29.0	-41.8	25	8.9
300	30	9,582	-37.5	-48.8	25	11.1
250	30	10,818	-45.8		25	13.8
200	30	12,283	-52.3		25	17.2
175	30	13,138	-56.5		26	17.0
150	30	14,106	-61.1		25	15.6
125	29	15,233	-64.8		26	11.6
100	29	16,591	-65.2		24	4.9
80	29	17,954	-64.1		10	1.0
70	29	18,776	-62.0		09	2.9
60	29	19,733	-60.2		10	5.2
50	29	20,878	-57.3		08	6.3
40	29	22,296	-55.1		09	7.7
30	28	24,148	-52.1		09	10.1
25	28	25,334	-50.4		09	10.8
20	28	26,797	-48.3		09	12.2
15	27	28,704	-45.5		09	15.2
10	26	31,433	-41.2		09	16.9
7	14	33,877	-37.0			
5						

EMPALME, MEXICO 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	26.1	23.1	04	1.6
1000	30	93	27.5	22.9	08	1.5
950	30	549	25.9	19.5	14	2.2
900	30	1,024	23.8	14.7	15	2.5
850	30	1,521	20.9	11.3	14	2.0
800	30	2,044	17.9	8.2	12	1.7
750	30	2,593	14.5	4.3	12	1.8
700	30	3,172	10.8	.7	15	1.4
650	28	3,789	6.8	-2.5	14	[illegible]
600	28	4,442	2.4	-5.7	12	1.3
550	28	5,140	-1.7	-11.7	08	1.4
500	28	5,893	-6.2	[illegible]	05	2.0
450	27	6,709	-11.1	-23.6	03	1.3
400	27	7,603	-17.2	-30.7	34	.9
350	27	8,595	-23.8	-37.1	30	.6
300	27	9,699	-32.1	-44.8	25	1.0
250	28	10,962	-41.9		31	2.2
200	28	12,436	-53.4		32	3.2
175	28	13,284	-59.4		34	4.8
150	28	14,234	-66.1		36	5.7
125	28	15,324	-72.0		03	5.4
100	27	16,631	-72.4		07	5.7
80	27	17,950	-69.9		08	8.1
70	27	18,752	-66.7		08	10.0
60	26	19,689	-64.0		09	13.1
50	25	20,817	-60.7		09	15.4
40	25	22,213	-58.2		09	16.9
30	24	24,044	-54.6		09	18.2
25	23	25,214	-53.2		09	19.7
20	19	26,660	-50.1		09	21.2
15	18	28,552	-47.5		09	22.7
10	13	31,253	-43.0			
7						
5						

• FAIRBANKS, ALASKA 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	11.7	9.1	34	1.4
1000	5	156	12.1	8.9		
950	31	511	12.3	7.2	[illegible]	1.3
900	31	963	10.1	4.3	23	2.4
850	31	1,436	6.7	1.9	23	4.3
800	31	1,931	3.2	-.4	23	4.3
750	31	2,451	-.4	-3.7	23	4.5
700	31	3,000	-3.7	-8.0	23	4.4
650	31	3,583	-6.9	-13.6	23	4.8
600	31	4,203	-10.2	-17.3	24	5.2
550	31	4,869	-14.5	-24.0	24	4.9
500	31	5,584	-19.7	-29.3	24	5.5
450	31	6,358	-25.2	-34.1	24	5.6
400	31	7,202	-31.5	-40.3	25	4.7
350	31	8,137	-38.5	-43.9	26	5.0
300	31	9,175	-46.5		28	[illegible]
250	31	10,365	-53.2		29	5.2
200	31	11,803	-51.8		27	5.9
175	31	12,671	-50.8		28	6.9
150	31	13,677	-50.1		25	6.4
125	31	14,867	-50.2		25	5.1
100	31	16,325	-50.0		24	3.3
80	31	17,784	-49.7		24	3.1
70	30	18,661	-49.3		24	2.3
60	30	19,672	-49.3		24	1.9
50	30	20,867	-49.3		[illegible]	.8
40	29	22,332	-49.0		08	1.3
30	28	24,226	-48.1		[illegible]	1.4
25	27	25,435	-47.1		[illegible]	1.5
20	25	26,916	-45.3		[illegible]	3.3
15	[illegible]	28,834	[illegible]		[illegible]	4.2
10	[illegible]	31,586	-39.2		08	3.8
7	[illegible]	34,072	-34.6			
5	7	36,465	-30.7			

FLINT, MICH. 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	236	15.2	13.4	[illegible]	.4
1000						
950	31	575	17.4	12.6	24	2.8
900	31	1,036	15.2	9.3	27	3.9
850	31	1,519	12.8	5.1	28	5.7
800	31	2,027	10.9	-1.6	28	6.6
750	31	2,564	8.2	-4.3	28	7.4
700	31	3,130	4.8	-7.8	28	8.6
650	31	3,731	1.4	-11.4	28	9.6
600	31	4,371	[illegible]	-16.9	29	[illegible]
550	31	5,058	[illegible]	-21.6	28	[illegible]
500	31	5,798	-10.6	[illegible]	28	11.7
450	31	6,601	-15.8	-31.6	28	12.6
400	31	7,478	-22.0	-38.3	28	[illegible]
350	31	8,450	[illegible]	-44.4	28	[illegible]
300	31	9,530	-37.5	-51.1	29	18.6
250	31	10,765	-46.5		29	[illegible]
200	31	12,215	[illegible]		29	[illegible]
175	31	13,061	[illegible]		30	[illegible]
150	31	14,027	-59.7		29	[illegible]
125	31	15,161	-62.1		29	[illegible]
100	31	16,539	-62.3		30	[illegible]
80	31	17,921	-60.8		31	4.2
70	30	18,754	-59.1		33	2.9
60	30	19,725	-57.3		[illegible]	2.1
50	30	20,884	-55.4		[illegible]	3.2
40	30	22,315	-53.2		08	4.7
30	30	24,181	-50.3		08	[illegible]
25	30	25,375	-48.9		09	8.1
20	[illegible]	26,849	-46.7		09	[illegible]
15	[illegible]	28,771	[illegible]		09	11.2
10	17	31,496	-41.8			

FORT WORTH, TEXAS 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	23.5	9.4	[illegible]	1.4
1000						
950	31	586	23.8	17.3	21	6.2
900	31	1,059	21.8	14.2	20	6.4
850	31	1,553	18.7	11.6	20	5.2
800	31	2,072	15.1	9.3	20	4.3
750	31	2,616	11.6	5.2	20	3.4
700	31	3,190	8.0	-.8	20	3.2
650	31	3,798	4.4	-4.6	20	3.0
600	31	4,446	.6	-8.3	20	2.7
550	31	5,140	-3.5	-14.3	[illegible]	2.7
500	31	5,888	-7.5	[illegible]	22	[illegible]
450	31	6,701	-12.4	-24.5	20	1.4
400	31	7,591	-18.2	[illegible]	21	.9
350	31	8,578	-25.2	-36.1	24	.8
300	31	9,675	[illegible]	[illegible]	30	.9
250	31	10,928	[illegible]		31	2.5
200	31	12,392	-54.8		30	3.2
175	31	13,235	-60.3		[illegible]	1.8
150	31	14,184	[illegible]		[illegible]	3.7
125	29	15,289	-69.4		[illegible]	[illegible]
100	29	16,619	-69.0		[illegible]	[illegible]
80	29	17,958	-67.0		07	5.8
70	29	18,770	-64.6		08	7.2
60	29	19,718	-61.7		08	9.7
50	29	20,855	-58.8		09	[illegible]
40	29	22,264	[illegible]		09	12.9
30	29	24,105	[illegible]		09	14.4
25	28	25,285	[illegible]		09	16.3
20	27	26,743	-48.9		09	17.6
15	21	28,638	[illegible]		09	20.0
10	15	31,353	-42.1		09	24.3

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1972

Standard pressure surface (mb.)	GLASGOW, MONT. 934 MB						GRAND JUNCTION, COLO. 854 MB						* GREAT FALLS, MONT. 889 MB						GREEN BAY, WIS. 990 MB						GREENSBORO, N. C. 987 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	15.6	10.4	09	2.2	31	1,472	18.8	4.1	11	3.5	31	1,118	15.4	10.2	24	2.6	31	210	15.8	13.6	27	.6	31	275	19.2	17.1	29	.3
1000																														
950																			31	558	17.2	11.3	24	2.0	31	602	20.7	16.3	31	1.6
900	31	1,014	19.2	8.5	19	2.2													31	1,020	15.4	9.0	26	3.3	31	1,070	18.6	13.9	31	3.0
850	31	1,506	17.8	5.5	24	2.6	29	1,512	20.3	5.0	12	3.6	31	1,506	17.2	6.1	26	2.3	31	1,503	13.1	6.5	27	5.3	31	1,559	15.9	11.1	31	3.0
800	31	2,022	14.3	3.2	27	3.0	31	2,032	19.0	3.2	13	4.5	31	2,022	14.6	2.9	26	2.3	31	2,012	10.8	1.7	28	6.5	31	2,073	13.2	5.7	29	3.7
750	31	2,563	10.4	-.8	30	3.9	31	2,583	15.7	.9	18	1.8	31	2,564	10.9	.0	25	2.8	31	2,548	7.9	-1.2	28	7.0	31	2,613	10.3	.6	29	4.8
700	31	3,133	6.4	-5.1	30	4.9	31	3,164	11.3	-1.6	24	2.6	31	3,135	6.7	-3.7	26	4.3	31	3,114	4.6	-5.6	28	7.5	31	3,185	7.3	-5.5	28	4.7
650	31	3,737	2.2	-8.7	30	6.2	31	3,779	6.4	-4.0	25	3.0	31	3,740	2.6	-7.0	26	5.3	31	3,714	1.3	-10.2	29	8.3	31	3,792	4.3	-11.7	28	4.9
600	31	4,378	-2.0	-13.3	28	7.2	31	4,429	1.1	-6.6	26	3.2	31	4,382	-1.9	-11.5	26	6.3	31	4,355	-2.2	-15.0	29	8.7	31	4,439	.6	-16.4	29	4.9
550	31	5,064	-6.7	-18.4	28	7.6	31	5,122	-4.3	-10.5	26	3.6	31	5,068	-6.6	-18.4	27	7.4	31	5,041	-6.4	-20.3	29	9.7	31	5,132	-3.2	-21.2	28	5.1
500	31	5,802	-11.5	-24.1	28	8.2	31	5,867	-9.1	-19.5	26	5.2	31	5,806	-11.6	-25.1	26	7.5	31	5,779	-11.0	-27.1	29	10.9	31	5,880	-7.8	-28.0	29	5.1
450	31	6,612	-16.7	-28.1	28	10.1	31	6,674	-14.4	-26.0	26	5.9	31	6,605	-17.1	-31.9	26	8.2	31	6,580	-16.5	-34.6	29	11.5	31	6,691	-12.9	-33.0	29	4.4
400	31	7,476	-23.1	-34.6	28	11.0	31	7,557	-20.5	-33.9	26	7.5	31	7,478	-23.4	-38.5	26	9.4	31	7,455	-22.6	-39.7	29	12.1	31	7,579	-18.8	-39.6	31	6.0
350	31	8,443	-30.4	-40.9	28	11.8	31	8,534	-27.6	-40.3	25	10.2	31	8,444	-30.6	-44.3	25	10.4	31	8,424	-29.8	-45.7	29	12.8	31	8,563	-26.0	-44.1	30	6.7
300	31	9,517	-39.1	-47.2	27	12.8	31	9,621	-35.9	-48.7	25	12.6	31	9,517	-39.4	-50.5	25	11.8	31	9,502	-37.8	-51.4	29	14.7	31	9,657	-34.6	-49.9	31	7.8
250	31	10,741	-48.9		26	13.5	31	10,864	-44.7		25	16.4	31	10,740	-48.9		25	12.1	31	10,735	-46.5		29	17.4	31	10,904	-44.7		31	8.8
200	31	12,182	-54.9		27	15.3	31	12,331	-52.8		26	17.8	31	12,184	-54.6		26	14.2	31	12,189	-54.3		29	20.1	31	12,362	-55.3		31	10.4
175	31	13,034	-56.3		28	15.2	31	13,184	-57.1		27	17.5	31	13,036	-56.2		26	14.4	31	13,039	-57.3		29	19.3	31	13,204	-60.7		32	9.9
150	31	14,009	-57.6		28	13.9	31	14,148	-61.9		27	14.1	31	14,012	-57.9		26	13.5	31	14,011	-58.5		30	15.8	31	14,154	-64.4		32	8.0
125	31	15,156	-59.3		28	11.6	31	15,265	-65.8		27	10.6	31	15,157	-59.4		26	11.2	31	15,153	-60.1		30	12.5	31	15,261	-66.7		33	6.3
100	31	16,551	-59.9		28	8.1	31	16,616	-66.5		28	3.1	31	16,553	-60.0		27	6.3	31	16,541	-61.1		30	8.4	31	16,612	-66.2		34	2.6
80	31	17,948	-58.5		30	4.7	31	17,971	-64.8		04	1.0	30	17,948	-59.5		29	3.4	31	17,931	-59.5		31	4.9	31	17,971	-63.9		05	2.5
70	31	18,790	-57.6		32	2.9	28	18,790	-62.9		08	3.2	30	18,787	-58.3		33	1.7	31	18,770	-58.1		32	3.2	31	18,794	-61.6		08	3.9
60	31	19,767	-56.2		01	2.0	28	19,744	-60.5		08	5.2	30	19,761	-56.7		04	2.4	31	19,745	-56.6		36	2.5	30	19,754	-59.4		08	5.7
50	31	20,930	-54.6		06	2.6	28	20,888	-57.7		08	7.1	30	20,922	-54.9		07	3.9	31	20,909	-54.0		04	2.8	30	20,903	-56.9		09	8.2
40	31	22,364	-53.1		07	3.3	27	22,305	-55.1		08	9.0	29	22,355	-53.4		07	4.4	31	22,346	-52.2		07	3.5	30	22,326	-54.2		09	10.0
30	30	24,234	-49.9		08	4.9	26	24,155	-51.6		09	10.8	28	24,216	-50.2		08	5.9	30	24,221	-49.4		08	5.1	29	24,184	-50.9		09	12.4
25	29	25,431	-48.0		09	6.0	24	25,345	-50.1		08	12.1	27	25,409	-48.2		08	6.5	29	25,420	-48.0		08	6.2	28	25,377	-49.2		09	13.6
20	29	26,910	-46.0		09	7.3	20	26,800	-48.2		09	12.9	25	26,882	-46.4		09	7.1	28	26,899	-45.8		08	8.1	26	26,846	-47.4		09	14.4
15	28	28,833	-43.5		09	7.7	20	28,705	-45.8		08	14.7	24	28,801	-44.3		08	8.0	28	28,824	-43.4		09	9.8	26	28,759	-45.1		09	16.2
10	21	31,586	-39.0		09	9.7	15	31,421	-41.8				22	31,546	-39.9		08	10.3	19	31,568	-40.4		09	11.6	18	31,465	-41.7		09	19.6
7	6	33,970	-37.5										11	34,003	-35.8		08	12.4												
5													8	36,354	-32.8															

Standard pressure surface (mb.)	GUADALUPE IS., MEXICO 1011 MB						* GUAM, MARIANA IS. 998 MB						HILO, HAWAII 1013 MB						HUNTINGTON W. VA. 989 MB						* INTERNATIONAL FALLS, MINN. 972 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	23	19.7	17.4	34	4.2	31	111	24.9	23.5	09	2.0	31	10	22.3	19.8	25	1.1	30	246	17.9	17.4	18	.9	31	359	13.8	10.4	13	.6
1000	28	114	17.0	14.3	34	4.2							31	123	23.2	20.3	31	.7												
950	28	552	16.8	10.3	32	2.4	31	543	23.2	21.1	09	4.1	31	571	20.2	17.9	03	2.1	30	594	20.4	16.2	26	3.3	31	555	15.9	11.0	19	.6
900	28	1,013	18.7	4.3	30	1.2	31	1,014	20.7	17.6	09	3.6	31	1,036	17.1	15.0	04	2.8	30	1,061	18.1	13.3	28	5.4	31	1,015	14.7	7.5	27	2.7
850	29	1,505	18.4	.3	24	.5	31	1,508	18.1	14.3	08	3.2	31	1,522	14.1	11.7	05	3.2	30	1,549	15.2	7.8	28	5.8	31	1,497	12.7	3.1	29	4.3
800	29	2,022	15.8	-.9	22	.7	31	2,026	15.4	11.6	08	3.8	31	2,033	12.4	4.5	06	3.4	30	2,061	12.8	1.3	28	6.3	31	2,004	10.1	-.7	29	5.3
750	29	2,566	12.7	-3.1	23	1.0	31	2,572	12.7	8.0	08	3.9	31	2,573	10.6	-4.9	07	3.1	30	2,601	10.0	-2.4	28	6.4	31	2,539	7.0	-5.5	30	6.4
700	29	3,141	8.8	-6.6	18	1.6	31	3,149	9.6	3.5	09	4.0	31	3,146	8.5	-10.3	06	2.0	30	3,171	6.6	-7.8	28	6.2	31	3,102	3.6	-9.6	30	7.9
650	26	3,750	4.8	-9.3	17	1.1	31	3,762	6.2	-1.1	09	3.6	31	3,755	5.6	-14.7	06	1.2	30	3,776	3.8	-14.1	29	6.6	31	3,700	.3	-12.8	30	8.5
600	26	4,398	1.0	-14.0	20	1.3	31	4,414	2.3	-4.5	09	3.7	31	4,406	2.6	-20.5	06	.4	30	4,421	.2	-19.1	28	7.0	31	4,338	-3.3	-16.7	30	9.4
550	26	5,092	-3.1	-18.4	22	.5	31	5,113	-1.7	-9.8	10	3.4	31	5,104	-1.3	-24.8	32	1.3	30	5,114	-3.5	-22.9	29	7.0	31	5,020	-7.8	-22.4	31	10.2
500	26	5,841	-7.8	-23.5	20	.9	31	5,866	-5.9	-15.6	11	3.3	31	5,857	-5.6	-30.0	29	2.6	30	5,861	-7.8	-28.0	29	7.4	30	5,753	-12.3	-27.9	31	11.2
450	23	6,657	-12.8	-27.9	22	1.7	31	6,684	-10.7	-20.0	11	3.8	31	6,675	-10.9	-34.6	28	3.8	30	6,673	-13.0	-33.7	29	7.7	30	6,550	-17.5	-32.5	30	12.6
400	23	7,545	-19.2	-32.3	25	2.9	31	7,580	-16.5	-23.9	11	3.9	31	7,569	-17.1	-39.1	28	5.5	30	7,560	-19.1	-39.9	29	8.9	30	7,421	-23.7	-38.3	30	14.0
350	22	8,523	-26.2	-40.1	23	3.7	31	8,574	-23.3	-31.6	11	2.5	31	8,560	-24.0	-44.9	28	7.0	30	8,542	-26.4	-44.2	29	10.2	30	8,385	-31.1	-43.9	29	15.2
300	22	9,618	-33.9	-49.0	23	5.4	31	9,682	-31.4	-39.8	13	1.7	31	9,663	-32.3	-51.3	27	7.9	30	9,635	-34.8	-50.2	30	11.2	30	9,457	-39.5	-49.1	29	18.4
250	25	10,868	-42.8		23	5.8	31	10,945	-41.8		10	1.0	31	10,923	-42.2		27	8.8	30	10,881	-44.8		29	12.2	30	10,680	-48.6		29	20.0
200	25	12,338	-53.5		24	4.4	31	12,416	-54.4		02	.9	31	12,394	-54.1		26	10.4	30	12,339	-55.3		30	15.3	30	12,124	-54.5		29	20.2
175	24	13,182	-59.7		21	1.8	31	13,258	-61.6		02	1.8	30	13,240	-60.4		25	10.5	30	13,182	-59.7		30	14.5	30	12,979	-54.8		29	19.4
150	24	14,131	-66.2		17	1.2	30	14,194	-69.5		04	3.0	30	14,184	-67.2		24	9.4	30	14,138	-62.8		30	12.0	30	13,962	-56.2		29	18.2
125	24	15,220	-72.0		06	1.4	29	15,264	-76.4		07	5.9	30	15,267	-73.5		23	6.6	30	15,255	-65.1		30	9.0	30	15,115	-58.3		29	15.1
100	21	16,527	-74.0		07	5.4	28	16,543	-77.8		09	10.2	30	16,557	-76.0		16	3.3	30	16,613	-64.8		32	4.4	30	16,516	-58.6		30	10.5
80	21	17,840	-69.9		07	7.7	23	17,843	-72.2		08	13.2	29	17,862	-71.4		10	8.4	30	17,981	-62.8		36	2.3	30	17,921	-57.6		30	7.4
70	21	18,642	-66.9		07	9.1	20	18,630	-69.9		09	15.1	29	18,656	-69.0		09	11.1	30	18,809	-60.4		04	3.2	30	18,767	-56.2		32	4.5
60	21	19,579	-64.2		07	11.0	18	19,557	-67.2		09	17.6	29	19,585	-66.0		09	13.6	30	19,775	-58.1		07	4.4	30	19,750	-54.9		34	3.9
50	21	20,702	-61.9		08	13.5	18	20,666	-63.9		09	20.8	29	20,701	-62.9		09	16.7	30	20,929	-56.0		08	6.2	30	20,921	-53.2		01	3.4
40	20	22,094	-58.9		08	14.7	17	22,042	-61.2		09	24.5	28	22,079	-60.2		09	20.0	29	22,355	-53.9		09	7.7	30	22,362	-52.0		06	3.0
30	18	23,919	-55.0		08	16.5	17	23,850	-56.7		09	29.1	28	23,890	-56.3		09	23.8	28	24,213	-50.7		09	10.9	29	24,235	-49.0		06	3.9
25	16	25,099	-52.9		08	17.4	16	25,013	-54.2		09	30.2	27	25,053	-54.0		09	26.0	28	25,406	-49.0		09	11.7	28	25,433	-47.7		08	4.7
20	15	26,543	-51.1		08	18.8	14	26,459	-51.6		09	31.5	27	26,496	-51.0		09	27.1	27	26,878	-46.4		09	13.6	27	26,918	-45.5		08	6.4
15	13	28,423	-48.7				9	28,339	-48.4				26	28,380	-48.2		09	29.5	25	28,799	-44.1		09	14.9	23	28,839	-43.3		08	7.1
10	7	31,079	-44.5										25	31,082	-43.7		09	30.1	13	31,545	-41.2		09	16.9	20	31,580	-39.8		09	9.5
7													14	33,495	-41.1										19	34,035	-36.2		09	10.7
5																									15	36,384	-32.4		07	9.7
4																									11	37,968	-31.1			

Standard pressure surface (mb.)	JACKSON, MISS. 1006 MB						JOHN F. KENNEDY INT. AP NY 1016 MB						JOHNSTON IS., PACIFIC AREA 1013 MB						KEY WEST, FLA. 1016 MB						* KOROR, CAROLINE IS. 1007 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	22.3	20.9	17	.8	30	5	21.1	16.7	27	1.4	22	3	26.5	22.6	08	6.8	31	3	27.3	23.1	12	2.5	30	30	27.4	24.2	26	2.0
1000	31	151	22.7	20.3	21	1.0	30	145	20.7	15.4	27	2.2	22	116	24.9	22.0	08	7.4	31	142	26.9	22.8	11	3.3	30	92	26.6	23.8	26	2.6
950	31	501	23.7	17.3	26	2.9	30	588	18.9	12.0	27	3.3	22	565	21.3	20.0	08	8.3	31	594	23.2	20.6	12	4.0	30	545	23.7	21.3	26	4.3
900	31	1,073	20.8	14.9	26	2.6	30	1,051	16.1	9.7	26	4.1	22	1,033	18.4	15.6	08	8.3	31	1,065	20.4	14.3	11	4.4	30	1,018	21.0	17.5	26	3.9
850	31	1,565	17.3	10.9	26	1.8	30	1,535	13.2	4.3	26	5.6	22	1,522	15.6	12.2	08	7.6	31	1,557	17.4	10.6	11	4.1	30	1,511	18.1	13.9	27	2.9
800	31	2,080	14.1	6.4	27	1.7	30	2,044	11.0	-2.3	27	7.3	22	2,036	13.1	7.5	08	6.5	31	2,074	14.5	6.5	10	3.7	30	2,030	15.8	9.6	27	2.6
750	31	2,623	11.2	.1	27	2.2	30	2,580	9.0	-6.2	27	8.5	22	2,577	11.2	2.4	08	5.3	31	2,617	11.4	2.9	10	3.4	30	2,576	12.7	6.8	26	2.1
700	31	3,195	7.6	-2.9	29	2.1	30	3,149	6.4	-10.0	27	10.0	22	3,152	9.5	-4.3	07	3.5	31	3,190	8.0	-3.2	09	3.5	30	3,153	9.2	3.1	25	1.6
650	31	3,803	4.0	-5.3	29	2.2	30	3,753	3.2	-13.7	27	9.9	22	3,764	6.4	-8.7	09	1.6	31	3,799	4.9	-7.5	10	3.2	30	3,765	5.7	1.4	26	.7
600	31	4,450	.5	-11.5	28	2.5	30	4,398	-.2	-18.7	27	11.4	22	4,416	2.4	-12.5	07	.5	31	4,447	1.1	-11.3	09	3.0	30	4,416	2.0	-1.7	13	.8
550	31	5,143	-3.4	-16.3	28	2.4	30	5,089	-4.2	-23.3	27	11.7	22	5,114	-1.7	-16.5	24	.8	31	5,142	-3.1	-15.9	09	2.5	30	5,115	-1.7	-6.2	10	2.5
500	31	5,891	-7.8	-22.0	30	1.9	30	5,833	-8.8	-28.8	27	11.7	22	5,866	-6.0	-22.6	25	1.5	31	5,890	-7.9	-20.9	08	2.1	30	5,869	-5.9	-11.4	10	3.5
450	31	6,703	-12.9	-25.6	30	1.7	30	6,641	-14.1	-34.4	27	13.0	22	6,684	-10.9	-26.7	26	2.9	31	6,702	-12.8	-28.1	06	2.6	30	6,688	-10.5	-16.9	10	3.7
400	31	7,591	-18.9	-31.5	31	1.9	30	7,524	-20.5	-39.4	27	13.9	22	7,579	-16.8	-31.1	26	4.4	31	7,591	-18.5	-35.9	05	2.8	30	7,585	-16.1	-24.2	10	3.7
350	31	8,576	-25.4	-41.4	32	2.1	30	8,502	-27.6	-44.3	27	15.6	22	8,571	-23.8	-38.4	25	6.4	31	8,576	-25.6	-40.9	03	3.2	30	8,581	-22.8	-32.0	09	5.4
300	31	9,672	-34.0	-47.7	33	1.8	30	9,589	-36.1	-49.8	27	16.4	21	9,676	-32.4	-45.5	25	7.6	31	9,672	-34.1	-48.2	03	4.3	30	9,690	-31.0	-41.1	08	7.7
250	31	10,923	-44.1		31	2.9	30	10,830	-45.6		28	18.9	21	10,935	-42.5		24	10.3	31	10,922	-44.3		03	4.5	30	10,956	-41.5		07	10.1
200	31	12,383	-55.5		34	3.3	30	12,283	-55.6		28	19.5	21	12,404	-54.5		23	12.5	30	12,379	-56.1		04	5.1	30	12,429	-53.9		07	13.7
175	31	13,223	-61.0		35	3.5	30	13,127	-58.8		28	18.8	21	13,246	-61.0		23	12.2	30	13,216	-62.2		04	6.2	30	13,274	-60.8		07	15.3
150	30	14,172	-65.8		02	2.7	30	14,092	-60.4		28	16.2	21	14,187	-68.4		23	10.9	30	14,156	-67.6		04	5.9	30	14,215	-68.3		07	16.3
125	30	15,268	-69.4		04	3.8	30	15,222	-62.2		28	13.9	20	15,263	-75.2		23	8.6	28	15,243	-70.1		04	5.9	30	15,292	-75.0		08	11.7
100	29	16,600	-69.3		07	5.1	29	16,599	-62.4		28	8.9	20	16,546	-76.3		17	2.8	28	16,571	-70.2		07	7.3	30	16,576	-77.1		07	4.9
80	29	17,944	-65.8		08	6.2	29	17,982	-60.4		31	4.5	20	17,849	-71.5		09	8.9	28	17,902	-68.6		09	9.3	30	17,870	-72.6		08	8.4
70	29	18,760	-63.6		08	7.1	29	18,819	-58.1		35	2.7	20	18,644	-68.5		09	14.0	28	18,707	-66.3		08	11.7	30	18,659	-70.2		09	11.7
60	29	19,713	-61.1		08	8.6	29	19,794	-56.2		04	2.2	19	19,573	-66.1		09	16.7	28	19,647	-64.0		08	14.2	29	19,581	-67.7		09	14.6
50	29	20,852	-58.9		08	11.0	29	20,958	-54.3		07	4.8	18	20,688	-62.7		09	18.7	27	20,771	-61.5		09	17.2	28	20,685	-65.2		09	19.4
40	28	22,259	-56.4		09	13.5	29	22,394	-52.7		07	7.0	17	22,068	-60.6		09	22.5	27	22,165	-57.8		09	19.9	28	22,057	-61.8		09	26.5
30	26	24,102	-52.6		09	16.0	26	24,267	-49.2		08	10.4	16	23,879	-56.2		09	26.9	26	23,998	-53.9		09	21.5	28	23,854	-57.8		09	32.8
25	26	25,284	-51.0		09	17.0	25	25,469	-47.6		08	11.6	16	25,044	-53.8		09	28.7	25	25,173	-52.1		09	20.6	26	25,006	-54.7		09	34.6
20	24	26,743	-49.0		09	17.8	25	26,950	-45.7		08	12.1	16	26,489	-50.8		09	31.6	25	26,627	-49.7		09	21.6	24	26,444	-50.9		09	37.3
15	23	28,643	-46.1		08	20.4	24	28,881	-43.2		08	13.9	11	28,369	-47.6		09	32.9	21	28,518	-47.2		09	25.9	22	28,337	-47.3		09	37.5
10	17	31,359	-41.9		09	24.6	15	31,616	-39.0		08	14.4	9	31,072	-43.0				12	31,224	-43.2				15	31,038	-44.3		09	35.8
7																									5	33,503	-37.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOTZEBUE, ALASKA
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE						
1000						
950						
900						
850						
800						
750						
700						
650						
600						
550						
500						
450						
400						
350						
300						
250						
200						
175						
150						
125						
100						
80						
70						
60						
50						
40						
30						
25						
20						
15						
10						
7						

KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	24.1	07	2.4
1000	31	95	26.6	23.7	08	3.0
950	31	548	23.4	21.2	09	4.1
900	31	1,019	20.6	17.9	09	4.5
850	31	1,513	17.7	14.8	09	4.5
800	31	2,031	15.2	11.6	09	4.6
750	31	2,576	12.5	8.2	09	4.8
700	31	3,153	9.4	4.7	09	5.1
650	31	3,765	6.0	-.7	09	5.6
600	31	4,417	2.4	-6.1	08	6.1
550	31	5,116	-1.6	-11.0	09	6.6
500	31	5,870	-5.8	-16.3	09	6.2
450	31	6,688	-10.5	-22.4	09	6.2
400	31	7,585	-16.3	-30.3	10	5.4
350	31	8,577	-23.2	-36.2	10	4.6
300	31	9,687	-31.8	-43.0	10	4.0
250	31	10,949	-42.1	-52.9	09	3.9
200	31	12,417	-54.8	-64.4	08	3.8
175	31	13,257	-61.9		09	4.2
150	30	14,194	-69.3		08	3.2
125	24	15,265	-76.1		12	2.9
100	22	16,541	-78.6		13	3.6
80	14	17,836	-74.4		10	7.7
70	13	18,620	-70.5		09	12.0
60	13	19,540	-68.5		09	13.8
50	12	20,639	-65.9		09	19.3
40	11	22,010	-62.1		09	27.5
30	11	23,806	-57.8		09	31.8
25	11	24,962	-55.7		09	33.8
20	11	26,392	-52.8		09	35.7
15	9	28,279	-49.5			
10	7	30,994	-43.8			
7						

LAKE CHARLES, LA.
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	22.8	21.8	04	.7
1000	30	146	25.7	22.2	20	.7
950	30	598	23.4	18.7	20	3.0
900	30	1,069	20.6	13.3	19	3.8
850	28	1,559	17.4	7.1	18	4.5
800	28	2,076	14.4	3.2	18	3.7
750	28	2,618	11.3	-1.5	18	1.9
700	28	3,191	7.8	-5.1	18	2.0
650	29	3,799	4.0	-7.0	20	1.1
600	29	4,446	.3	-11.2	20	1.1
550	29	5,138	-3.6	-16.9	18	.8
500	29	5,885	-7.8	-21.3	18	1.2
450	29	6,694	-12.9	-26.0	18	.7
400	29	7,586	-18.8	-32.0	13	.6
350	29	8,571	-25.5	-39.9	[illegible]	.7
300	29	9,667	-34.1	-48.1	06	.7
250	29	10,917	-44.2		08	.9
200	29	12,376	-55.6		02	2.3
175	29	13,216	-61.0		03	3.1
150	29	14,161	-66.3		04	4.5
125	30	15,257	-69.7		06	5.8
100	30	16,584	-69.7		08	6.4
80	28	17,919	-66.6		09	6.7
70	28	18,731	-64.7		08	7.8
60	28	19,678	-62.3		08	10.0
50	28	20,812	-59.7		08	12.8
40	28	22,215	-57.0		09	15.2
30	28	24,053	-53.4		09	17.1
25	27	25,230	-51.6		09	18.2
20	25	26,684	-49.5		09	18.9
15	23	28,583	-47.0		09	21.5
10	16	31,280	-42.4		09	26.4
7	6	33,705	-38.1			

LANDER, WYO.
833 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,697	13.7	4.[illegible]	24	1.8
1000						
950						
900						
850						
800	29	2,034	16.1	2.4	30	.9
750	29	2,580	13.3	-.3	29	.7
700	29	3,157	9.3	-2.6	28	2.2
650	29	3,767	4.8	-5.1	27	3.7
600	29	4,414	.1	-10.4	26	5.2
550	29	5,105	-5.1	-15.4	26	6.0
500	29	5,846	-10.4	-22.2	26	7.2
450	29	6,649	-16.0	-29.8	26	7.9
400	29	7,525	-22.4	-36.5	26	8.5
350	29	8,495	-29.8	-43.4	26	9.2
300	29	9,571	-38.4	-50.3	25	10.0
250	29	10,800	-47.0		25	13.5
200	29	12,256	-53.9		26	16.0
175	29	13,107	-57.2		26	15.9
150	29	14,074	-60.6		26	14.5
125	29	15,202	-63.1		27	9.3
100	29	16,572	-63.7		27	5.0
80	29	17,945	-62.4		27	.7
70	29	18,773	-60.4		08	1.0
60	27	19,737	-58.9		08	3.4
50	25	20,888	-56.8		08	5.1
40	24	22,312	-54.1		08	7.0
30	24	24,171	-51.0		09	8.1
25	24	25,362	-49.6		08	9.6
20	24	26,832	-47.2		09	11.4
15	23	28,746	-44.8		09	13.0
10	10	31,482	-40.8			
7						

• LIHUE KAUAI, HAWAII
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	25.1	21.2	05	4.3
1000	31	141	24.0	20.3	05	5.4
950	31	588	20.2	19.3	06	7.4
900	31	1,054	16.8	15.6	06	7.8
850	31	1,54[illegible]	14.0	10.6	07	8.0
800	31	2,050	12.0	5.0	07	7.7
750	31	2,590	10.0	-3.7	09	5.8
700	31	3,162	8.6	-11.6	09	3.9
650	31	3,771	5.5	-15.7	09	2.1
600	31	4,421	1.8	-19.7	12	.4
550	31	5,117	-2.0	-22.5	24	1.5
500	31	5,868	-6.7	-26.6	25	4.0
450	31	6,682	-12.0	-30.7	25	6.1
400	31	7,573	-18.1	-36.0	26	9.3
350	31	8,560	-25.1	-41.3	26	11.4
300	31	9,658	-33.5	-48.1	26	13.6
250	31	10,912	-43.4		26	15.6
200	31	12,375	-54.9		26	18.8
175	31	13,217	-61.1		25	17.7
150	31	14,159	-67.6		25	16.0
125	31	15,242	-72.7		25	10.8
100	31	16,544	-73.0		21	1.9
80	28	17,865	-69.7		10	7.5
70	28	18,666	-67.5		09	10.9
60	25	19,597	-64.7		09	14.1
50	25	20,719	-61.8		09	17.4
40	24	22,111	-58.5		09	20.0
30	24	23,938	-54.7		09	22.6
25	22	25,111	-52.8		09	24.7
20	22	26,562	-49.9		09	25.8
15	19	28,461	-46.9		09	27.3
10	18	31,172	-42.3			
7						

LITTLE ROCK, ARK.
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	21.2	18.8	23	.9
1000	30	146	23.2	20.3	24	1.5
950	31	594	23.6	17.4	24	4.1
900	31	1,065	21.0	13.8	25	4.9
850	31	1,558	17.7	10.4	26	4.9
800	31	2,074	14.2	7.1	27	4.3
750	31	2,616	11.0	1.8	27	3.6
700	31	3,189	7.6	-3.4	26	3.5
650	31	3,797	4.2	-8.0	26	3.1
600	31	4,444	.6	-12.4	25	3.1
550	31	5,137	-3.4	-17.3	25	2.6
500	31	5,885	-7.7	-23.5	26	3.1
450	30	6,698	-12.6	-29.0	27	2.9
400	30	7,586	-18.6	-35.8	28	3.5
350	30	8,571	-25.5	-40.7	28	3.4
300	30	9,668	-33.9	-48.4	29	4.5
250	31	10,917	-44.2		30	5.8
200	31	12,377	-55.3		31	7.0
175	30	13,222	-60.5		32	6.8
150	30	14,171	-65.3		32	4.1
125	30	15,270	-69.0		34	3.0
100	30	16,603	-68.3		02	3.2
80	30	17,948	-66.0		06	4.8
70	30	18,763	-63.5		07	5.9
60	30	19,716	-60.9		08	7.9
50	30	20,858	-58.2		09	9.7
40	30	22,271	-55.7		09	11.4
30	30	24,119	-52.1		09	13.9
25	29	25,304	-50.5		09	14.4
20	28	26,767	-48.5		09	15.8
15	25	28,673	-45.7		09	19.5
10	15	31,386	-41.0		09	22.6
7						
5						

MCGRATH, ALASKA
997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	11.5	6.7	21	.7
1000	10	139	12.9	8.4		
950	31	508	12.3	7.3	18	1.7
900	31	960	9.7	5.0	19	3.1
850	31	1,432	6.7	2.2	19	4.2
800	31	1,927	3.4	.2	19	5.0
750	31	2,449	.2	-3.1	18	5.0
700	31	2,998	-3.2	-9.7	19	5.2
650	31	3,582	-6.2	-14.6	18	4.3
600	31	4,205	-9.8	-18.7	19	4.0
550	31	4,871	-14.2	-23.4	19	3.7
500	31	5,587	-19.1	-29.9	19	3.8
450	31	6,363	-24.4	-36.0	20	3.5
400	31	7,211	-30.2	-40.3	19	1.6
350	31	8,152	-36.9	-44.2	18	.8
300	31	9,198	-44.9		14	.2
250	31	10,394	-53.0		30	1.2
200	31	11,833	-51.7		25	3.5
175	31	12,704	-49.6		25	3.8
150	31	13,714	-49.5		25	3.8
125	31	14,908	-49.8		25	3.2
100	31	16,369	-49.6		23	2.7
80	31	17,832	-49.2		23	1.8
70	31	18,709	-48.9		22	1.7
60	30	19,719	-49.0		22	1.0
50	30	20,916	-49.0		16	.9
40	29	22,378	-48.7		12	1.4
30	23	24,272	-47.9		08	2.3
25	20	25,478	-47.0		08	2.7
20	18	26,956	-45.6		07	3.4
15	12	28,907	-42.7		07	4.1
10	5	31,622	-40.1			
7						
5						

+ MAJURO, MARSHALL IS.
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.7	24.3	09	2.3
1000	31	101	27.0	23.0	09	2.7
950	31	553	23.3	21.5	09	3.7
900	31	1,025	20.7	17.9	09	4.1
850	31	1,519	18.0	14.5	09	4.1
800	31	2,037	15.6	11.2	09	3.9
750	31	2,584	12.9	7.4	10	4.3
700	31	3,161	9.8	3.2	10	4.5
650	31	3,774	6.4	-.5	09	5.1
600	31	4,427	2.6	-5.0	09	6.2
550	31	5,127	-1.2	-9.9	10	7.0
500	31	5,882	-5.1	-14.6	09	6.8
450	31	6,703	-9.6	-20.4	09	6.4
400	31	7,603	-15.4	-27.5	09	6.3
350	31	8,601	-22.4	-34.0	09	5.4
300	31	9,712	-30.7	-43.1	09	4.7
250	31	10,979	-41.2	-50.4	09	5.1
200	31	12,453	-53.9		10	4.5
175	31	13,298	-60.7		08	4.1
150	31	14,240	-68.2		09	3.8
125	31	15,315	-75.3		10	4.1
100	31	16,594	-77.6		10	4.5
80	31	17,891	-71.9		09	6.1
70	31	18,684	-69.1		09	8.9
60	31	19,611	-66.7		09	13.3
50	31	20,722	-63.8		09	19.2
40	31	22,097	-60.8		09	26.7
30	30	23,912	-56.0		09	31.3
25	30	25,081	-52.8		09	32.4
20	28	26,537	-49.2		09	33.1
15	26	28,436	-45.7		09	34.6
10	18	31,175	-38.0		09	32.7
7						
5						

• MEDFORD, OREG.
969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	13.7	8.8	27	.6
1000						
950	31	566	17.6	8.8	25	1.0
900	31	1,028	17.2	6.4	29	.9
850	31	1,515	15.3	3.7	09	1.1
800	31	2,027	13.6	-1.0	12	2.0
750	31	2,568	10.6	-6.9	20	2.7
700	31	3,138	6.7	-10.7	21	5.0
650	31	3,742	2.7	-15.0	21	6.5
600	31	4,384	-1.5	-18.4	21	7.5
550	31	5,071	-6.2	-23.7	22	8.4
500	31	5,809	-11.5	-27.6	22	9.1
450	31	6,608	-17.1	-33.9	22	9.1
400	31	7,481	-23.5	-39.6	23	10.7
350	31	8,447	-30.7	-44.6	23	12.0
300	31	9,519	-39.1	-51.8	23	13.5
250	31	10,745	-48.0		23	15.8
200	30	12,195	-52.8		24	18.4
175	30	13,054	-54.1		24	18.1
150	30	14,036	-57.4		24	15.7
125	30	15,183	-59.4		24	11.3
100	30	16,575	-60.9		23	5.8
80	28	17,965	-60.0		19	2.2
70	28	18,800	-59.4		12	2.0
60	28	19,768	-58.0		11	3.1
50	28	20,923	-56.0		09	4.4
40	28	22,350	-54.0		08	6.2
30	27	24,206	-51.6		09	8.2
25	26	25,395	-49.8		09	9.3
20	25	26,866	-47.7		08	10.5
15	21	28,784	-45.4		09	12.9
10	17	31,522	-41.0		09	15.5
7	17	33,970	-36.7		10	16.6
5	13	36,327	-32.8			

MERIDA, MEXICO
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	22.7	22.3	09	.8
1000	31	129	24.5	23.0	10	4.1
950	31	579	23.3	19.4	11	6.9
900	31	1,051	20.8	15.1	11	7.1
850	31	1,544	17.9	10.9	11	6.8
800	31	2,061	15.3	5.2	10	6.2
750	31	2,606	12.0	1.7	10	6.2
700	31	3,180	8.7	-2.5	11	6.0
650	31	3,789	5.3	-8.3	11	6.6
600	31	4,440	1.6	-12.6	10	5.6
550	31	5,136	-2.4	-16.2	09	5.2
500	31	5,886	-7.1	-20.7	09	5.8
450	31	6,700	-12.0	-23.0	09	5.2
400	31	7,592	-17.7	-30.9	08	4.8
350	31	8,580	-24.7	-36.2	06	2.9
300	31	9,680	-33.0	-43.9	03	2.7
250	31	10,936	-43.1		35	2.0
200	31	12,401	-55.3		29	4.2
175	30	13,240	-61.5		29	5.0
150	30	14,182	-67.3		29	3.8
125	30	15,272	-70.3		03	2.9
100	29	16,595	-70.5		06	7.1
80	28	17,924	-69.0		07	10.8
70	28	18,727	-67.0		08	12.5
60	28	19,664	-64.4		08	14.4
50	28	20,787	-61.6		08	16.2
40	26	22,182	-58.0		08	19.0
30	25	24,008	-55.0		09	21.7
25	25	25,181	-52.5		08	22.5
20	24	26,633	-49.6		08	21.8
15	22	28,527	-46.6		08	23.5
10	9	31,230	-42.7			
7						
5						

MIAMI, FLA.
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	25.1	23.2	10	.5
1000	31	149	26.2	23.1	14	1.6
950	31	600	22.9	19.8	15	3.3
900	31	1,071	20.1	15.4	14	2.9
850	31	1,562	17.1	10.4	13	2.1
800	31	2,078	14.4	6.5	11	2.0
750	31	2,621	11.3	2.7	12	1.5
700	31	3,194	7.9	.6	09	1.3
650	31	3,803	4.7	-4.3	11	.6
600	31	4,451	1.1	-9.5	14	.7
550	31	5,146	-3.3	-13.8	13	.6
500	31	5,894	-8.0	-18.5	10	.8
450	31	6,705	-12.9	-22.6	07	.8
400	31	7,593	-18.7	-29.6	04	2.3
350	31	8,578	-25.5	-37.2	03	2.5
300	31	9,675	-34.1	-45.1	03	3.4
250	31	10,924	-44.3		02	4.4
200	31	12,382	-55.9		04	5.8
175	31	13,219	-62.0		04	6.3
150	31	14,159	-67.4		04	7.2
125	31	15,251	-69.3		05	6.6
100	31	16,584	-69.5		08	6.4
80	31	17,920	-67.7		08	8.6
70	31	18,728	-65.5		08	11.1
60	30	19,670	-63.2		09	14.0
50	30	20,800	-60.4		09	16.5
40	28	22,197	-57.4		09	19.1
30	28	24,032	-53.7		09	21.0
25	28	25,211	-51.2		09	21.0
20	27	26,667	-48.6		09	21.4
15	26	28,572	-46.2		08	24.0
10	19	31,274	-43.6		09	30.0
7	8	33,678	-39.7			

MIDLAND, TEXAS
917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	19.3	16.8	13	3.1
1000						
950						
900	31	1,038	20.6	16.3	16	5.9
850	31	1,532	18.9	13.6	18	10.1
800	31	2,052	16.3	8.9	19	7.8
750	31	2,599	13.0	4.4	18	5.1
700	31	3,176	9.4	-.7	17	3.3
650	31	3,787	5.6	-2.8	17	2.6
600	31	4,437	1.2	-4.7	16	2.1
550	31	5,132	-3.2	-10.6	17	2.0
500	31	5,881	-7.5	-17.9	18	1.4
450	31	6,695	-12.2	-23.8	17	1.1
400	31	7,566	-18.1	-32.5	17	.5
350	31	8,573	-24.6	-40.5	28	.4
300	31	9,674	-33.0	-47.0	29	.6
250	31	10,929	-43.4		30	1.7
200	31	12,393	-55.1		32	4.4
175	31	13,235	-60.5		35	5.8
150	31	14,184	-65.2		02	6.5
125	30	15,282	-69.9		03	5.1
100	28	16,607	-70.9		07	4.7
80	28	17,937	-67.8		08	6.5
70	28	18,745	-65.3		08	7.5
60	28	19,690	-62.7		08	9.0
50	27	20,823	-60.2		09	11.6
40	26	22,222	-57.7		09	13.3
30	24	24,050	-54.5		09	15.8
25	23	25,225	-52.1		09	16.7
20	22	26,677	-49.7		09	18.2
15	20	28,580	-47.0		09	20.0
10	17	31,297	-43.4		09	22.9
7	8	33,711	-39.8			

MONTERREY, MEXICO
964 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	22.0	20.6	12	.5
1000						
950	31	579	21.5	20.2	12	2.7
900	31	1,048	19.0	16.8	14	7.2
850	31	1,540	18.0	10.9	14	9.1
800	31	2,058	16.1	4.4	14	8.1
750	31	2,604	13.4	-1.6	14	6.3
700	31	3,181	9.7	-4.8	14	4.1
650	31	3,792	5.6	-7.7	14	2.7
600	31	4,442	1.3	-11.6	14	1.2
550	31	5,137	-3.2	-16.6	12	1.7
500	31	5,885	-7.9	-20.9	12	2.6
450	31	6,697	-12.7	-27.1	13	2.7
400	31	7,586	-18.4	-31.9	13	2.1
350	31	8,572	-25.2	-39.3	08	1.7
300	31	9,670	-33.5	-47.1	02	2.6
250	31	10,923	-43.7		01	4.5
200	29	12,383	-55.4		01	6.6
175	29	13,224	-61.0		01	6.6
150	29	14,168	-66.4		02	6.0
125	29	15,263	-69.5		04	6.6
100	27	16,594	-70.6		07	7.9
80	24	17,922	-68.6		08	9.8
70	24	18,727	-66.2		08	11.1
60	24	19,668	-63.6		08	13.2
50	24	20,793	-61.4		08	15.5
40	24	22,187	-58.3		09	18.4
30	24	24,013	-54.7		09	20.9
25	22	25,178	-52.1		09	22.6
20	22	26,630	-49.7		09	23.4
15	17	28,524	-46.9		08	22.8
10	6	31,226	-42.0			
7						

MONETT, MO.
967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	19.5	16.5	17	1.8
1000						
950	31	590	21.4	16.1	21	3.3
900	31	1,059	20.4	12.6	24	6.6
850	31	1,551	17.3	8.3	26	6.0
800	31	2,066	14.3	4.1	26	5.2
750	31	2,609	10.9	1.6	26	4.6
700	31	3,181	7.4	-3.7	26	4.2
650	31	3,787	3.8	-7.5	27	4.4
600	31	4,433	.1	-12.2	27	4.7
550	31	5,125	-3.8	-17.6	27	4.5
500	31	5,872	-8.0	-23.7	27	4.4
450	31	6,683	-12.9	-29.7	26	4.5
400	31	7,571	-19.0	-35.8	27	5.1
350	31	8,555	-25.7	-42.4	28	5.8
300	31	9,649	-34.6	-49.6	29	6.7
250	31	10,897	-44.5		29	8.5
200	31	12,354	-55.4		30	11.1
175	31	13,197	-59.7		30	10.1
150	31	14,152	-63.7		31	7.3
125	31	15,261	-67.6		30	5.5
100	31	16,600	-67.9		33	3.5
80	31	17,951	-64.9		04	2.7
70	31	18,771	-62.5		07	3.3
60	31	19,728	-60.2		07	5.0
50	31	20,871	-57.8		08	6.8
40	31	22,287	-55.4		09	8.7
30	31	24,136	-52.0		09	[illegible]
25	31	25,322	-50.4		09	[illegible]
20	29	26,781	-48.5		09	12.9
15	29	28,682	-46.5		09	15.0
10	[illegible]	31,401	-42.0		09	19.3
7						

MONTGOMERY, ALA.
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	21.9	19.9	03	.5
1000	31	150	22.7	19.8	35	.7
950	31	600	23.1	17.6	32	1.3
900	31	1,070	20.3	14.4	30	1.4
850	31	1,562	17.0	11.1	30	1.6
800	31	2,077	14.0	6.8	30	2.0
750	31	2,620	10.9	.9	30	2.3
700	31	3,192	7.1	-2.5	30	2.9
650	30	3,797	3.7	-6.5	30	3.4
600	29	4,442	.1	-11.6	31	2.8
550	29	5,135	-3.7	-17.4	31	3.5
500	29	5,882	-7.9	-20.9	31	3.0
450	30	6,695	-12.7	-28.2	31	2.3
400	30	7,583	-18.8	-34.6	32	2.1
350	30	8,567	-25.7	-40.9	32	2.0
300	30	9,663	-34.1	-47.9	33	3.8
250	30	10,913	-44.2		33	4.1
200	30	12,372	-55.6		34	3.8
175	30	13,212	-61.1		35	4.1
150	30	14,158	-66.2		02	4.6
125	30	15,255	-68.8		04	4.4
100	30	16,587	-68.9		06	4.3
80	30	17,930	-66.1		08	6.1
70	30	18,745	-63.4		08	7.5
60	30	19,697	-61.1		09	9.1
50	30	20,839	-58.1		09	10.9
40	30	22,252	-55.8		09	12.5
30	29	24,098	-52.5		09	15.4
25	29	25,281	-50.8		09	16.8
20	[illegible]	26,745	-48.5		09	17.3
15	25	28,650	-45.8		09	[illegible]
10	17	31,370	-40.7			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NASHVILLE, TENN. 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	19.9	19.1	14	1.0
1000						
950	31	597	21.8	16.7	24	3.3
900	31	1,065	18.8	14.5	27	4.2
850	31	1,555	15.6	10.2	28	4.6
800	31	2,068	13.3	3.4	28	4.7
750	31	2,609	10.6	-1.4	28	4.4
700	31	3,181	7.3	-6.6	28	4.1
650	31	3,787	3.8	-11.3	29	4.1
600	31	4,432	.1	-16.8	29	4.3
550	31	5,125	-3.4	-24.2	29	4.0
500	31	5,872	-7.8	-29.3	29	4.6
450	31	6,684	-12.9	-34.1	30	4.2
400	31	7,571	-19.2	-38.6	29	5.4
350	31	8,554	-26.1	-44.6	29	6.1
300	31	9,647	-34.4	-51.6	30	6.9
250	31	10,895	-44.6		30	9.5
200	31	12,353	-55.4		30	10.3
175	31	13,194	-60.5		30	9.4
150	31	14,144	-64.8		31	7.4
125	31	15,248	-67.8		31	5.2
100	31	16,589	-67.0		35	2.7
80	31	17,943	-64.9		04	3.0
70	31	18,762	-62.5		07	4.3
60	31	19,719	-60.1		08	6.0
50	31	20,864	-57.5		08	7.6
40	31	22,282	-55.0		08	10.1
30	30	24,136	-51.9		09	12.1
25	30	25,322	-50.2		09	13.7
20	30	26,787	-47.9		09	14.8
15	26	28,697	-45.9		08	16.9
10	22	31,420	-41.3		09	20.5
7						
5						

*** NOME, ALASKA 1007 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	10.2	7.4	36	.7
1000	26	75	10.9	7.6	02	.4
950	30	492	9.6	5.5	14	1.6
900	30	939	7.5	1.8	17	2.6
850	30	1,408	4.8	-.6	19	2.4
800	30	1,900	2.0	-4.4	18	2.3
750	30	2,419	-.7	-7.9	18	2.0
700	30	2,968	-3.3	-13.5	18	1.9
650	30	3,551	-6.4	-16.9	18	1.7
600	30	4,172	-10.1	-20.8	19	1.8
550	30	4,838	-14.3	-25.6	20	2.0
500	30	5,555	-18.9	-30.5	20	2.0
450	30	6,331	-24.3	-35.2	22	2.6
400	30	7,179	-30.4	-41.0	21	3.1
350	30	8,117	-37.6	-43.5	22	3.1
300	30	9,160	-45.5		23	3.5
250	30	10,356	-52.4		25	2.9
200	30	11,797	-52.4		27	4.0
175	30	12,667	-50.0		28	3.8
150	30	13,675	-49.6		28	3.8
125	30	14,870	-49.6		27	2.8
100	30	16,332	-49.3		26	2.1
80	30	17,796	-49.0		26	1.1
70	30	18,674	-48.6		22	.4
60	29	19,685	-48.7		15	.6
50	29	20,884	-48.5		19	.6
40	29	22,353	-48.2		07	1.6
30	28	24,249	-47.4		08	2.1
25	28	25,458	-46.3		08	3.1
20	27	26,944	-45.2		08	3.2
15	26	28,876	-43.0		08	4.1
10	23	31,644	-38.6		08	4.4
7	16	34,140	-34.5		08	6.1
5	11	36,518	-31.7			

NORTH PLATTE, NEBR. 919 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	15.4	11.5	14	.7
1000						
950						
900	31	1,031	18.6	11.4	23	1.6
850	31	1,522	18.5	6.7	23	4.2
800	31	2,040	15.6	4.1	24	4.3
750	31	2,585	12.3	1.3	26	3.6
700	31	3,159	8.3	-2.4	28	3.3
650	31	3,768	4.4	-7.5	28	3.8
600	31	4,414	.2	-12.4	28	5.3
550	31	5,106	-4.1	-18.0	29	6.1
500	31	5,851	-8.8	-25.1	28	7.3
450	31	6,660	-13.9	-30.2	28	8.0
400	31	7,543	-20.3	-37.2	27	9.2
350	31	8,521	-27.5	-42.5	27	11.3
300	31	9,609	-35.9	-48.8	26	13.8
250	31	10,850	-45.3		27	15.9
200	31	12,309	-54.1		27	16.7
175	31	13,158	-58.0		27	14.6
150	31	14,121	-61.6		28	12.4
125	31	15,243	-64.4		28	9.0
100	31	16,606	-64.8		30	3.8
80	31	17,973	-62.9		35	1.8
70	31	18,801	-60.4		04	2.2
60	31	19,766	-58.4		06	3.8
50	31	20,920	-55.9		08	6.0
40	31	22,348	-53.5		08	7.2
30	30	24,213	-50.2		09	8.3
25	28	25,412	-48.7		09	9.6
20	26	26,889	-46.3		08	11.3
15	25	28,816	-43.2		09	13.7
10	16	31,589	-39.5		09	18.2
7						
5						

OAKLAND, CALIF. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	14.5	12.6	27	1.5
1000	31	118	14.1	12.5	26	1.8
950	31	551	16.0	6.0	28	3.1
900	31	1,016	21.4	-4.9	30	4.5
850	31	1,509	19.8	-9.2	29	3.3
800	31	2,027	16.7	-10.2	28	1.8
750	31	2,573	13.3	-12.7	26	1.2
700	31	3,148	9.2	-15.7	24	2.5
650	31	3,757	4.9	-17.6	23	3.3
600	31	4,403	.4	-20.5	22	4.1
550	31	5,095	-4.4	-23.5	22	4.2
500	31	5,839	-9.2	-28.7	23	5.6
450	31	6,645	-14.9	-33.9	23	7.1
400	31	7,525	-21.4	-38.2	24	9.2
350	31	8,498	-28.7	-46.0	24	11.0
300	31	9,580	-37.1	-53.0	24	13.4
250	31	10,818	-45.5		25	17.0
200	31	12,280	-53.2		25	19.7
175	31	13,133	-56.9		25	18.6
150	31	14,100	-61.1		24	16.5
125	31	15,223	-64.5		24	12.4
100	31	16,581	-65.3		23	5.1
80	29	17,943	-63.7		16	2.4
70	29	18,766	-61.9		10	4.4
60	29	19,725	-59.7		09	6.0
50	29	20,871	-57.5		09	8.0
40	29	22,288	-55.5		09	9.2
30	29	24,131	-53.2		09	11.4
25	28	25,310	-51.4		09	12.6
20	28	26,767	-49.1		09	14.1
15	24	28,669	-46.4		09	16.8
10	19	31,390	-43.2		09	19.2
7	8	33,796	-39.9			
5						

OMAHA, NEBR. 968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	18.2	16.2	21	1.2
1000						
950	31	567	20.0	15.3	23	3.3
900	31	1,035	19.2	11.8	24	5.7
850	31	1,525	16.8	9.0	25	5.3
800	31	2,040	13.8	5.5	26	4.9
750	31	2,581	10.8	.1	28	5.8
700	31	3,154	7.6	-5.3	28	6.7
650	31	3,760	4.0	-9.7	28	7.5
600	31	4,407	.1	-13.9	28	7.8
550	31	5,099	-3.7	-21.0	28	7.6
500	31	5,845	-8.3	-25.3	28	8.3
450	31	6,655	-13.7	-32.9	28	8.5
400	31	7,540	-19.7	-38.0	28	10.3
350	31	8,520	-26.9	-43.4	28	11.9
300	31	9,610	-35.6	-50.3	28	14.2
250	31	10,853	-45.0		28	17.0
200	31	12,312	-54.5		28	18.5
175	31	13,161	-57.7		28	17.6
150	31	14,126	-61.4		29	14.2
125	31	15,248	-64.2		30	9.9
100	31	16,613	-64.2		30	5.7
80	31	17,983	-62.6		33	3.9
70	31	18,811	-60.8		01	2.6
60	31	19,775	-58.6		06	4.0
50	31	20,927	-56.4		08	5.5
40	31	22,352	-53.6		08	6.3
30	30	24,217	-50.7		09	8.4
25	29	25,411	-49.2		09	8.7
20	28	26,880	-47.4		08	10.5
15	23	28,794	-45.1		09	14.1
10	15	31,534	-39.7		09	15.2
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	28.2	22.6	09	3.5
1000	31	113	26.2	21.6	09	4.5
950	31	565	22.3	19.8	08	5.3
900	31	1,034	19.0	16.1	07	5.4
850	31	1,524	16.1	11.6	06	5.0
800	31	2,039	15.6	1.4	06	3.7
750	31	2,586	13.7	-4.0	04	2.2
700	31	3,163	10.5	-8.8	03	2.1
650	31	3,777	7.0	-12.3	01	3.2
600	31	4,429	2.9	-16.4	36	4.7
550	31	5,128	-1.4	-19.9	34	4.9
500	31	5,881	-5.9	-21.7	32	4.6
450	31	6,699	-10.7	-28.1	30	5.3
400	31	7,594	-16.2	-35.0	29	5.8
350	31	8,589	-23.2	-41.0	27	7.6
300	31	9,696	-31.6	-47.8	28	10.0
250	31	10,958	-41.9		28	12.1
200	31	12,430	-54.0		29	12.4
175	31	13,275	-60.5		28	11.9
150	31	14,219	-67.6		28	10.3
125	31	15,297	-74.6		28	8.5
100	31	16,576	-78.9		28	6.3
80	31	17,856	-74.7		28	4.1
70	31	18,644	-68.6		28	2.1
60	31	19,581	-63.8		06	1.1
50	31	20,702	-62.6		08	5.6
40	31	22,087	-60.2		08	9.4
30	30	23,900	-56.9		09	14.2
25	30	25,062	-54.0		09	15.0
20	29	26,508	-50.6		09	15.4
15	28	28,394	-47.5		09	13.3
10	23	31,117	-42.1		10	10.9
7	5	33,482	-40.4			
5						
4						

*** PEORIA, ILL. 993 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	18.0	15.7	19	1.3
1000						
950	31	579	20.4	14.9	24	4.0
900	31	1,045	18.1	11.9	27	5.2
850	31	1,533	15.5	7.4	27	6.3
800	31	2,046	12.8	3.2	28	6.7
750	31	2,585	9.5	.6	27	7.2
700	31	3,155	6.3	-4.8	28	8.0
650	31	3,759	3.0	-9.3	28	8.0
600	31	4,404	-.6	-14.4	27	8.7
550	31	5,094	-4.6	-20.7	27	9.4
500	31	5,839	-8.7	-26.4	28	10.1
450	31	6,647	-13.8	-31.7	27	10.8
400	31	7,531	-20.1	-36.7	28	11.8
350	31	8,510	-27.4	-42.1	28	12.4
300	31	9,598	-35.9	-48.4	28	14.1
250	31	10,839	-45.7		28	15.2
200	31	12,293	-55.4		29	17.8
175	31	13,137	-59.1		29	16.6
150	31	14,096	-62.1		29	13.9
125	31	15,216	-64.7		29	10.4
100	31	16,577	-64.6		31	5.6
80	31	17,944	-62.7		34	2.9
70	31	18,772	-60.7		03	2.7
60	31	19,736	-58.5		06	3.3
50	30	20,889	-56.3		08	4.7
40	30	22,313	-54.2		08	6.7
30	30	24,171	-51.4		09	9.1
25	30	25,361	-49.7		09	10.4
20	29	26,829	-47.8		09	11.6
15	28	28,738	-45.2		09	13.3
10	24	31,475	-40.9		09	16.1
7	23	33,922	-37.2		09	17.5
5	15	36,260	-32.7		08	16.2
4	8	37,820	-31.4			

*** PITTSBURGH, PA. 975 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	17.0	16.0	19	1.0
1000						
950	31	582	18.7	14.9	23	2.3
900	31	1,046	16.7	11.8	26	4.2
850	31	1,532	13.7	7.6	27	5.8
800	31	2,042	11.6	1.4	27	7.0
750	31	2,579	9.0	-4.5	27	7.1
700	31	3,148	6.1	-10.3	28	8.1
650	31	3,752	3.2	-14.6	28	8.4
600	31	4,396	-.5	-17.8	28	8.7
550	31	5,086	-4.5	-23.2	27	10.1
500	31	5,830	-8.9	-28.9	28	10.8
450	31	6,638	-14.0	-34.0	28	11.7
400	31	7,522	-20.2	-38.5	28	12.6
350	31	8,500	-27.6	-44.2	29	14.4
300	31	9,587	-36.1	-51.0	29	15.2
250	31	10,826	-45.9		29	18.5
200	31	12,279	-55.6		29	19.3
175	31	13,122	-59.1		29	19.7
150	31	14,082	-61.6		29	15.2
125	31	15,205	-64.0		29	13.2
100	30	16,573	-63.6		30	6.5
80	30	17,948	-61.9		31	4.1
70	30	18,779	-59.7		35	2.4
60	30	19,747	-57.8		05	2.8
50	30	20,904	-55.3		08	4.3
40	29	22,333	-53.4		09	5.5
30	29	24,197	-50.7		08	8.2
25	29	25,390	-49.0		09	9.7
20	29	26,862	-47.1		09	10.9
15	23	28,782	-44.3		09	12.7
10	23	31,524	-40.1		09	15.4
7	23	33,977	-36.7		09	16.5
5	16	36,347	-33.7			
4	6	37,900	-31.8			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	28.0	24.2	31	.5
1000	31	83	26.5	22.9	29	.5
950	31	536	23.2	20.6	19	1.0
900	31	1,007	20.2	17.6	16	.9
850	31	1,499	17.4	14.4	09	.7
800	31	2,017	15.2	11.1	08	1.4
750	31	2,563	12.5	7.3	09	2.3
700	31	3,139	9.3	3.7	09	3.2
650	31	3,751	6.1	-1.0	10	4.7
600	31	4,404	2.4	-4.6	10	5.6
550	31	5,102	-1.5	-8.2	10	7.6
500	31	5,857	-5.6	-13.9	10	7.1
450	31	6,676	-10.3	-21.1	10	8.1
400	31	7,575	-15.6	-27.6	09	6.3
350	31	8,572	-22.4	-34.2	09	6.3
300	31	9,683	-30.6	-42.5	09	6.6
250	31	10,951	-41.1	-49.3	08	6.6
200	31	12,427	-53.7		07	7.4
175	31	13,272	-60.5		07	6.6
150	30	14,216	-68.2		08	6.8
125	30	15,292	-75.4		10	5.4
100	30	16,572	-77.0		10	4.8
80	30	17,867	-72.5		09	6.0
70	30	18,658	-70.1		09	8.8
60	30	19,582	-67.1		09	12.1
50	30	20,688	-65.3		09	17.8
40	30	22,057	-62.4		09	26.3
30	29	23,853	-57.2		09	31.9
25	29	25,014	-54.5		09	33.9
20	28	26,455	-50.7		09	36.3
15	28	28,345	-47.0		09	36.1
10	24	31,041	-44.7		09	38.7
7	11	33,443	-41.1			
5						
4						

PORTLAND, MAINE 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	15.9	13.1	28	1.6
1000	30	142	16.8	11.9	29	2.1
950	31	576	16.6	9.1	29	3.4
900	31	1,035	14.1	6.4	28	3.9
850	31	1,515	11.2	2.9	27	4.9
800	31	2,020	9.3	-2.3	27	6.9
750	31	2,553	6.4	-5.1	27	8.4
700	31	3,117	3.8	-9.1	27	10.8
650	31	3,716	.7	-13.7	27	12.8
600	31	4,354	-2.6	-19.5	28	13.6
550	31	5,039	-6.7	-24.7	28	14.4
500	31	5,777	-11.5	-29.9	28	15.2
450	31	6,576	-17.0	-34.2	27	15.9
400	31	7,449	-23.5	-40.6	27	17.6
350	31	8,415	-30.4	-45.6	27	19.4
300	31	9,490	-38.3	-49.2	27	21.3
250	31	10,721	-47.2		28	23.6
200	31	12,170	-54.8		27	23.5
175	31	13,020	-56.9		27	22.4
150	31	13,993	-57.9		28	19.1
125	31	15,141	-58.8		27	15.9
100	31	16,538	-59.1		28	10.4
80	31	17,941	-57.9		28	5.6
70	31	18,786	-56.5		28	2.7
60	30	19,769	-55.3		30	.6
50	30	20,938	-53.6		08	1.9
40	29	22,379	-52.0		09	4.4
30	29	24,254	-49.6		09	6.8
25	29	25,452	-48.0		09	8.2
20	29	26,931	-45.9		09	9.6
15	27	28,854	-43.5		09	10.3
10	19	31,592	-40.4		09	12.6
7	7	34,086	-35.0			
5						
4						

*** QUILLAYUTE, WASH. 1011 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	11.5	10.3	03	.7
1000	31	146	13.2	11.9	02	1.3
950	31	579	14.5	8.2	34	2.4
900	31	1,036	14.0	2.6	32	2.1
850	31	1,517	11.7	-.7	28	2.0
800	31	2,021	9.0	-3.4	26	2.3
750	31	2,553	6.2	-7.5	26	2.6
700	31	3,115	3.0	-11.2	24	3.7
650	31	3,712	-.5	-14.5	24	4.9
600	31	4,347	-4.3	-17.3	24	6.0
550	31	5,027	-8.9	-21.4	24	7.1
500	31	5,758	-14.0	-26.8	23	7.9
450	31	6,550	-19.5	-32.2	23	9.1
400	31	7,414	-25.8	-37.8	23	10.7
350	31	8,370	-33.0	-43.3	22	11.8
300	31	9,433	-41.3	-50.2	22	12.0
250	31	10,650	-49.0		22	14.1
200	31	12,100	-53.0		23	13.5
175	31	12,960	-53.7		24	14.3
150	31	13,949	-54.8		24	13.1
125	31	15,111	-55.9		24	9.9
100	31	16,528	-57.2		24	6.4
80	31	17,938	-57.3		23	3.5
70	31	18,784	-57.0		22	1.6
60	31	19,761	-56.3		11	1.4
50	31	20,924	-54.9		10	3.0
40	31	22,356	-53.1		09	4.4
30	30	24,217	-51.2		08	4.7
25	30	25,409	-49.2		08	5.9
20	29	26,879	-46.9		08	7.7
15	28	28,795	-44.8		08	8.9
10	25	31,527	-41.4		09	9.9
7	24	33,959	-37.2		10	10.0
5	11	36,300	-34.5			
4	5	37,850	-32.8			

RAPID CITY, S. DAK. 906 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	14.3	10.5	30	1.4
1000						
950						
900	30	1,022	16.3	10.4	31	1.6
850	31	1,511	18.4	5.6	29	2.4
800	31	2,029	15.7	3.1	29	3.6
750	31	2,573	12.0	-.2	30	4.6
700	31	3,147	8.0	-4.7	29	5.2
650	31	3,754	4.0	-9.4	29	5.5
600	31	4,400	-.1	-14.5	29	6.2
550	31	5,090	-4.9	-17.8	29	7.4
500	31	5,833	-10.1	-23.9	29	7.8
450	31	6,637	-15.5	-30.0	29	8.5
400	31	7,515	-22.0	-37.1	28	9.7
350	31	8,486	-29.0	-43.8	28	10.4
300	31	9,566	-37.9	-49.6	27	11.5
250	31	10,797	-47.2		27	13.7
200	31	12,247	-54.7		27	16.0
175	31	13,097	-57.1		27	16.2
150	31	14,067	-59.8		27	13.6
125	31	15,198	-62.6		28	10.8
100	31	16,571	-62.9		28	6.0
80	30	17,947	-61.8		32	2.9
70	30	18,777	-59.9		01	1.9
60	30	19,743	-58.5		04	2.1
50	29	20,896	-56.4		07	3.6
40	29	22,321	-54.0		07	5.1
30	29	24,180	-51.1		08	7.2
25	29	25,371	-49.5		09	8.1
20	28	26,842	-47.3		09	9.4
15	27	28,758	-44.4		08	10.5
10	22	31,488	-40.5		09	11.9
7	9	33,888	-38.4			
5						
4						

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	15.1	13.7	08	.4
1000						
950	31	566	17.9	13.6	25	1.3
900	31	1,030	16.8	9.7	28	2.6
850	31	1,515	14.4	4.9	29	3.2
800	31	2,025	11.4	.9	29	3.9
750	31	2,562	8.5	-3.4	29	4.5
700	31	3,129	4.9	-6.6	29	4.9
650	31	3,730	1.6	-10.5	29	6.3
600	31	4,371	-2.2	-14.8	29	7.0
550	31	5,057	-6.4	-19.7	29	7.8
500	31	5,796	-10.9	-25.7	29	8.9
450	31	6,598	-16.3	-31.0	29	9.8
400	31	7,473	-22.6	-37.0	29	11.5
350	31	8,442	-29.8	-43.9	29	12.7
300	31	9,519	-38.1	-48.7	29	14.3
250	31	10,749	-47.4		28	16.3
200	31	12,198	-54.9		28	18.5
175	30	13,056	-56.8		28	17.1
150	30	14,028	-58.8		28	15.3
125	30	15,167	-61.0		29	12.2
100	30	16,549	-61.8		30	8.2
80	30	17,935	-60.1		32	4.4
70	30	18,771	-58.7		34	3.1
60	30	19,743	-57.1		01	2.1
50	30	20,902	-55.2		05	3.3
40	30	22,333	-53.5		06	3.8
30	30	24,197	-50.2		08	5.6
25	30	25,391	-48.8		08	6.4
20	29	26,865	-47.0		08	7.3
15	25	28,782	-44.4		08	8.9
10	21	31,520	-40.1		08	11.4
7	6	33,935	-38.3			
5						
4						

*** ST PAUL IS., ALASKA 1007 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	6.8	6.7	33	1.7
1000	26	87	7.1	6.7	33	1.6
950	31	486	7.1	5.6	32	1.3
900	31	930	5.8	2.9	36	1.0
850	31	1,397	4.1	-1.1	01	1.5
800	31	1,888	1.8	-2.3	34	1.4
750	31	2,407	-.9	-5.1	33	1.7
700	31	2,955	-3.6	-10.6	33	1.9
650	31	3,538	-6.6	-14.0	33	1.9
600	31	4,159	-10.0	-18.5	32	2.1
550	31	4,826	-14.0	-23.0	32	2.6
500	31	5,542	-18.6	-28.5	32	3.2
450	31	6,320	-24.0	-34.2	32	3.1
400	31	7,169	-30.2	-40.1	31	3.1
350	31	8,108	-37.1	-45.0	32	4.0
300	31	9,155	-44.3	-48.0	33	6.0
250	31	10,361	-49.7		33	7.2
200	31	11,822	-48.9		31	5.3
175	31	12,700	-48.9		31	5.0
150	31	13,712	-49.5		30	4.5
125	31	14,905	-50.3		29	3.6
100	30	16,355	-50.4		28	2.7
80	30	17,810	-50.4		28	1.4
70	30	18,683	-50.0		30	1.0
60	30	19,691	-50.0		04	.4
50	30	20,884	-49.7		11	1.6
40	30	22,346	-49.4		09	2.3
30	29	24,239	-48.2		08	3.2
25	28	25,448	-46.9		08	4.1
20	28	26,932	-45.2		08	4.5
15	27	28,864	-42.9		08	5.1
10	18	31,639	-38.6		08	8.6
7						
5						
4						

SALEM, ILL. 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	18.8	17.6	16	1.0
1000	5	185	18.0	15.3		
950	31	585	21.3	15.5	25	3.9
900	31	1,052	18.6	12.5	27	5.0
850	32	1,539	16.0	7.7	28	5.2
800	32	2,053	13.5	2.0	29	5.7
750	32	2,593	10.4	-2.1	27	5.7
700	32	3,164	7.2	-8.3	27	6.3
650	31	3,772	3.7	-12.6	28	6.4
600	31	4,417	.1	-17.7	28	6.6
550	31	5,109	-4.0	-22.2	28	6.5
500	31	5,855	-8.3	-27.5	27	7.6
450	31	6,665	-13.4	-35.2	28	8.5
400	31	7,551	-19.6	-40.0	28	7.4
350	31	8,531	-26.8	-44.6	28	9.5
300	31	9,622	-35.1	-50.6	28	10.3
250	31	10,866	-45.2		29	12.9
200	31	12,320	-56.0		29	15.0
175	31	13,160	-60.8		29	13.9
150	31	14,112	-63.7		29	11.4
125	31	15,223	-66.6		30	8.6
100	31	16,572	-66.1		31	4.5
80	31	17,932	-64.2		01	2.3
70	31	18,755	-61.4		05	2.9
60	31	19,715	-59.5		07	4.5
50	31	20,864	-56.9		08	6.1
40	31	22,285	-54.6		09	8.2
30	31	24,141	-51.2		09	10.3
25	30	25,331	-49.1		09	11.4
20	29	26,802	-47.7		09	12.6
15	29	28,712	-45.3		09	15.5
10	23	31,440	-40.7		09	18.7
7						
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4						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1972

SALEM, OREG. 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	61	12.7	7.1	28	.3
1000	31	133	15.9	10.9	36	1.0
950	31	569	15.8	8.7	02	4.2
900	31	1,029	16.1	4.0	02	3.0
850	31	1,514	14.3	-.1	35	1.0
800	31	2,023	11.7	-4.6	24	.7
750	31	2,560	8.6	-7.4	24	1.7
700	31	3,126	5.3	-13.3	23	3.9
650	31	3,728	1.5	-15.9	23	5.9
600	31	4,367	-2.9	-20.4	23	7.3
550	31	5,050	-7.5	-26.3	23	7.7
500	31	5,785	-12.5	-30.7	22	8.6
450	31	6,581	-18.3	-35.7	22	9.3
400	31	7,449	-24.8	-40.7	22	10.2
350	31	8,409	-32.1	-46.8	23	11.9
300	31	9,476	-40.5	-53.9	23	13.6
250	31	10,697	-48.3		23	16.2
200	30	12,150	-52.7		24	17.1
175	30	13,210	-53.7		24	17.2
150	30	13,947	-55.8		25	14.4
125	30	15,150	-58.0		24	10.0
100	30	16,552	-59.5		23	5.7
80	30	17,948	-59.3		22	2.4
70	30	18,786	-58.8		19	1.4
60	30	19,757	-57.6		10	2.2
50	30	20,914	-55.8		09	4.1
40	29	22,340	-54.1		09	5.2
30	29	24,197	-51.3		08	6.3
25	29	25,387	-49.7		08	8.0
20	26	26,860	-47.7		09	9.2
15	26	28,769	-45.5		09	10.7
10	20	31,494	-41.1		09	11.7
7						

SALT LAKE CITY, UTAH 872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	1,288	17.7	5.3	15	3.6
850	31	1,508	21.6	3.8	15	4.4
800	31	2,032	19.3	-.1	17	3.8
750	31	2,583	15.3	-2.4	19	2.6
700	31	3,162	10.6	-4.6	22	2.8
650	31	3,774	5.6	-6.8	24	4.0
600	31	4,422	.4	-9.7	24	5.4
550	31	5,113	-4.9	-15.6	24	6.5
500	31	5,855	-10.5	-21.2	24	7.4
450	31	6,658	-15.8	-30.4	24	7.7
400	31	7,536	-22.0	-37.3	25	9.1
350	31	8,507	-29.2	-43.5	25	10.4
300	31	9,586	-37.6	-50.0	25	13.2
250	31	10,822	-45.7		25	16.7
200	31	12,286	-52.4		25	16.8
175	31	13,143	-55.9		26	17.4
150	31	14,114	-60.3		26	15.1
125	31	15,240	-63.8		26	10.6
100	31	16,604	-64.6		26	4.1
80	31	17,971	-63.3		16	.5
70	31	18,797	-61.3		09	2.2
60	31	19,758	-59.4		08	3.6
50	30	20,906	-56.9		08	5.5
40	30	22,327	-54.5		09	7.5
30	30	24,183	-51.3		09	9.3
25	30	25,374	-49.4		09	10.2
20	28	26,839	-47.6		08	11.7
15	25	28,753	-44.9		08	13.8
10	19	31,486	-40.1		09	17.7
7	8	33,952	-36.6			

SAN DIEGO, CALIF. 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	124	18.8	16.1	[illegible]	.7
1000	[illegible]	130	18.5	15.6		
950	31	543	19.3	[illegible]	18	[illegible]
900	31	1,012	20.3	[illegible]	18	[illegible]
850	31	1,504	20.2	-.8	[illegible]	[illegible]
800	31	2,025	17.9	-1.6	[illegible]	.8
750	31	2,573	14.8	-5.8	19	.9
700	31	3,152	10.8	-8.1	18	1.6
650	31	3,765	6.7	-12.1	18	1.5
600	31	4,417	2.3	-15.0	18	.9
550	31	5,114	-2.5	-20.8	18	1.0
500	31	5,862	-7.8	-26.9	[illegible]	1.9
450	31	6,673	-12.9	-34.1	24	4.1
400	31	7,561	-18.9	-38.0	25	6.2
350	31	8,544	-26.1	-44.2	25	8.0
300	31	9,638	-34.2	-51.1	25	10.1
250	31	10,892	-43.0		25	12.4
200	31	12,365	-52.6		25	12.2
175	31	13,217	-58.2		25	12.3
150	31	14,174	-64.0		25	[illegible]
125	31	15,277	-69.0		25	7.3
100	30	16,606	-70.3		[illegible]	[illegible]
80	30	17,939	-67.0		09	4.7
70	29	18,749	-65.3		09	7.5
60	29	19,694	-62.4		09	9.7
50	29	20,829	-59.3		09	11.8
40	29	22,237	-56.4		09	13.0
30	29	24,075	-53.8		09	14.7
25	29	25,251	-52.1		08	16.9
20	29	26,705	-49.6		08	18.3
15	27	28,602	-46.6		08	19.5
10	23	31,330	-41.5		09	23.5
7	10	33,747	-38.4			

SAN JUAN, P. R. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	5	26.3	[illegible]	[illegible]	[illegible]
1000	31	143	25.3	[illegible]	[illegible]	5.3
950	31	593	22.3	[illegible]	[illegible]	7.8
900	31	1,063	[illegible]	16.3	[illegible]	9.2
850	31	1,553	16.2	[illegible]	[illegible]	8.6
800	31	2,068	13.9	[illegible]	[illegible]	8.4
750	31	2,610	11.2	.3	[illegible]	6.9
700	31	3,184	8.1	-4.9	[illegible]	6.2
650	31	3,792	4.6	[illegible]	[illegible]	5.9
600	31	4,440	1.1	[illegible]	[illegible]	5.2
550	31	5,135	-2.8	-19.8	[illegible]	4.4
500	31	5,883	-7.6	[illegible]	[illegible]	4.0
450	31	6,695	-12.9	[illegible]	[illegible]	3.4
400	31	7,582	-19.3	-31.6	13	3.0
350	31	8,564	-26.5	-37.2	13	2.5
300	31	9,656	-35.1	-45.4	18	1.4
250	31	10,900	-45.3		24	3.9
200	31	12,352	-56.7		27	5.8
175	31	13,188	-62.2		27	6.5
150	31	14,129	-66.8		28	4.6
125	31	15,227	-68.0		08	1.7
100	31	16,556	-71.8		08	5.2
80	31	17,874	-70.2		08	10.4
70	31	18,672	-68.0		08	13.3
60	31	19,605	-65.3		09	16.9
50	31	20,723	-62.5		09	19.0
40	28	22,111	-58.9		09	20.2
30	26	23,935	-55.8		09	24.6
25	21	25,097	-53.7		09	27.3
20	18	26,539	-50.3		09	30.0
15	16	28,435	-46.2		09	32.1
10	8	31,151	-41.4			

SAN NICOLAS, CALIF. [illegible] MB

AUGUST 1972

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.

• SAULT STE MARIE, MICH. 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	221	13.3	12.2	07	.9
1000						
950	31	558	14.7	10.7	21	1.4
900	31	1,016	13.7	9.5	26	3.6
850	31	1,496	11.2	6.8	27	5.6
800	31	2,001	8.5	3.3	28	6.5
750	31	2,532	6.0	-3.5	28	8.0
700	31	3,095	3.3	-9.8	28	8.9
650	31	3,693	.1	-12.1	29	10.1
600	31	4,330	-3.3	-15.4	29	10.9
550	31	5,014	-7.2	-20.7	29	11.9
500	30	5,748	-11.8	-26.3	29	12.5
450	30	6,547	-17.1	-31.7	29	14.0
400	30	7,420	-23.4	-38.7	29	15.3
350	30	8,386	-30.5	-43.5	29	17.0
300	30	9,460	-39.0	-51.1	29	19.8
250	30	10,686	-47.9		29	22.9
200	30	12,134	-54.7		29	23.9
175	30	12,986	-55.7		29	22.5
150	30	13,968	-56.2		29	19.5
125	30	15,122	-57.7		30	16.0
100	30	16,528	-58.4		29	11.0
80	29	17,933	-57.0		30	6.2
70	29	18,780	-56.2		31	4.4
60	29	19,763	-54.8		34	3.0
50	29	20,933	-53.3		01	2.1
40	29	22,375	-51.7		04	3.1
30	29	24,252	-49.1		08	4.8
25	27	25,470	-47.3		08	6.5
20	27	26,953	-45.3		08	7.1
15	26	28,885	-42.9		09	9.4
10	23	31,632	-39.7		09	12.5
7	[illegible]	34,288	-35.9		09	13.5
5	[illegible]	36,449	-32.0			
4	9	38,040	-30.0			

• SHEMYA, ALASKA 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	38	8.7	7.5	27	2.4
1000	27	124	8.4	7.8	27	1.9
950	31	530	8.0	4.2	28	3.2
900	31	976	7.2	.6	29	3.2
850	31	1,446	6.2	-2.4	30	3.9
800	31	1,941	4.3	-6.6	30	4.5
750	31	2,465	2.2	-11.2	30	6.0
700	31	3,019	-.4	-15.0	30	6.4
650	31	3,609	-3.3	-18.1	30	7.7
600	31	4,239	-6.7	-20.3	30	7.8
550	31	4,913	-10.6	-26.3	30	8.7
500	31	5,640	-15.1	-29.5	30	9.7
450	31	6,429	-20.3	-35.7	30	10.9
400	31	7,290	-26.6	-40.2	30	11.7
350	31	8,245	-33.4	-45.7	30	12.7
300	31	9,305	-41.9	-48.8	30	14.5
250	31	10,519	-49.3		30	16.6
200	31	11,970	-52.4		30	17.2
175	31	12,833	-52.8		30	16.2
150	31	13,825	-54.0		30	13.9
125	31	14,993	-54.9		30	11.3
100	31	16,419	-55.0		31	8.6
80	31	17,847	-54.1		31	5.0
70	31	18,706	-53.1		32	2.9
60	31	19,701	-52.7		01	2.1
50	30	20,883	-51.8		04	1.7
40	30	22,333	-50.7		07	2.7
30	30	24,215	-49.1		08	4.7
25	30	25,416	-47.6		08	4.8
20	30	26,898	-45.4		09	5.5
15	28	28,827	-42.7		09	6.2
10	25	31,599	-38.2		09	7.5
7	14	34,060	-34.5			

• SHREVEPORT, LA. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	79	22.5	20.6	21	1.0
1000	31	145	23.5	20.8	23	1.9
950	31	596	24.0	18.2	23	4.8
900	31	1,068	21.1	14.8	22	3.6
850	31	1,561	17.9	10.2	21	2.9
800	31	2,078	14.7	7.2	22	2.5
750	31	2,621	11.7	1.5	23	1.9
700	31	3,195	7.9	-1.7	24	1.9
650	31	3,803	4.2	-4.2	24	1.7
600	31	4,450	.2	-8.4	23	2.2
550	31	5,142	-3.6	-14.1	23	2.2
500	31	5,890	-7.8	-17.9	24	1.5
450	31	6,702	-12.5	-24.0	26	.9
400	31	7,592	-18.2	-30.8	28	.9
350	31	8,579	-25.2	-38.5	31	.9
300	31	9,677	-33.7	[illegible]	33	.9
250	31	10,929	-44.0		36	2.3
200	30	12,389	-55.3		35	4.5
175	30	13,231	-60.7		01	4.1
150	28	14,182	-65.8		03	4.0
125	28	15,279	-69.7		04	4.2
100	28	16,604	-69.5		06	4.8
80	28	17,944	-66.4		07	6.1
70	28	18,757	-64.2		08	7.2
60	28	19,706	-62.1		08	9.1
50	28	20,840	-59.4		09	11.2
40	28	22,248	-56.4		09	13.8
30	28	24,090	-52.9		09	15.3
25	27	25,273	-50.8		09	16.2
20	26	26,733	-49.4		09	17.2
15	23	28,633	-47.3		08	20.2
10	20	31,348	-42.3		09	25.1
7	15	33,785	-38.3		09	27.7
5	6	36,115	-35.1			

SPOKANE, WASH. 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	720	15.7	7.3	23	.5
900	31	1,015	19.0	6.0	27	1.5
850	31	1,504	17.1	2.4	26	[illegible]
800	31	2,019	13.6	-.8	24	2.4
750	31	2,558	9.8	[illegible]	24	2.9
700	31	3,127	5.8	[illegible]	22	4.4
650	31	3,730	2.2	-11.9	22	5.6
600	31	4,371	-2.1	[illegible]	23	7.2
550	31	5,057	-6.6	-21.3	23	8.4
500	31	5,794	-11.8	-27.4	23	9.1
450	31	6,592	-17.5	-32.0	23	9.2
400	31	7,463	-24.0	-38.6	23	10.3
350	31	8,427	-31.2	-44.3	23	11.1
300	31	9,498	-39.5	-50.5	23	12.3
250	31	10,721	-48.6		24	14.4
200	31	12,167	-54.1		24	15.8
175	31	13,024	-54.6		24	15.5
150	31	14,008	-55.8		24	13.2
125	31	15,164	-57.4		25	10.1
100	31	16,570	-58.6		25	6.4
80	31	17,972	-58.3		26	2.6
70	31	18,815	-57.1		27	.8
60	31	19,792	-56.2		06	.9
50	31	20,955	-54.6		07	2.9
40	31	22,389	-53.3		08	3.5
30	28	24,252	-50.2		07	5.6
25	25	25,448	-48.3		08	6.2
20	28	26,925	-46.3		08	7.6
15	25	28,835	-44.4		09	7.7
10	19	31,566	-40.0		09	8.6

• SWAN ISLAND, W. I. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	10	26.5	23.5	08	3.9
1000	31	117	26.5	[illegible]	08	5.2
950	31	569	23.1	[illegible]	09	7.5
900	31	1,040	20.3	[illegible]	09	8.3
850	31	1,532	17.1	11.5	09	9.4
800	31	2,049	14.5	6.7	[illegible]	9.4
750	31	2,592	11.6	1.8	10	9.6
700	31	3,166	8.3	-2.1	10	9.0
650	31	3,775	4.9	-5.6	10	9.2
600	31	4,424	1.5	-11.1	10	8.5
550	31	5,120	-2.5	-16.1	10	7.4
500	31	5,870	-7.1	-20.4	10	6.1
450	31	6,684	-12.2	-25.9	09	4.8
400	31	7,574	-17.9	-31.6	07	4.0
350	30	8,563	-24.8	-38.0	05	3.5
300	30	9,662	-33.3	-45.0	01	3.9
250	30	10,916	-43.5		34	4.8
200	29	12,377	-55.6		32	6.5
175	29	13,215	-62.2		31	8.2
150	29	14,151	-69.4		31	7.6
125	29	15,230	-72.3		34	4.6
100	29	16,543	-72.4		06	5.4
80	29	17,857	-71.1		08	10.9
70	29	18,652	-68.5		09	13.2
60	28	19,583	-65.6		09	17.3
50	28	20,700	-62.8		09	18.4
40	28	22,082	-60.6		09	22.1
30	28	23,891	-56.2		09	26.2
25	28	25,057	-53.4		09	28.1
20	27	26,506	-49.7		09	30.0
15	24	28,400	-46.3		09	32.2

TAMPA, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	8	23.7	22.0	12	1.0
1000	31	152	24.8	22.6	18	1.6
950	31	603	23.0	19.2	21	2.7
900	31	1,074	20.3	15.2	22	2.1
850	31	1,565	17.1	[illegible]	21	1.5
800	31	2,081	14.0	8.1	19	.9
750	31	2,624	10.8	5.1	19	.6
700	31	3,196	7.3	1.0	21	.3
650	31	[illegible]	4.0	-2.8	29	.6
600	31	4,450	.3	-8.2	32	1.5
550	31	5,143	-3.5	-13.3	33	1.5
500	31	5,891	-7.8	-17.8	35	1.4
450	31	6,703	-12.6	-25.4	01	1.8
400	31	7,593	-18.4	-33.0	02	2.5
350	31	8,579	-25.4	-40.0	01	3.0
300	31	9,675	-33.9	-46.9	36	2.6
250	31	10,926	-44.1		02	3.6
200	31	12,385	-56.0		02	4.8
175	31	13,222	-62.0		02	5.0
150	31	14,162	-67.5		04	5.8
125	31	15,252	-69.7		05	6.1
100	31	16,581	-69.6		07	7.1
80	31	17,920	-67.4		08	7.3
70	31	18,729	-65.2		08	10.2
60	31	19,675	-62.4		09	12.4
50	31	20,808	-59.6		09	15.4
40	31	[illegible]	-56.8		09	17.2
30	29	24,054	-53.0		09	17.9
25	29	25,234	-51.4		09	18.9
20	[illegible]	26,687	-49.3		08	20.4
15	27	28,586	-46.4		08	22.2
10	23	31,297	-43.3		09	28.0
7	9	33,721	-39.2			
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TOPEKA, KANS. 985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	268	18.8	17.4	20	1.1
950	31	579	[illegible]	15.9	[illegible]	4.4
900	31	1,049	19.9	[illegible]	[illegible]	5.5
850	31	1,540	[illegible]	10.0	[illegible]	5.9
800	31	2,056	13.9	7.6	26	6.0
750	31	2,597	10.6	4.1	27	5.3
700	31	3,169	7.2	-2.0	27	4.9
650	31	3,776	3.7	-6.1	27	5.7
600	31	4,422	.0	-11.1	26	5.9
550	31	5,114	-4.0	[illegible]	26	6.6
500	31	5,860	-8.2	-22.9	27	6.5
450	31	6,671	-13.3	-28.6	27	6.9
400	31	7,557	-19.4	-33.8	28	8.0
350	31	8,539	-26.4	-39.7	28	9.0
300	31	9,631	-35.0	-46.7	28	11.0
250	31	10,877	-44.5		28	13.9
200	31	12,338	-54.8		29	15.0
175	31	13,183	-59.2		29	14.2
150	31	14,140	-62.8		29	11.8
125	30	15,256	-65.7		30	8.0
100	28	16,606	-65.8		30	4.1
80	27	17,966	-63.4		31	2.7
70	27	18,791	[illegible]		[illegible]	3.0
60	27	19,752	-59.0		[illegible]	4.3
50	27	20,904	-56.3		08	7.0
40	27	22,326	-54.6		09	8.6
30	27	24,182	-51.1		09	10.5
25	27	25,372	-49.7		09	11.4
20	27	26,841	-47.5		09	12.3
15	26	28,753	-45.4		09	15.3
10	18	31,499	-40.7		09	18.5

• TRUK, CAROLINE IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	2	27.9	24.5	24	1.3
1000	31	96	26.8	23.7	24	1.4
950	31	549	23.4	21.3	24	1.7
900	31	1,021	20.8	17.6	[illegible]	1.6
850	31	1,515	18.2	14.0	22	.4
800	31	2,034	15.8	[illegible]	[illegible]	1.1
750	31	2,581	13.0	7.8	[illegible]	1.7
700	31	3,158	9.5	4.0	[illegible]	2.6
650	31	3,771	6.3	[illegible]	[illegible]	3.8
600	31	4,423	[illegible]	[illegible]	[illegible]	5.1
550	31	5,123	[illegible]	[illegible]	[illegible]	6.4
500	31	5,877	[illegible]	[illegible]	[illegible]	6.3
450	31	6,697	[illegible]	[illegible]	[illegible]	6.5
400	31	7,596	-15.7	-24.6	[illegible]	6.5
350	31	8,595	-22.2	-33.7	[illegible]	6.8
300	31	9,706	-30.5	-42.5	[illegible]	6.2
250	31	10,974	[illegible]	-51.0	08	5.8
200	31	12,450	-53.5		[illegible]	7.7
175	31	13,296	-60.6		[illegible]	8.2
150	31	14,238	[illegible]		[illegible]	8.1
125	31	15,312	[illegible]		09	7.5
100	31	16,592	-76.4		[illegible]	4.8
80	31	17,891	-72.9		09	7.2
70	31	18,680	-69.8		09	[illegible]
60	31	19,604	-67.8		09	[illegible]
50	31	20,709	-64.8		09	[illegible]
40	31	22,084	-61.5		09	27.3
30	31	23,884	-55.9		09	32.3
25	31	25,047	-54.0		09	34.4
20	[illegible]	26,489	[illegible]		09	36.5
15	[illegible]	28,377	-47.5		09	[illegible]
10	18	31,083	[illegible]		09	[illegible]
7	[illegible]	33,518	-37.8			

* TUCSON, ARIZ. 923 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	789	23.1	13.9	[illegible]	2.4
900	31	1,014	24.6	11.5	17	2.8
850	31	1,513	22.4	8.5	17	1.6
800	31	2,038	19.0	6.2	15	1.4
750	31	2,589	14.9	4.3	[illegible]	1.8
700	31	3,168	10.4	1.9	15	3.3
650	31	3,782	6.1	-2.4	16	3.4
600	31	4,433	1.7	-8.1	[illegible]	3.1
550	31	5,129	-2.4	-16.6	16	[illegible]
500	31	5,880	-6.9	-23.2	19	1.5
450	31	6,694	-11.9	-27.9	24	2.8
400	31	7,585	-18.0	-32.7	25	3.5
350	31	8,573	-24.8	[illegible]	25	4.4
300	31	9,676	-33.1	-46.7	25	5.5
250	31	10,933	-42.4		25	7.6
200	31	12,406	-53.2		27	9.7
175	31	13,255	-58.9		28	9.5
150	31	14,208	-64.9		29	[illegible]
125	31	15,305	-70.1		29	[illegible]
100	[illegible]	16,620	-72.0		07	2.5
80	[illegible]	17,947	-68.6		08	5.4
70	[illegible]	18,753	-65.3		08	[illegible]
60	[illegible]	19,700	-62.6		09	10.1
50	[illegible]	20,831	-60.3		09	[illegible]
40	[illegible]	22,233	-57.2		09	[illegible]
30	[illegible]	24,068	-54.0		09	[illegible]
25	[illegible]	25,242	-52.1		[illegible]	16.7
20	[illegible]	26,696	-49.7		[illegible]	17.9
15	[illegible]	28,594	-46.9		[illegible]	[illegible]
10	[illegible]	31,312	-42.6		09	[illegible]
7	[illegible]	33,743	-38.6		09	[illegible]
5	7	36,047	-35.4			

• VANDENBERG AFB, CALIF. 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	100	13.0	12.1	32	1.5
1000	24	124	13.4	12.1	33	1.4
950	31	550	17.0	9.2	36	3.8
900	31	1,016	21.2	3.7	01	3.3
850	31	1,509	19.7	1.7	35	3.4
800	31	2,028	17.0	-2.0	35	3.3
750	31	2,575	14.0	-4.4	32	2.4
700	31	3,153	10.1	-6.6	28	2.5
650	31	3,765	6.1	-10.7	25	2.4
600	31	4,415	1.6	-13.6	24	2.7
550	31	5,110	-3.2	-18.9	[illegible]	2.5
500	31	5,857	-8.3	-23.5	25	3.1
450	31	6,667	-13.6	-28.8	25	4.3
400	31	7,551	-20.2	-34.4	25	5.4
350	31	8,529	-27.6	-40.0	25	7.5
300	31	9,617	-35.4	-47.8	25	10.3
250	31	10,863	-44.1		25	12.1
200	31	12,330	-52.8		25	13.8
175	31	13,183	-57.6		25	13.2
150	31	14,144	-62.8		24	11.8
125	31	15,254	-67.5		24	9.7
100	31	16,593	-68.0		23	2.8
80	31	17,939	-65.8		12	3.1
70	30	18,752	-63.9		[illegible]	6.0
60	30	19,704	-61.2		[illegible]	7.9
50	30	20,842	-59.0		09	9.0
40	30	22,252	-56.2		09	10.9
30	28	24,094	-53.0		09	12.4
25	27	25,275	-51.4		09	14.1
20	27	26,730	-49.5		09	15.9
15	[illegible]	28,623	-46.6		09	17.6
10	24	31,341	-42.2		09	20.5
7	18	33,762	-39.1			
5	[illegible]	36,099	-35.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

	VICTORIA, TEXAS 1012 MB					
Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	32	33	23.1	22.1	08	.9
1000	32	135	25.6	24.0	16	1.9
950	32	586	23.3	20.2	18	6.7
900	32	1,058	20.8	14.6	17	7.1
850	31	1,551	17.9	10.0	16	5.7
800	31	2,068	15.2	4.7	15	4.8
750	31	2,612	12.0	2.0	15	3.8
700	31	3,187	8.3	-1.8	14	3.2
650	31	3,796	4.6	-5.4	14	3.2
600	31	4,443	.6	-11.3	15	2.8
550	31	5,137	-3.5	-15.5	15	2.7
500	31	5,884	-7.8	-22.5	13	2.9
450	31	6,697	-12.7	-28.6	12	2.6
400	31	7,586	-18.3	-32.2	12	2.5
350	30	8,572	-25.0	-39.4	10	3.0
300	29	9,672	-33.4	-47.1	10	3.2
250	29	10,925	-43.6		10	3.6
200	29	12,386	-55.2		07	4.4
175	29	13,228	-61.0		07	5.6
150	29	14,172	-66.5		07	7.3
125	29	15,267	-69.9		07	8.2
100	29	16,592	-70.2		08	6.5
80	28	17,926	-67.7		07	7.9
70	28	18,733	-66.1		08	9.4
60	28	19,675	-63.1		09	11.7
50	28	20,805	-60.1		09	13.3
40	28	22,205	-57.8		09	16.3
30	28	24,037	-53.8		09	19.0
25	28	25,214	-51.7		09	19.7
20	27	26,672	-49.2		09	20.4
15	24	28,570	-47.2		09	21.9
10	18	31,278	-42.7		09	28.4
7	6	33,690	-38.6			

	* WAKE IS., PACIFIC AREA 1014 MB					
Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.8	24.2	08	4.7
1000	31	124	26.2	22.8	09	5.7
950	31	575	22.4	21.1	09	6.4
900	31	1,046	19.5	16.7	09	6.4
850	31	1,536	16.5	13.1	09	5.8
800	31	2,052	13.7	9.9	09	5.4
750	31	2,594	11.1	5.4	09	4.8
700	31	3,168	8.2	-1.1	09	4.2
650	31	3,776	4.9	-5.8	08	3.9
600	31	4,425	1.4	-10.8	07	3.3
550	31	5,121	-2.5	-16.6	07	2.9
500	31	5,871	-6.9	-20.0	06	1.8
450	31	6,686	-11.8	-24.9	04	1.4
400	31	7,578	-18.0	-30.8	35	.7
350	31	8,565	-25.1	-38.0	30	1.7
300	31	9,663	-33.6	-45.6	29	3.6
250	31	10,915	-43.8		28	6.7
200	31	12,376	-55.5		29	9.2
175	31	13,215	-61.8		29	8.5
150	30	14,153	-68.2		29	7.5
125	30	15,232	-73.9		31	3.9
100	30	16,528	-74.2		07	5.8
80	30	17,840	-70.7		09	10.9
70	29	18,639	-67.6		09	13.4
60	29	19,573	-65.1		09	15.9
50	28	20,694	-62.3		09	19.0
40	27	22,080	-59.6		09	21.1
30	26	23,898	-55.9		09	25.4
25	25	25,070	-52.7		09	27.4
20	22	26,523	-48.9		09	28.9
15	16	28,420	-46.6		09	28.6
10						
7						

	* WALLOPS IS., VA. NASA 1017 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	21.3	18.7	29	.9
1000	31	148	21.7	17.4	31	1.3
950	31	593	19.7	14.0	31	1.9
900	31	1,057	16.9	11.3	29	2.0
850	31	1,543	13.8	7.4	28	3.8
800	31	2,053	11.9	-.2	27	5.1
750	31	2,591	9.4	-4.9	27	5.9
700	31	3,160	6.3	-7.8	27	6.5
650	31	3,765	3.3	-12.8	27	7.0
600	31	4,410	-.1	-15.6	27	7.2
550	31	5,101	-4.3	-19.3	27	7.6
500	31	5,846	-8.8	-24.5	27	7.6
450	31	6,654	-13.9	-30.4	27	7.6
400	31	7,539	-20.0	-36.0	28	8.5
350	31	8,518	-27.3	-41.9	27	9.5
300	31	9,605	-36.0	-49.3	28	9.9
250	31	10,845	-46.1		28	11.6
200	31	12,294	-56.8		29	12.8
175	31	13,131	-61.1		29	13.2
150	31	14,081	-63.9		29	11.1
125	31	15,193	-66.4		29	9.1
100	31	16,545	-65.5		30	4.2
80	31	17,908	-63.3		02	1.4
70	31	18,734	-61.0		07	2.3
60	31	19,698	-58.7		08	4.3
50	30	20,850	-56.8		08	6.3
40	29	22,271	-54.2		08	9.0
30	29	24,130	-51.0		09	11.6
25	27	25,322	-49.1		09	12.8
20	25	26,805	-46.3		08	13.4
15	24	28,727	-44.1		09	14.7
10	21	31,450	-40.8		09	19.2
7	13	33,908	-37.0			

	WASHINGTON DULLES INT. AP 1008 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	16.5	15.6	27	.2
1000	30	151	18.8	16.5	30	.4
950	31	592	19.9	13.4	29	2.0
900	31	1,057	17.2	10.6	30	3.7
850	31	1,542	14.0	7.6	30	4.8
800	31	2,052	11.9	.4	28	5.6
750	31	2,591	9.9	-4.8	28	5.9
700	31	3,161	6.8	-7.2	28	6.9
650	31	3,767	3.7	-13.7	28	7.1
600	31	4,413	.4	-17.1	28	7.4
550	31	5,106	-3.5	-23.0	27	8.5
500	31	5,852	-8.3	-27.1	28	8.8
450	31	6,662	-13.3	-31.5	28	9.5
400	31	7,548	-19.8	-36.6	28	9.6
350	31	8,528	-26.8	-42.1	28	10.9
300	31	9,618	-35.4	-49.2	29	11.1
250	31	10,862	-45.4		29	13.7
200	31	12,315	-56.0		30	16.4
175	30	13,155	-59.6		30	16.6
150	30	14,111	-62.9		29	14.1
125	30	15,229	-64.5		29	10.3
100	29	16,590	-64.5		30	6.2
80	29	17,959	-62.4		32	2.6
70	29	18,789	-60.0		02	1.9
60	29	19,755	-58.2		07	3.6
50	29	20,910	-56.0		08	5.4
40	29	22,337	-53.7		09	7.4
30	28	24,200	-50.8		09	10.4
25	27	25,393	-49.2		09	11.6
20	27	26,867	-46.5		09	12.8
15	26	28,787	-44.3		09	14.9
10	22	31,529	-40.4		09	17.7
7	7	33,958	-37.6			

	WAYCROSS, GA. 1011 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	44	21.9	21.4	23	.5
1000	31	142	22.4	21.4	28	.8
950	31	591	22.5	18.2	29	1.8
900	31	1,061	19.8	15.7	26	1.4
850	31	1,552	16.5	12.7	26	1.2
800	31	2,067	13.7	7.5	27	1.2
750	31	2,609	10.7	4.1	28	1.7
700	31	3,181	7.5	-3.0	31	2.0
650	31	3,788	4.1	-6.4	32	2.4
600	31	4,435	.5	-12.3	32	2.4
550	31	5,129	-3.3	-16.4	31	2.1
500	31	5,876	-7.8	-22.4	31	2.4
450	31	6,689	-12.3	-31.1	33	2.1
400	31	7,579	-18.4	-36.9	33	2.5
350	31	8,564	-25.6	-42.2	34	3.4
300	31	9,660	-34.1	-50.4	35	3.8
250	31	10,910	-44.2		35	4.2
200	31	12,369	-55.7		35	4.0
175	31	13,208	-61.4		35	4.3
150	31	14,152	-66.2		01	5.0
125	31	15,249	-68.8		04	4.6
100	31	16,583	-69.1		07	4.7
80	31	17,926	-66.1		07	6.2
70	31	18,740	-64.0		08	8.1
60	31	19,691	-61.3		08	10.2
50	31	20,830	-58.5		09	12.8
40	31	22,241	-56.0		09	14.7
30	30	24,086	-52.5		09	16.2
25	29	25,267	-51.1		09	17.2
20	28	26,725	-49.2		09	18.3
15	26	28,620	-46.5		08	20.8
10	16	31,326	-42.4		09	26.5
7	6	33,756	-38.3			

	WINNEMUCCA, NEV. 871 MB					
Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,312	15.9	-.5	05	1.5
1000						
950						
900						
850	31	1,520	20.0	1.8	04	2.2
800	31	2,041	17.5	-.3	05	1.5
750	31	2,588	13.7	-2.9	07	1.3
700	31	3,164	9.4	-5.8	21	1.0
650	31	3,774	4.9	-8.2	21	3.2
600	31	4,421	-.3	-10.9	22	4.6
550	31	5,110	-5.9	-15.5	22	5.6
500	31	5,849	-11.4	-21.6	23	6.9
450	31	6,649	-16.6	-27.4	24	7.1
400	31	7,524	-22.7	-35.3	24	8.0
350	31	8,491	-30.2	-42.5	24	10.3
300	31	9,566	-38.6	-48.6	24	11.9
250	31	10,796	-46.8		25	14.5
200	31	12,253	-53.1		25	17.7
175	31	13,108	-56.1		25	17.9
150	31	14,079	-60.2		25	15.7
125	28	15,210	-63.3		24	12.0
100	28	16,578	-63.8		23	5.6
80	28	17,950	-62.6		19	1.9
70	28	18,776	-61.0		11	2.3
60	28	19,737	-59.6		09	3.7
50	28	20,885	-57.1		09	5.1
40	28	22,304	-54.9		09	6.0
30	27	24,155	-52.5		08	8.3
25	27	25,338	-50.8		08	9.4
20	25	26,799	-48.8		08	10.9
15	22	28,704	-46.3		08	12.3
10						
7						

	WINSLOW, ARIZ. 853 MB					
Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,487	18.2	9.9	17	1.3
1000						
950						
900						
850	26	1,525	18.3	9.3	16	1.5
800	31	2,038	19.2	5.8	23	2.5
750	31	2,590	15.8	2.8	22	2.9
700	31	3,171	11.2	.4	19	2.3
650	31	3,785	6.4	-2.7	19	3.1
600	31	4,436	1.3	-7.3	18	3.6
550	31	5,130	-3.6	-14.4	18	3.4
500	31	5,876	-8.8	-19.6	21	4.2
450	31	6,685	-13.8	-26.4	23	5.6
400	31	7,571	-19.8	-34.3	24	6.9
350	31	8,551	-26.6	-39.7	24	8.3
300	31	9,644	-34.7	-47.9	25	11.4
250	31	10,894	-43.1		25	13.1
200	31	12,364	-53.5		26	12.9
175	31	13,213	-58.8		26	11.3
150	31	14,167	-64.6		26	9.7
125	30	15,271	-68.5		27	5.7
100	29	16,600	-69.7		03	.1
80	29	17,937	-67.3		09	3.1
70	29	18,747	-64.7		08	5.4
60	29	19,695	-61.9		09	7.5
50	29	20,832	-59.2		09	10.5
40	29	22,238	-56.8		09	11.8
30	28	24,079	-53.1		09	13.5
25	27	25,258	-51.8		09	14.9
20	25	26,706	-50.1		09	14.9
15	23	28,598	-47.2		09	16.7
10	16	31,295	-42.5			
7						

	YAKUTAT, ALASKA 1014 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	10.5	10.1	08	2.0
1000	31	124	11.1	9.9	10	2.7
950	31	552	9.7	7.5	13	4.9
900	31	1,000	7.6	4.0	15	5.5
850	31	1,470	5.4	1.5	15	5.5
800	31	1,964	3.0	-.9	16	5.3
750	31	2,484	.1	-4.3	16	5.1
700	31	3,035	-2.5	-10.8	18	4.2
650	31	3,620	-5.7	-12.9	19	4.4
600	31	4,244	-9.3	-17.0	21	5.3
550	31	4,912	-13.4	-21.5	22	6.0
500	31	5,630	-18.2	-27.1	22	5.9
450	31	6,409	-23.6	-32.6	22	6.3
400	31	7,259	-29.9	-39.8	23	6.7
350	31	8,200	-37.0	-45.8	23	7.2
300	31	9,246	-44.8	-50.4	24	8.0
250	31	10,447	-51.0		26	9.0
200	31	11,895	-51.3		26	9.1
175	31	12,766	-50.4		25	8.3
150	31	13,772	-50.6		25	7.0
125	31	14,959	-51.0		25	6.1
100	31	16,412	-50.8		24	4.6
80	31	17,867	-50.5		24	3.8
70	30	18,737	-50.3		24	2.4
60	30	19,743	-50.5		22	1.0
50	30	20,933	-50.4		15	1.0
40	29	22,393	-50.1		10	1.7
30	29	24,277	-49.2		08	2.0
25	28	25,482	-47.4		08	3.1
20	27	26,966	-45.5		08	4.3
15	22	28,887	-43.2		07	4.7
10	11	31,583	-40.3			
7						

	+ YAP, CAROLINE IS. 1008 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	28.2	24.3	25	1.5
1000	31	87	26.6	23.2	25	1.8
950	31	540	23.4	20.9	27	2.9
900	31	1,011	20.6	17.3	27	2.6
850	31	1,505	17.6	13.9	28	2.3
800	31	2,023	15.4	10.9	29	1.5
750	31	2,569	12.6	7.4	32	.3
700	31	3,145	9.3	4.3	09	1.3
650	31	3,757	5.9	1.3	07	1.6
600	31	4,409	2.1	-2.8	11	2.5
550	31	5,107	-1.9	-6.2	11	3.2
500	31	5,860	-6.1	-11.8	12	3.2
450	31	6,679	-10.6	-17.1	11	2.2
400	31	7,577	-16.1	-23.7	09	3.0
350	31	8,573	-22.6	-30.6	09	4.6
300	31	9,682	-31.0	-40.8	08	6.0
250	31	10,948	-41.4		07	6.9
200	31	12,421	-54.2		07	10.3
175	30	13,264	-61.1		07	12.0
150	30	14,204	-68.8		07	13.4
125	30	15,276	-75.8		08	12.6
100	30	16,556	-77.0		08	8.1
80	30	17,852	-73.1		09	10.4
70	30	18,639	-70.8		09	13.4
60	30	19,559	-67.8		09	16.4
50	30	20,663	-65.4		09	21.0
40	30	22,032	-62.1		09	27.1
30	29	23,828	-57.9		09	33.0
25	29	24,988	-54.2		09	35.0
20	29	26,433	-50.2		09	36.4
15	28	28,327	-47.4		09	38.1
10	24	31,023	-44.0		09	38.1
7	11	33,448	-38.9			

	YUCCA FLAT, NEV. 881 MB					
Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,198	16.6	.9	30	.4
1000						
950						
900						
850	31	1,504	23.0	4.1	25	.9
800	31	2,029	19.6	1.6	20	3.3
750	31	2,580	15.6	-1.0	19	3.3
700	31	3,160	10.8	-3.9	18	3.8
650	31	3,773	6.1	-7.2	17	4.1
600	31	4,423	1.2	-11.7	17	3.8
550	31	5,117	-3.7	-16.2	19	3.1
500	31	5,862	-9.1	-21.9	23	3.7
450	31	6,670	-14.5	-28.6	24	4.3
400	31	7,552	-20.5	-34.5	25	5.5
350	30	8,531	-27.8	-40.5	25	7.1
300	30	9,616	-36.1	-47.0	25	10.5
250	30	10,859	-44.3		25	13.4
200	30	12,330	-51.9		26	15.2
175	30	13,186	-56.8		26	13.7
150	30	14,150	-62.1		26	12.6
125	30	15,267	-66.0		25	9.5
100	30	16,616	-66.9		24	2.9
80	30	17,970	-64.9		11	2.2
70	30	18,790	-62.7		09	4.6
60	30	19,744	-61.0		09	6.4
50	30	20,885	-58.0		09	8.6
40	29	22,302	-55.3		09	9.8
30	29	24,149	-52.6		09	11.6
25	27	25,330	-50.7		09	12.2
20	26	26,792	-49.1		09	14.5
15	25	28,694	-46.1		09	16.9
10	10	31,383	-42.9			
7						

Note: All observations scheduled at [illegible] G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

AUGUST 1972

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Aug									
1-----	0.66	0.76	0.86	1.05	1.28	----	----	----	----
2-----	.74	----	----	(1.08)	1.28	1.04	0.87	0.74	----
3-----	.71	.81	.94	1.09	1.27	(1.05)	----	----	----
4-----	----	----	----	1.00	----	----	----	----	----
5-----	----	----	----	----	1.28	1.03	.89	----	----
6-----	.78	.87	.99	1.10	1.31	(1.09)	.98	.87	.76
7-----	----	----	----	.90	1.30	----	----	----	----
9-----	----	----	.93	1.14	----	----	----	----	----
10----	.83	.92	1.00	1.16	1.31	(1.11)	(.91)	(.79)	(.68)
11----	.77	.86	.98	1.11	1.32	1.05	.90	(.78)	(.66)
12----	.76	.85	.96	1.12	1.26	(1.09)	----	(.75)	----
13----	.66	.78	.89	1.06	(1.23)	1.12	.90	(.77)	(.67)
15----	----	.74	----	----	1.34	1.02	.89	.80	.68
16----	----	----	----	----	1.27	----	----	----	----
17----	----	----	----	----	1.26	----	----	----	----
19----	.72	.84	.94	----	----	----	----	----	----
20----	----	----	----	----	1.24	1.06	.90	.77	.66
21----	.75	.84	.93	1.06	1.23	1.02	----	----	----
22----	----	----	.93	----	1.33	----	----	.86	.77
23----	.68	.78	----	1.06	1.25	1.07	.95	.75	.65
24----	.72	.82	.96	1.21	1.38	1.10	----	----	----
25----	----	----	----	----	1.26	----	----	----	----
30----	.69	.88	.97	1.09	1.24	----	----	----	----
31----	.78	.87	.95	1.04	1.28	1.14	----	----	----
Aver-ages	0.73	0.83	0.95	1.08	1.28	1.07	0.91	0.80	0.70
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Aug.									
16----	HS0.63	HS0.74	HS0.87	HS1.02	----	----	----	----	----
17----	----	----	----	HS .97	----	----	----	----	----
18----	----	----	----	HM .94	----	----	----	----	----
19----	HM .36	HM .44	HM .57	HM .75	HM1.05	----	----	----	----
20----	HS .53	HS .62	HS .77	HS .94	HM1.11	----	----	----	----
21----	HS .66	HS .76	HS .88	HS1.06	HS1.25	----	----	----	----
27----	.81	.90	1.02	1.18	1.37	1.16	.96	.79	.62
28----	HS .78	HS .88	HS .99	HS1.10	HS1.30	----	----	----	----
29----	----	----	HS .98	HS1.13	----	----	----	----	----
Aver-ages	0.63	0.72	0.87	1.01	1.22	1.16	0.96	0.79	0.62

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Aug.									
1-----	0.64	0.77	0.90	1.08	1.32	1.12	0.93	0.81	0.71
2-----	.66	.76	.89	1.08	1.27	----	.97	.87	.76
3-----	.73	.82	.94	1.12	1.25	1.09	.92	.80	.70
4-----	----	----	----	.91	1.19	.92	.85	----	----
5-----	----	----	----	.99	1.27	.97	----	----	----
6-----	----	----	----	----	1.20	----	----	----	----
7-----	----	----	----	1.14	1.28	.97	.77	.68	.57
8-----	.68	.78	.92	1.07	1.28	1.00	----	----	----
9-----	----	----	----	----	----	1.05	.78	.64	.57
10----	.71	.82	.93	1.10	1.31	1.04	.83	----	----
11----	.54	.66	.78	.94	1.14	----	----	----	----
12----	.38	.52	.71	.98	1.24	----	----	----	----
13----	----	----	.95	1.11	1.35	1.07	.94	.78	.71
14----	.62	.72	.69	----	1.37	1.20	1.08	.97	.87
15----	.79	.89	1.03	1.19	1.42	1.24	1.10	.98	.89
16----	.82	.96	1.07	1.22	1.41	1.21	1.03	.94	.85
17----	.72	.84	.95	1.12	1.30	----	----	----	----
18----	----	----	----	----	----	----	.90	.78	.67
20----	----	.81	.94	1.13	1.36	1.14	.93	.83	.71
21----	.64	.74	.86	1.05	1.30	1.17	1.07	.96	.86
22----	.89	.99	1.11	1.23	1.41	1.24	1.08	.93	.81
23----	.82	.92	1.05	1.20	1.38	1.17	1.01	.90	.76
24----	.75	.88	1.04	1.20	1.39	1.21	1.02	.86	.70
25----	.72	.85	.99	1.11	1.40	1.20	1.06	.95	.84
29----	----	----	----	----	----	----	.86	----	----
30----	.71	----	.99	1.14	1.31	----	----	----	----
31----	.69	.78	.91	1.07	1.32	----	----	----	----
Aver-ages	0.70	0.81	0.94	1.10	1.31	1.11	0.95	0.85	0.75
	MADISON, WISC.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Aug.									
4-----	S 0.82	S 0.93	S 1.06	S 1.19	----	----	----	----	----
5-----	M .60	M .69	M .94	M 1.01	----	----	----	----	----
9-----	S .81	S .91	S 1.04	S 1.18	S 1.35	----	----	----	----
12----	I .31	----	----	----	----	----	----	----	----
17----	I .35	I .47	I .63	I .86	M 1.13	----	----	----	----
18----	----	----	S .60	.84	1.19	----	----	----	----
22----	.63	.79	----	----	----	----	----	----	----
28----	.69	.79	.91	1.09	1.25	S 0.97	S 0.75	S 0.60	S 0.51
29----	----	----	.98	----	1.22	----	----	----	----
30----	.65	M .70	M .84	S 1.00	----	----	----	----	----
Aver-ages	0.61	0.75	0.88	1.02	1.23	0.97	0.75	0.60	0.51

( ) Clouds Present
* Values corresponding to true solar noon

BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

AUGUST 1972

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	637	704	686	305	684	694	526	466	480	671	670	627	659	592	650	555	515	369	577	576	510	620	631	641	509	411	114	538	406	582	591	555
AMES IOWA	71	---	603	568	401	428	664	303	525	581	582	518	646	633	613	620	613	588	555	584	582	242	136	431	232	176	614	602	586	346	305	478
ANNETTE ALASKA	590	241	70	267	80	390	309	592	569	470	413	576	580	273	---	595	302	119	366	503	272	163	77	494	128	357	186	200	355	---	490	346
APALACHICOLA FLORIDA	586	444	330	529	568	538	309	432	510	596	487	319	499	386	---	599	603	595	533	527	491	543	322	277	204	436	488	515	516	366	488	468
ARGONNE NAT. LAB.	157	343	185	558	554	309	156	255	578	602	163	501	426	410	349	400	521	516	378	358	433	342	168	279	353	170	254	530	506	454	395	374
ASTORIA OREGON	201	---	---	---	531	---	613	---	---	529	---	---	---	186	---	361	---	---	---	249	487	489	543	---	---	---	525	---	508	525	510	---
ATLANTA GEORGIA	414	522	410	486	419	315	523	557	507	442	313	344	482	439	377	327	352	480	455	397	328	473	401	271	364	379	435	481	285	441	405	414
BARROW ALASKA	316	499	560	453	286	157	262	201	170	180	318	457	353	188	197	311	291	127	285	154	---	---	---	181	71	156	178	347	115	126	142	253
BETHEL ALASKA	544	552	531	531	296	531	268	155	392	461	183	91	184	195	291	225	173	128	371	210	418	342	212	358	359	396	270	183	430	462	445	329
BISMARCK N.DAK.	598	546	603	647	499	442	383	489	657	657	689	669	588	664	627	504	516	---	510	592	234	628	677	667	537	627	617	622	608	565	608	576
BLUE HILL MASS.	409	546	358	528	649	555	156	517	432	601	573	326	538	218	573	452	371	283	511	585	555	556	491	407	362	482	144	409	483	505	513	455
BOISE IDAHO	709	726	722	696	711	714	720	691	503	636	648	556	419	582	574	514	618	649	474	531	637	627	653	637	622	614	613	545	490	594	593	613
BROWNSVILLE TEXAS	691	269	467	579	650	668	655	682	557	688	676	671	674	590	521	316	541	563	301	438	549	687	633	547	---	---	596	595	590	608	475	568
BURLINGTON VERMONT	457	366	253	662	687	384	305	257	389	382	602	138	529	100	587	436	202	83	567	601	594	535	292	426	332	478	178	229	551	525	528	408
CAPE HATTERAS N.C.	332	519	611	594	288	614	515	577	627	444	653	595	631	643	521	623	481	489	538	541	561	271	295	300	386	576	599	524	153	494	240	491
CARIBOU MAINE	380	570	37	555	546	457	107	314	407	119	526	123	250	503	489	405	384	48	376	---	486	23	132	434	230	459	400	160	465	396	344	337
CHARLESTON S.C.	506	601	605	466	238	218	548	586	574	453	198	578	501	448	501	315	452	319	556	311	458	380	452	337	289	364	517	440	411	449	206	428
CLEVELAND OHIO	---	---	---	---	627	---	---	159	107	---	509	248	583	464	620	454	---	---	505	---	557	---	---	491	508	---	---	392	554	528	522	---
COLUMBIA MISSOURI	220	582	372	357	589	518	724	605	704	694	621	668	672	606	591	622	605	564	482	492	447	314	326	550	367	325	418	604	574	402	512	520
DODGE CITY KANSAS	660	736	382	289	636	729	734	482	746	735	727	729	726	638	653	691	622	620	621	579	415	509	631	---	705	523	427	122	540	406	547	585
EL CENTRO CALIF. NPF	622	640	619	610	572	431	590	587	595	571	581	577	573	612	617	635	606	605	606	587	594	585	561	564	566	564	556	568	199	554	552	571
EL PASO TEXAS	540	589	629	409	586	568	672	631	383	580	655	662	528	629	593	597	567	428	567	564	586	600	619	594	620	330	363	368	598	564	585	555
ELY NEVADA	382	578	673	662	654	667	678	677	661	520	548	309	346	398	513	652	646	448	447	591	578	623	627	576	554	498	---	431	410	384	249	533
EPPLEY NEWPORT R.I.	461	532	---	---	434	626	---	572	---	576	546	325	442	483	500	547	322	253	460	565	568	555	505	426	367	381	216	380	432	516	509	463
FAIRBANKS ALASKA	537	542	556	442	444	---	---	---	124	253	471	129	404	371	333	209	430	287	119	246	388	415	260	339	---	178	258	386	353	383	213	336
FLAMING GORGE UTAH	484	428	410	453	599	726	727	657	711	626	602	663	623	523	648	479	475	277	400	508	598	646	352	544	479	552	628	447	380	532	275	531
FORT WORTH TEXAS	588	607	435	406	602	603	456	424	463	482	416	429	412	354	447	454	418	528	464	536	546	313	371	548	435	438	518	522	491	515	328	469
FRESNO CALIFORNIA	699	697	664	653	653	583	603	612	617	624	639	645	659	663	657	661	639	615	611	607	623	630	622	614	584	578	509	524	559	536	487	615
GAINESVILLE FLORIDA	---	---	---	---	---	---	---	344	372	427	518	533	610	592	518	548	517	591	462	544	480	506	314	164	68	138	407	580	655	522	176	441
GENEVA NEW YORK	389	246	281	712	681	438	229	340	306	514	624	213	425	252	632	443	226	396	584	631	576	521	326	380	486	493	293	410	453	580	572	440
GLASGOW MONTANA	623	472	660	659	585	555	563	554	513	612	622	422	360	536	539	564	381	579	449	32	390	564	488	481	561	556	548	555	542	469	557	516
GRAND JUNCTION COLO.	647	653	678	515	507	702	695	695	706	---	635	607	598	236	582	579	429	345	429	594	626	603	596	573	350	593	551	540	260	597	414	551
GREAT FALLS MONTANA	524	---	687	680	645	656	650	619	450	654	626	370	338	117	321	595	599	619	319	513	586	404	397	502	579	568	573	575	556	503	463	523
GREENSBORO N.C.	513	502	592	583	608	469	443	559	464	450	487	526	529	379	521	242	420	471	555	553	453	583	441	484	555	517	365	433	541	534	435	491
INDIANAPOLIS INDIANA	295	384	351	553	654	254	281	231	633	641	492	550	549	476	233	574	529	533	460	513	512	291	339	478	466	496	217	558	533	546	488	455
ITHACA NEW YORK	407	293	271	646	654	473	211	285	439	444	573	225	528	204	725	428	81	317	474	576	580	542	411	343	308	447	233	264	527	565	563	421
LAKE CHARLES LA.	463	424	612	610	597	603	556	463	433	324	369	388	499	213	491	521	469	423	441	512	551	517	277	176	321	529	391	567	524	509	514	461
LAKELAND FLORIDA	495	479	586	536	520	291	445	447	315	568	502	448	386	340	373	355	496	447	334	429	335	224	350	515	440	124	442	515	393	145	314	406
LANDER WYOMING	543	263	494	327	651	674	671	513	663	556	527	548	530	544	592	546	489	385	420	490	434	549	115	397	615	621	619	604	474	547	386	509
LARAMIE WYOMING	681	391	621	453	554	700	699	473	691	501	560	559	682	505	483	514	503	623	374	565	446	578	294	290	481	399	569	563	283	468	378	512
LAS VEGAS NEVADA	684	698	700	714	656	659	685	646	628	647	653	500	299	519	662	670	667	666	597	629	650	619	651	625	554	582	487	580	541	374	525	605
LITTLE ROCK ARKANSAS	---	580	567	331	440	543	571	---	500	341	518	361	522	561	553	503	485	509	533	500	447	259	423	373	308	519	546	544	486	457	217	465
LOS ANGELES CALIF.	694	714	542	604	658	618	635	610	535	552	532	315	388	590	590	609	589	441	538	580	606	603	543	---	450	460	366	565	---	484	549	550
LOS ANGELES CALIF U	631	665	472	595	621	615	592	597	540	555	554	237	298	569	593	619	608	442	535	592	602	600	576	139	394	527	319	563	451	438	578	520
MADISON WISCONSIN	129	352	457	653	563	451	503	202	613	617	274	455	518	317	278	411	570	534	410	382	471	485	109	350	286	82	459	545	534	487	430	417
MANHATTAN KANSAS	251	610	209	293	434	667	658	659	634	642	637	638	625	628	621	614	596	575	575	590	600	451	572	265	437	607	602	538	507	161	308	523
MATANUSKA ALASKA	585	492	573	395	486	---	---	530	513	---	556	---	---	---	---	295	445	178	71	405	317	179	---	---	---	---	---	---	---	---	---	---
MEDFORD OREGON	689	693	673	652	642	646	612	491	627	643	655	631	658	413	488	327	646	424	556	480	602	626	621	592	598	591	587	562	555	573	568	584
MIAMI FLORIDA	555	602	618	555	610	314	515	494	595	540	530	532	428	230	491	522	511	515	302	375	389	380	219	515	464	371	462	320	362	271	443	453
MIDLAND TEXAS	616	675	480	481	450	529	326	537	222	282	194	357	316	618	636	561	441	485	487	575	624	560	415	606	198	346	463	562	592	577	507	475
NASHVILLE TENNESSEE	469	541	562	446	545	384	499	599	227	459	530	257	488	562	497	493	502	475	497	495	395	435	386	417	420	473	449	504	532	549	438	468
NEW YORK CENTRAL PK	554	459	317	440	593	573	165	504	330	509	516	195	402	447	291	438	93	348	539	571	514	482	434	372	297	273	353	371	478	477	465	413
NORTH OMAHA NEBRASKA	205	361	621	681	223	625	650	709	557	---	---	673	654	664	657	643	629	562	559	610	635	139	312	289	112	358	634	620	618	115	107	490
OAK RIDGE TENNESSEE	408	363	557	541	444	379	403	609	255	300	443	398	524	593	571	529	467	411	365	487	461	543	373	417	359	490	494	376	528	526	439	453
OKLAHOMA CITY OKLA.	556	588	577	511	533	259	461	479	522	469	711	611	454	419	583	534	537	515	529	547	582	220	565	480	531	471	477	208	118	---	---	484

SOLAR RADIATION TOTALS—Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

AUGUST 1972

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PALMER ALASKA	550	474	507	430	443	389	515	455	486	524	499	177	151	322	287	344	393	238	163	381	349	213	270	286	422	460	442	421	386	171	252	368
PAGE ARIZONA	---	609	601	569	582	615	622	576	597	594	588	586	512	418	542	470	600	409	547	583	553	581	575	575	432	431	402	468	305	517	487	533
PHOENIX ARIZONA	635	623	647	605	480	584	569	589	591	600	605	592	602	584	617	601	492	546	502	584	592	603	596	591	580	527	528	358	313	544	551	562
PORTLAND MAINE	490	469	108	579	632	480	123	509	293	448	584	206	518	209	520	507	193	75	512	537	545	528	289	411	352	404	355	266*	430	499	493	405
RAPID CITY S.DAK.	467	76	262	601	583	615	595	597	567	519	583	571	561	584	482	551	431	524	489	522	298	555	573	547	523	559	546	542	410	519	152	497
RENO NEVADA	---	---	---	531	536	517	473	461	323	474	485	501	506	477	500	495	475	402	453	455	432	473	464	413	461	446	---	---	369	319	317	452
RICHLAND 25 NW WASH.	703	688	687	682	676	673	670	615	659	667	653	557	658	442	261	457	446	584	517	499	573	595	610	596	586	581	578	562	558	587	592	588
RIVERSIDE CALIFORNIA	615	616	528	546	491	562	545	567	496	422	525	357	408	543	544	599	575	510	559	549	580	576	560	496	457	492	334	540	316	509	523	515
RUSTON LOUISIANA	609	492	610	623	626	646	635	589	556	461	441	370	356	532	550	---	---	---	566	498	412	439	509	259	402	319	586	584	551	520	460	507
SAINT CLOUD MINN.	545	286	629	656	482	173	330	429	590	344	534	646	344	558	439	561*	512	414	507	522	311	137	248*	104	154	81	512	542	540	241	351	410
SALT LAKE CITY	523	638	647	612	664	693	676	672	670	646	567	551	462	531	603	637	641	455	481	593	623	588	580	614	612	503	541	384	398	572	250	569
SAN ANTONIO TEXAS	620	341	228	632	629	685	649	426	420	372	259	619	592	614	506	610	502	605	527	624	654	604	564	585	550	598	586	---	---	---	---	540
SANTA MARIA CALIF.	686	651	565	582	633	625	493	596	606	614	614	548	638	664	658	645	585	417	---	595	635	635	613	611	573	574	484	548	572	325	570	585
SAULT STE MARIE MICH	677	72	693	681	510	99	519	210	645	605	57	512	201	248	503	62	124	490	583	569	314	107	209	142	180	91	236	523	---	---	382	353
SEATTLE TACOMA WASH.	306	352	605	662	675	667	653	529	525	583	586	638	601	359	77	476	297	582	269	295	247	392	590	580	587	583	575	569	502	574	538	499
SEATTLE WASH. UNIV.	294	340	555	557	564	550	533	472	407	501	500	524	551	353	98	432	314	504	302	348	228	373	505	500	504	503	493	488	463	503	488	444
SPOKANE WASHINGTON	577	586	676	665	654	644	633	587	613	650	615	566	547	539	267	585	---	---	336	587	584	315	392	500	570	569	569	555	531	587	576	554
STERLING VIRGINIA	635	419	402	313	519	566	409	602	511	633	511	541	454	615	348	479	119	511	550	652	607	592	515	543	484	446	386	423	550	570	450	495
SWAN ISLAND W.I.	627	626	600	637*	603*	561*	663	614*	532	582	495	542	586*	563*	535*	599*	612	619	532	619	665	589	203	590	643	624	566	603	598	645	600	583
TALLAHASSEE FLA	442	388	403	522	506	514	341	381	428*	390	306*	333	429	264	515	517	438	412	364	407	440	382	280	241	318	292	439	329	313*	337	322*	387
TAMPA FLORIDA	582	542	604	479	608	613	530	598	472	550	565	557	307	281	547	343	444	575	302	527	311	268	85	245	474	222	330	600	611	141	339	440
TUCSON ARIZONA	676	629	671	575	582	620	660	640	444	646	569	572	632	640	651	651	641	400	---	---	---	643	641	612	627	---	---	---	461	543	494	597
UPPER MARBORO MD.	614	469	406	287	531	534	391	528	481	653	540	537	335	528	336	607	66	412	536	623	577	583	548	520	407	---	---	---	492	502	559	486
WAKE ISLAND PACIFIC	425	637	571	646	615	569	442	639	586	551	575	226	414	623	629	635	635	600	602	629	615	607	650	628	628	620	636	640	643	580	635	585

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

[1] Indicates Urban Sites.

Tucson is corrected by a factor of 1.2 from July 1971 on.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	328	248	305	285	191	294	273	273	292	276	103	59	258	201	229	235	113	80	196	190	87	124	156	223	263	254	222	185	41	141		204

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 A) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	2.80	13.53	18.16	15.48	12.31	11.58	19.01	9.99	14.87	16.82	16.21	14.14	17.43	16.94	15.84	16.21	16.33	15.35	14.87	15.35	15.48	8.41	5.24	12.31	7.67	6.46	17.67	16.33	15.11	9.99	8.89	13.44

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

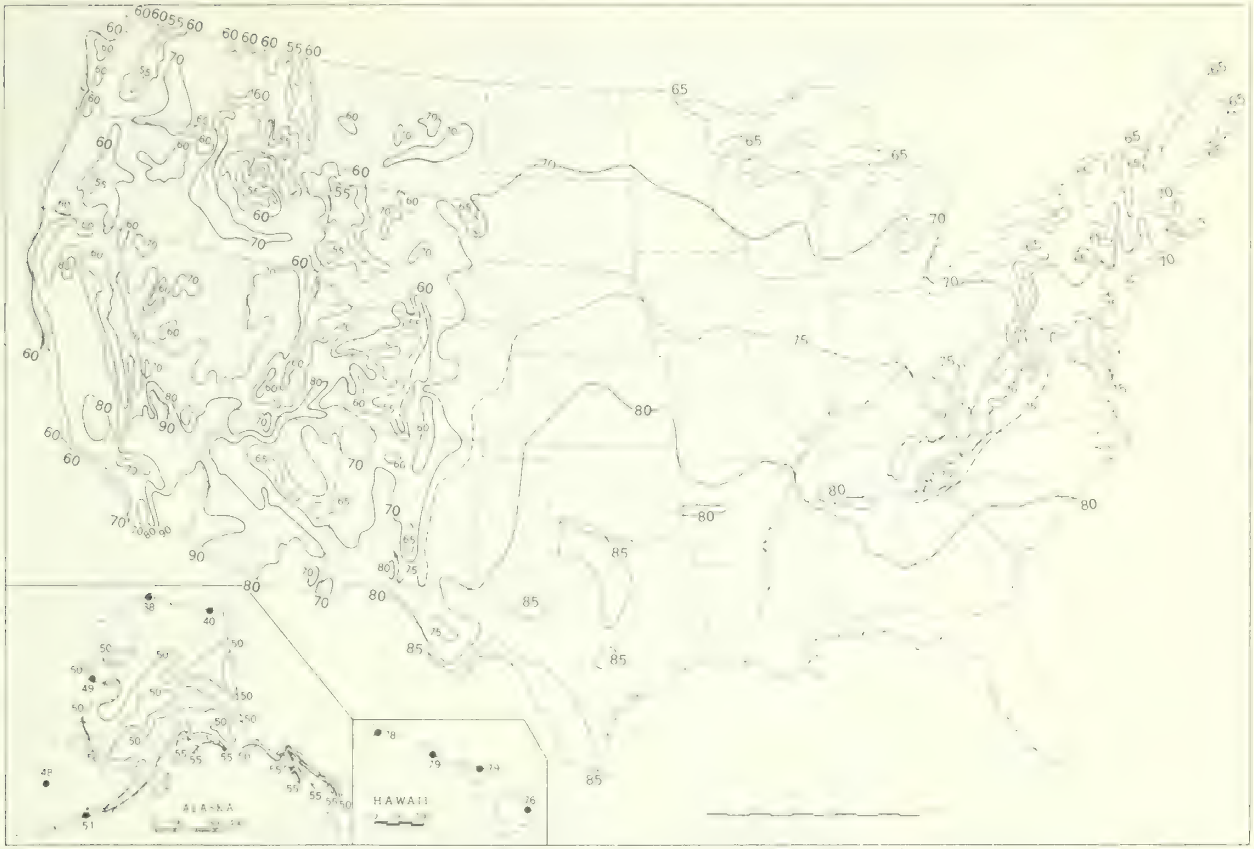
Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

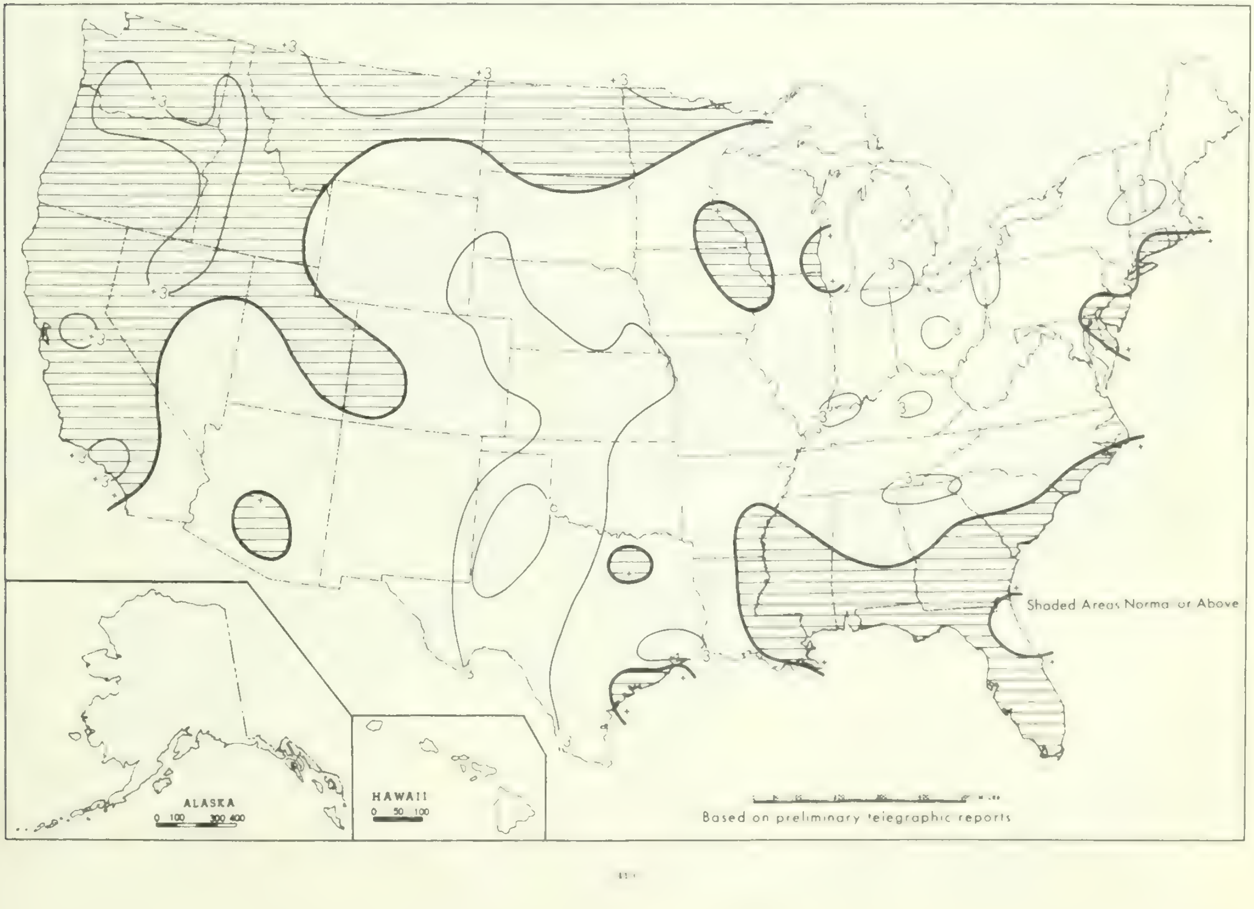
Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick. The code λ s designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), August.



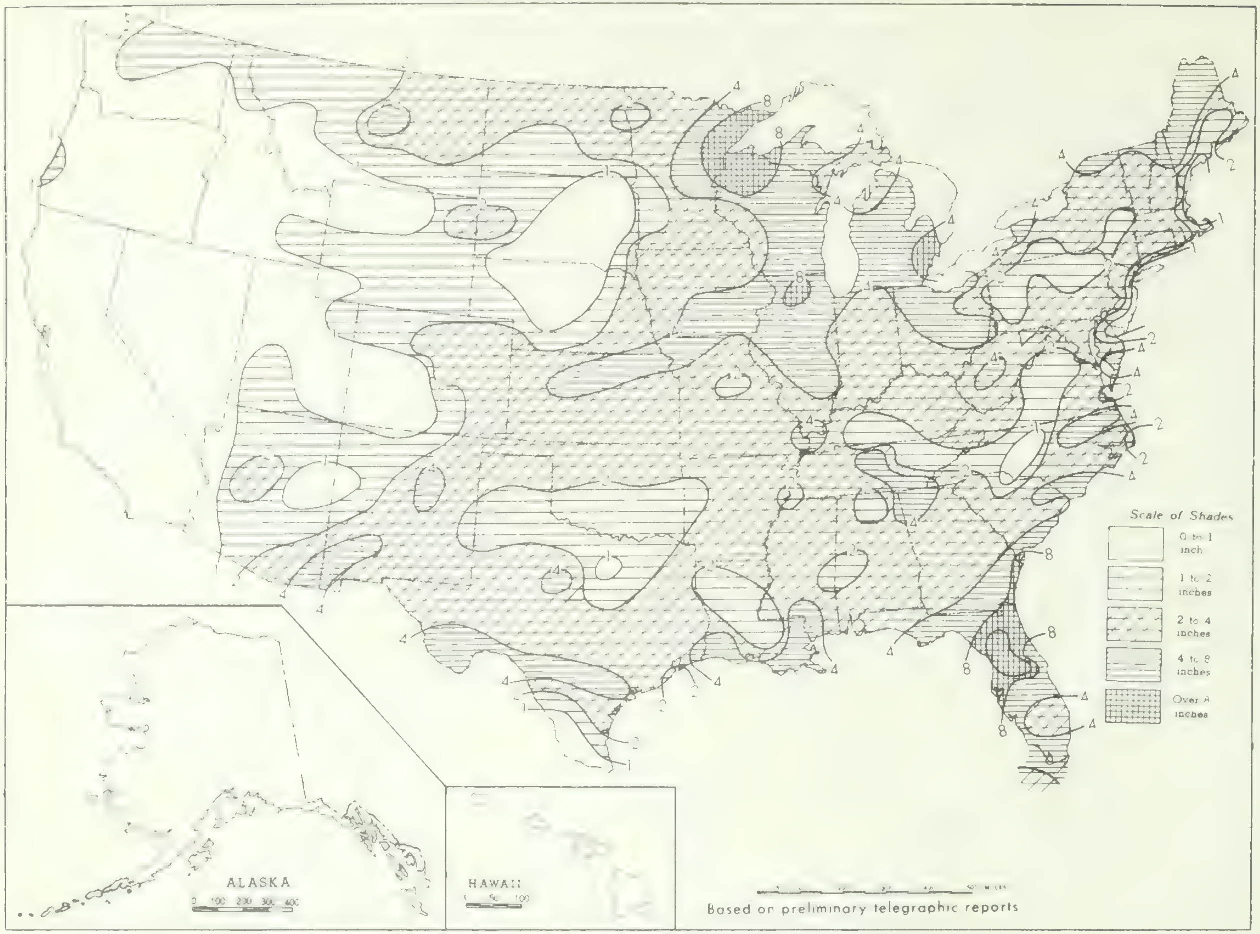
B. Temperature Departure from 30 - Year Mean (°F 1931-60), August 1972



Shaded Areas Normal or Above

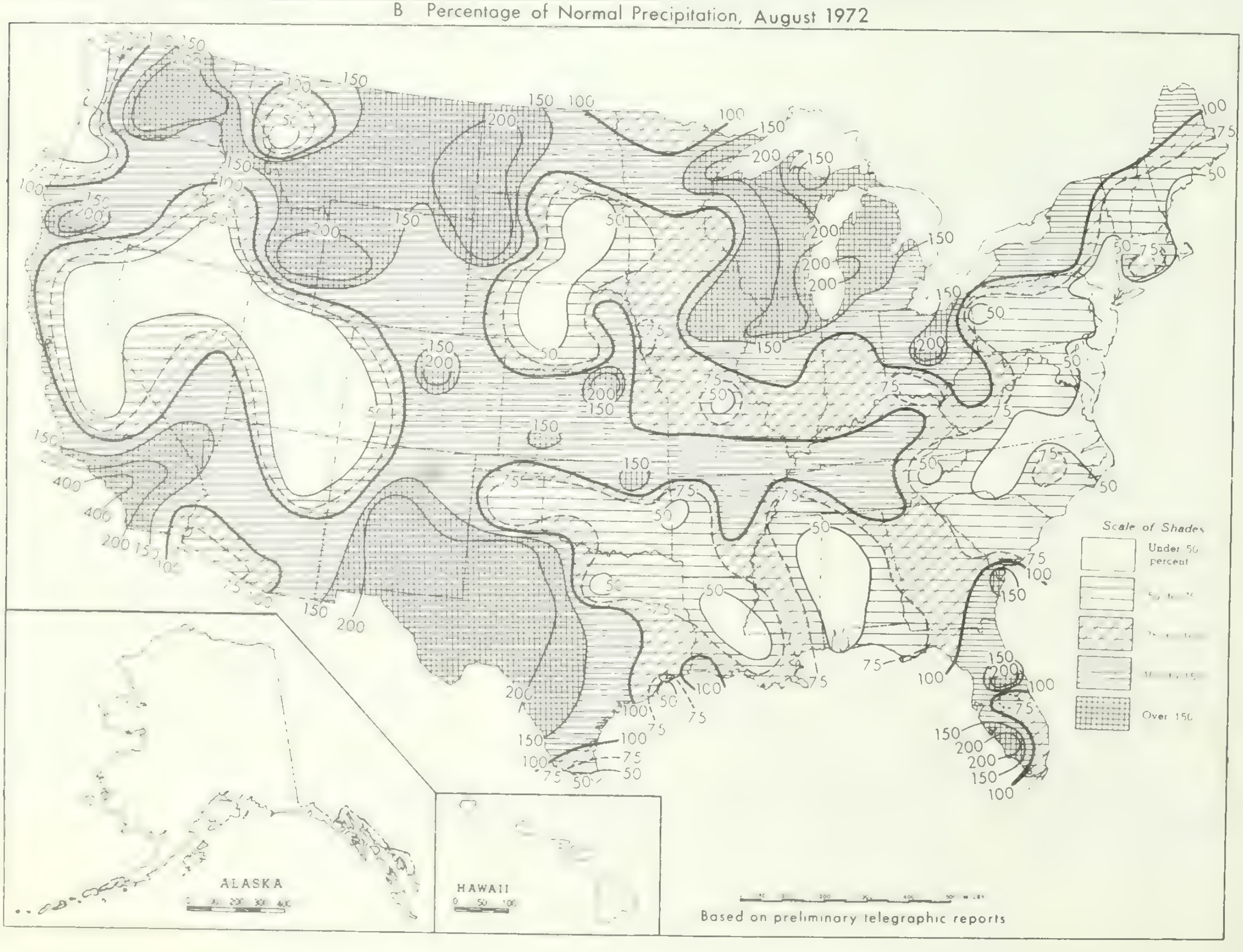
Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), August 1972

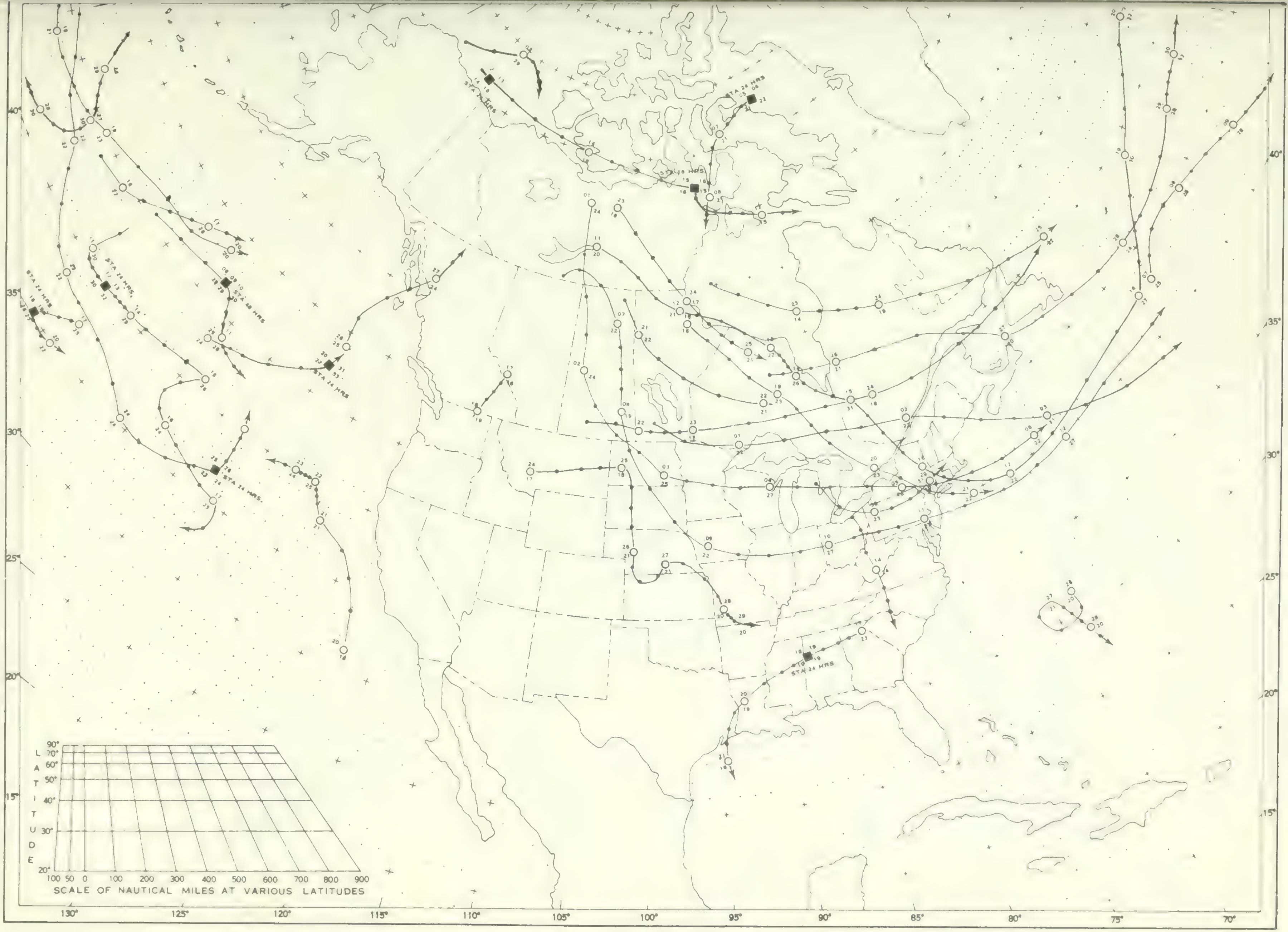


Based on preliminary telegraphic reports

B Percentage of Normal Precipitation, August 1972

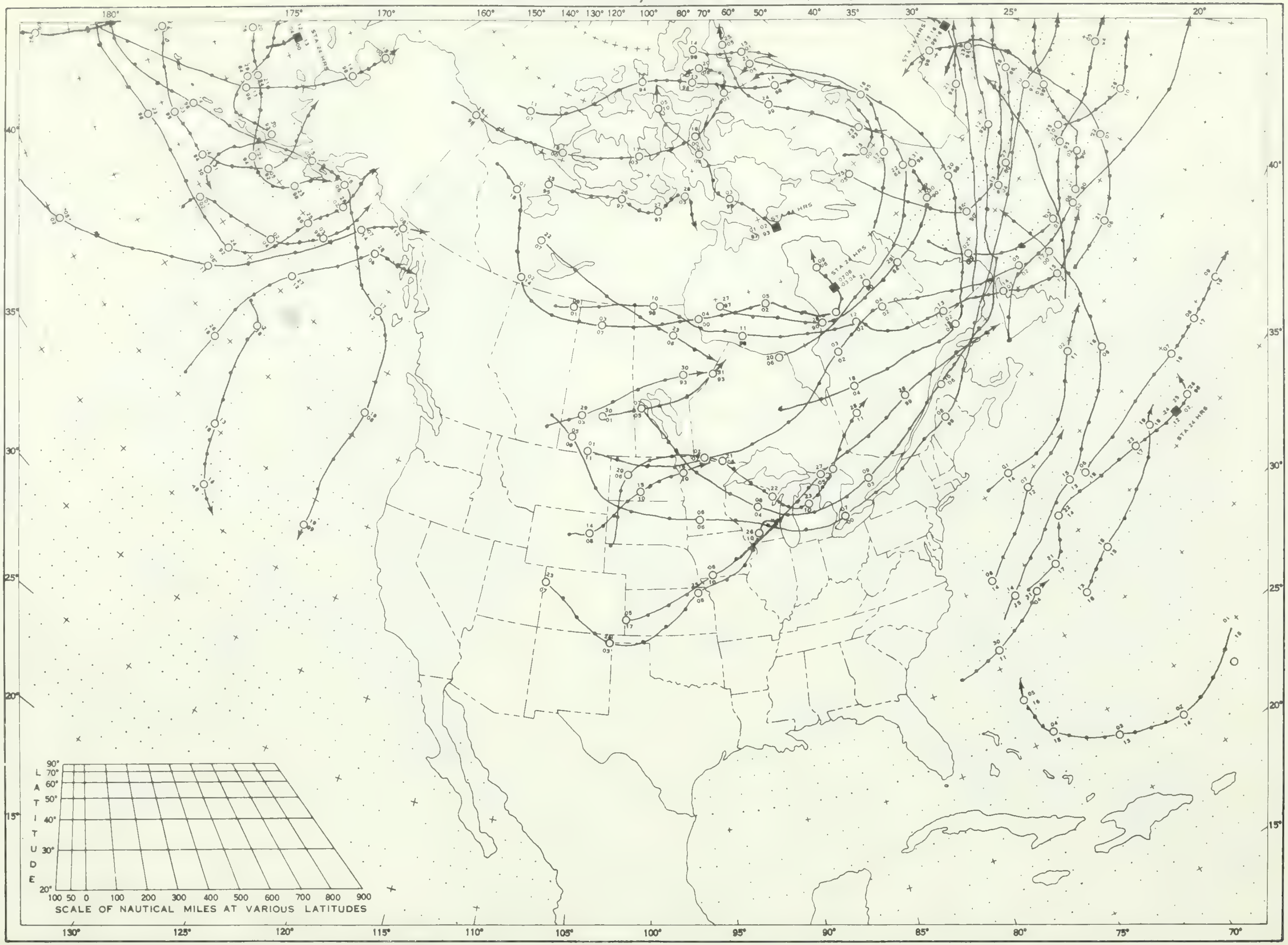


Based on preliminary telegraphic reports



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, August 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.

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CLIMATOLOGICAL DATA

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: $5.50 a year including annual summary; $1.00 additional for foreign mailing; 40¢ single copy; $1.00 annual summary. Make checks payable to Department of Commerce, NOAA; send payments and orders to: National Climatic Center, Federal Building, Asheville, N. C. 28801. Attn: Publications.

I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

NOTICE

Effective with the July 1972 issue of this publication, the Climatological Data tables in English Units are discontinued.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$$^\circ\mathrm{F.} = \frac{9}{5} \times {}^\circ\mathrm{C} + 32$$

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

Snowfall, sunshine, solar radiation, and pressure surface maps are also discontinued. See the explanatory page "Description of Charts," which appears in the July 1972 issue, and will be carried subsequently in the January and July issues.

Effective with the September 1972 issue, the Solar Radiation Totals Table is discontinued.

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

SEPTEMBER 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Temperatures responded to the movement of the migratory highs and lows, their associated fronts, and the shortening of the days.
2. Frontal thunderstorms dumped heavy rains on the Great Plains.
3. Tropical Storm Carrie left heavy rain in eastern Massachusetts.

TEMPERATURE--In general, September temperatures averaged cooler than normal from Washington and Oregon to the Great Lakes, and from California to western Texas. Above normal temperatures predominated from eastern Texas to the middle and southern Atlantic Coast.

Cold fronts moved southward from Canada into the northern Great Plains early in September. As they continued southward to the Gulf of Mexico, they brought cool, pleasant weather to the central and eastern portions of the Nation. Early morning temperatures dropped to the thirties and forties over the northern Great Plains and to freezing or lower in the higher Rocky Mountains. Big Piney, Wyo., registered 22° on the 7th. Temperatures along the Gulf of Mexico ranged generally from the seventies in the early mornings to the nineties in the afternoons. The Southwest continued hot. Blythe, Calif., recorded 109° on the 5th and the mercury at Cotulla, Tex., climbed to 102° on the 6th and 7th. The second week of September brought early autumn temperatures to much of the eastern half of the Nation. Minimum temperatures fell to the forties as far south as Virginia.

Two highs dominated the weather at midmonth. One of the highs was centered over the northern Great Plains. It dropped early morning temperatures into the forties from Montana to Michigan and held afternoon temperatures in the sixties and seventies in the vicinity of the Great Lakes. Another high was spread over the eastern third of the Nation. It brought warm humid air northward from the Gulf of Mexico. Afternoon temperatures in the tropical air ranged mostly in the eighties and nineties. Omaha, Nebr., registered 90° on the 17th. Elsewhere in the central Great Plains, afternoon temperatures reached the nineties. The Deep South was also warm, but the higher humidity made the air feel sticky. Warming continued over the central Great Plains into the third week of September. Grand Island, Nebr., registered 100° on the 18th and Aberdeen, S. Dak., recorded 98° on the 19th. A quick change to cooler weather occurred over the northern and central Great Plains in the third week of the month. Jamestown, N.Dak., registered the following daily maximum temperatures from the 19th through the 21st: 94°, 70°, and 60°. Temperature changes in the South were less drastic. The last few days of September were, in general, cold and dry in the Northwest, mild and dry in the Southwest, cold and damp in the Northeast, and warm and humid in the Southeast.

PRECIPITATION--A cold front pushed into the northern Great Plains early in September. The leading edge of the cold air set off showers and thunderstorms. Light rain fell in the cold air behind the front. Heavy rains, 2 to 4 inches in 24 hours, fell in east-central Kansas on the 1st and 2d, causing substantial flooding along Gypsum Creek, Turkey Creek, and the tributaries of the lower Smoky Hill River. Flooding also occurred in south-central New Mexico due to the heavy showers in that area. Meanwhile, Tropical Storm Carrie dumped heavy rain over eastern Massachusetts - 8 inches southwest of Hyannis Port and over 5 inches at Chatham in 6 hours. Showers and thunderstorms, some heavy, occurred about the middle of the first week of September from the southern Great Plains to the middle and southern Atlantic Coast. Near the end of the first week, light showers splattered the Texas Panhandle, northeastern Kansas, and nearby parts of Nebraska, Iowa, and Missouri. Heavy rains splashed down in Illinois and Indiana.

Shortly before midmonth a slow moving front stretched from a low centered near Hudson Bay, across Lake Superior to the central Great Plains, and westward to another low centered in northern Utah. Scattered showers and a few thunderstorms, some heavy, rumbled in the vicinity of the front. Especially heavy rains fell in eastern Nebraska and western Iowa. Storm totals exceeding 5 inches were common in that area; some locations received more than 10 inches from the evening of the 17th to the early morning of the 18th. One of the largest totals was 21 inches at Earling, Iowa. The continued heavy rains in Shelby County, Iowa, caused record river stages along the west and east forks of the Nishnabotna River. The heavy rains in Nebraska, Iowa, Kansas, and Missouri caused important rises on the main stem of the Missouri River. Much rain fell on saturated soil where it was not needed. Frontal thunderstorms continued in the third week of September. A storm in the Pacific Northwest brought rain to the coastal areas and nearby hills and snow in the higher Cascades. Stampede Pass, Wash., measured 5 inches of snow on the ground on the morning of the 20th. About 5 inches of rain on the 20th and 21st drenched Duluth, Minn. Hail and high winds occurred in Minnesota and Wisconsin. While a band of frontal thunderstorms moved across the Great Plains, airmass thunderstorms dotted the Deep South in the hot, sultry air that covered that region.

Northeasterly upslope winds produced heavy snow over portions of Montana on the 24th and 25th. Miles City measured 3 inches on the ground on the morning of the 25th. Heavy rains fell at Charles City, Iowa, and at Poplar Bluff, Mo. Mixtures of rain and snow slicked the roads and highways in parts of Idaho and Nevada. Near the end of the month, showers and thunderstorms occurred along a front that stretched from the southern Great Plains to New England and in the warm, humid air that lay over the Deep South. The areas that received only light rains in September were the Desert Southwest, southern Georgia, and parts of Florida.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

SEPTEMBER 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	3 Stations	101	21+	Huntsville WSO AP	43	30	Waterloo	10.63	[illegible]	.04
Alaska	Tok	77	2	Tok	- 5	22	Sitka Magnetic Obsy	18.19	Linger Longer	.12
Arizona	Gila Bend	109	5	Sunrise Mountain	19	30	Klondyke 3 SE	6.49	14 Stations	.00
Arkansas	Sheridan Tower	101	15	2 Stations	35	30	Bonnerdale	19.14	Pine Bluff	1.63
California	Indio U S Date Garden	115	2	Bodie	12	12	Shelter Cove	4.63	63 Stations	.00
Colorado	4 Stations	97	19+	Hermit 7 ESE	12	30	Colorado Sprgs WSO AP	4.13	Holly	.30
Connecticut	Hartford WSO AP	90	17	Coventry	31	23	West Thompson Dam	5.49	Danbury	.99
Delaware	Wilmington New WSO AP	91	17+	3 Stations	42	24+	Dover	5.18	Wilmgton Porter Resvr	1.10
Florida	Smith Creek	100	19	De Funiak Springs	54	13	Flamingo Ranger Sta	12.17	3 Stations	.09
Georgia	Hawkinsville	104	17	Elberton 2 N	41	12	Taylorsville	6.07	Homerville 3 WSW	.05
Hawaii	Waialua 847, Oahu	94	15	Haleakala Summit 338.4,Maui	34	2	Mount Waialeale 1047,Kauai	21.43	2 Stations	.00
Idaho	2 Stations	96	5+	Grouse	11	25+	Island Park Dam	4.12	Caldwell	.19
Illinois	3 Stations	97	19	2 Stations	30	30	Bloomington Waterworks	11.05	Fairfield Radio WFIW	1.33
Indiana	2 Stations	95	19+	Logansport Radio WSAL	35	30	Logansport Radio WSAL	10.62	Evansville WSO AP	1.25
Iowa	3 Stations	95	19+	Fayette	26	30	Harlan	16.33	Sioux Center	1.27
Kansas	Leoti 2 S	102	16	Topeka WSO AP	30	30	Columbus 6 NNW	11.78	[illegible]	.41
Kentucky	Owensboro 2 W	97	19	2 Stations	39	30	Elkhorn City	8.44	Murray	1.55
Louisiana	Belah Fire Tower	101	9	2 Stations	47	30	Eunice	8.64	[illegible]	.87
Maine	Fort Kent	88	2+	3 Stations	27	24+	Ellsworth	7.81	Middle Dam	.82
Maryland	Picardy	94	17	2 Stations	35	24+	Princess Anne	7.85	[illegible]	.60
Massachusetts	Chester 2	91	17	Chester 2	27	23	Woods Hole	14.75	Birch Hill Dam	.99
Michigan	2 Stations	89	18+	Vanderbilt	24	23	Dowagiac 1 W	8.04	Sandusky	.99
Minnesota	Beardsley	98	19	Tower 3 S	19	30	Winona	9.42	Beardsley	.03
Mississippi	2 Stations	102	15	2 Stations	44	30	New Albany	9.89	Buckatunna	.47
Missouri	Festus 2 NW	101	19	Edgerton	29	30	Wappapello Dam	11.66	Bowling Green 2 NE	1.39
Montana	Mildred	95	9	Wisdom	10	26	Cooke City	4.66	Biddle	.07
Nebraska	Loup City	103	19	Agate 3 E	18	26	Columbus 3 NE	9.24	Valentine WSO AP	.46
Nevada	Lathrop Wells 16 SSE	104	1	Mountain City RS	11	25	Beowawe Gund Ranch	2.33	[illegible]	.00
New Hampshire	Manchester	88	3+	Mount Washington	19	23	Mount Washington	7.34	Berlin	.74
New Jersey	Newark WSO AP	93	17	4 Stations	36	23	Long Valley	6.73	Rahway	.77
New Mexico	Jal	99	17	Wolf Canyon	20	30	Duval Potash Mine	7.05	Aztec Ruins Nat Mon	.21
New York	3 Stations	92	17	2 Stations	26	23	Fredonia	8.97	[illegible]	.47
North Carolina	Concord	96	15	Tuckasegee 2 S	36	30	Pinehurst Srn-Pines	9.94	Longwood	1.18
North Dakota	Forman 5 SSE	98	20	Watford City	18	26	Grafton	4.40	Fort Yates	.14
Ohio	Hamilton-Fairfield	92	13+	Canfield 1 S	34	10	Hiram	12.10	Middlebourne	1.40
Oklahoma	Mangum Research Sta	103	17	Bristow	32	30	Vinita 3 NNE	8.28	Oklahoma City East	.15
Oregon	Illahe	103	01	2 Stations	12	25	Tillamook 13 ENE	8.69	Fossil	.00
Pennsylvania	5 Stations	93	18	Clermont 4 NW	27	23	Marion Center 2 SE	11.21	Holtwood	.65
Puerto Rico	3 Stations	95	30+	Adjuntas Substation, P.R.	56	6	Pico Del Este, P.R.	17.55	Dorothea Agr Exp Sta,V.I.	1.63
Rhode Island	2 Stations	85	27+	Kingston	37	11	Providence WSO AP	7.31	North Scituate 4 W	5.15
South Carolina	3 Stations	98	19	Caesars Head 1 NE	43	30	Winthrop College	6.38	Branchville 6 S	.10
South Dakota	3 Stations	100	19+	Deerfield 4 NW	10	26	Vermillion 2 SE	3.09	3 Stations	.00
Tennessee	Covington 1 W	97	20	2 Stations	40	30+	Savannah	8.85	Carthage	1.91
Texas	Pecos	105	1	Lipscomb	31	30	Houston-Deer Park	11.66	Wink FAA Airport	.37
Utah	2 Stations	96	18+	Woodruff	17	25	Alta	3.75	Hite Marina	.04
Vermont	Saint Johnsbury	91	1	Morrisville 2	25	28	Mount Mansfield	3.64	Chelsea	.88
Virginia	Manassas	94	17	2 Stations	33	30+	Langley Air Force Base	11.49	Lincoln	.87
Washington	Willapa Harbor	97	2	Chesaw 4 NNW	18	27+	Quinault Ranger Sta	11.47	Priest Rapids Dam	T
West Virginia	Harpers Ferry Nat Park	93	14	Canaan Valley	29	23	Corton	6.13	Berkeley Springs	.44
Wisconsin	La Crosse FAA AP	88	16	Drummond 6 W	19	30	Necedah 3 NE	10.31	Minong 5 WSW	1.90
Wyoming	Recluse 14 NNW	93	9	3 Stations	7	26+	Pine Bluffs	5.96	2 Stations	.00

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
ALABAMA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	995.9	1018.0	29.7	18.1	23.9	- 0.7	34.4	15	7.8	30	8	0	18.3	74	205	121	77	11	11	0	0	0.6	10	15.2	W	29	8	11	11	6.0	63
HUNTSVILLE	190	995.3	1018.1	29.3	17.4	23.4	- 0.2	33.9	15	6.1	30	5	0	17.8	77	97	19	25	12	6	0	0	0.8	10	17.0	35	15	10	7	13	5.6	
MOBILE	64	1009.1	1017.0	33.2	21.9	27.6	2.1	36.1	15	13.3	30	26	0	22.2	78	83	- 75	48	9	8	0	0	0.9	13	10.3	29	22	8	16	6	5.1	
MONTGOMERY	56	1010.5	1017.6	32.5	19.3	25.9	0.8	36.1	15+	9.4	30	21	0	19.4	75	41	- 60	21	6	4	0	0	0.4	5	11.2	N	18	11	13	6	4.4	64
ALASKA												B															B					
ANCHORAGE	35	1007.5	1012.5	10.2	3.6	6.9	- 1.9	18.3	1	- 3.3	23	0	10	2.8	78	112	49	22	16	0	38	T	0.4	5	12.5	18	12	6	4	20	7.1	44
ANNETTE	34	1011.2	1015.3	14.6	7.9	11.3	- 1.0	23.9	3	1.1	26	2	0	6.7	78	121	-130	50	15	0	0	0	0.5	31	13.0	17	29	2	8	20	7.7	
BARROW	9	1017.3	1017.8	1.3	- 2.2	- 0.4	0.4	10.6	5	- 9.4	29	0	25	- 2.2	89	34	18	8	20	0	328	102	1.6	6	11.6	6	30+	0	2	28	9.5	
BARTER ISLAND	12	1014.9	1016.9	0.6	- 2.4	- 0.9	- 0.9	8.3	5	- 8.9	22	0	25	- 2.2	91	11	- 13	2	13	0	109	51	0.4	27	20.6	26	19+	1	5	24	8.7	
BETHEL	38	1007.5	1013.1	10.2	2.8	6.5	- 0.5	18.9	1	- 4.4	30	0	14	3.3	82	55	- 11	19	16	0	5	T	0.6	3	14.3	19	9	3	5	22	8.1	
BETTLES	196	991.2	1015.6	7.6	- 1.1	3.3		20.6	3	-10.6	23	0	18	- 1.1	77	10		4	6	0	142	152	1.3	35	10.3	35	18+	6	6	18	7.3	
BIG DELTA	386			9.4	- 1.2	4.2		22.2	2	-11.7	22	1	17			26			8	0	221											
COLD BAY	29	1009.5	1013.1	11.9	5.7	8.8	0.2	16.1	22+	- 1.1	30	0	2	5.6	83	33	- 77	12	15	0	5	T	3.5	18	19.7	17	13+	2	3	25	8.6	
FAIRBANKS	133	996.6	1014.0	8.8	0.2	4.5	- 1.9	21.1	2	-11.7	30	1	15	- 0.6	72	53	25	13	12	0	198	203	0.8	32	10.3	23	12	5	8	17	7.0	
GULKANA	479			10.1	- 0.8	4.7		17.8	3	-12.8	24	0	15			21		8	9	0	152	102			13.9	4	21+	8	7	15	6.1	
HOMER	20			11.7	4.4	8.1		17.8	1	- 2.8	22	0	5			121	51	22	17	0	0	0			11.2	36	19+	6	6	18	6.9	
JUNEAU	4	1013.5	1014.5	12.2	4.4	8.3	- 1.1	19.4	3	- 5.0	26+	0	5	3.9	78	158	- 11	41	18	0	0	0	2.1	8	11.6	12	28	3	3	24	8.3	24
KING SALMON	15	1010.5	1012.4	11.6	3.3	7.5	- 1.3	16.1	23+	- 6.1	30	0	10	4.4	82	75	- 3	18	15	0	T	0	0.7	23	11.2	18	9+	3	9	18	7.8	
KOTZEBUE	3	1014.2	1014.8	7.7	2.4	5.1	0.1	17.2	2	- 6.1	29	0	9	2.2	82	34	3	10	10	0	T	T	2.2	2	15.6	36	29	4	7	19	7.4	
MC GRATH	105	1001.0	1013.9	10.8	1.3	6.1	- 0.5	21.1	1	- 6.7	30+	1	14	- 1.1	64	64	- 2	16	15	0	104	102	0.4	32	8.9	29	15	4	7	19	7.3	
NOME	4	1013.5	1014.3	8.9	1.8	5.4	- 0.1	16.7	6	- 5.6	29+	0	12	1.7	78	50	- 18	30	10	0	25	T	1.3	3	12.5	10	9	9	2	19	6.9	39
ST. PAUL ISLAND	7	1010.2	1011.2	8.7	4.6	6.7	- 0.3	11.1	2+	- 2.8	29	0	2	5.6	94	82	4	18	26	0	5	T	1.7	11	18.3	3	27	0	4	26	9.1	
SHEMYA	37	1005.1	1008.9	9.9	7.2	8.6	- 0.5	12.8	4+	1.7	30	0	0	6.1	86	43	- 14	10	16	0	0	0	1.8	35	21.0	3	26	1	8	21	8.4	
SUMMIT	732	926.5	1014.1	6.6	- 2.2	2.2		17.8	2	-11.1	27	0	19	- 2.2	75	86		26	16	0	424	305	1.0	5	14.3	23	12	5	5	20	7.4	
TALKEETNA	105			10.9	0.4	5.7	- 2.1	17.2	6	- 8.9	24+	0	15			215	102	48	17	0	41	25			9.4	2	18					
UNALAKLEET	5			9.4	2.7	6.1		17.8	2	- 7.8	30	0	12			37		10	12	0	T	0			13.0	28	15+	5	6	19	7.6	
YAKUTAT	9	1012.5	1013.7	12.2	4.1	8.2	- 1.4	16.1	19	- 5.6	23	0	9	5.0	85	255	-165	51	20	0	0	0	1.1	10	11.2	6	19	2	8	20	8.0	
ARIZONA																																
FLAGSTAFF	2135	790.4	1016.3	22.9	4.4	13.7	- 1.0	26.7	30+	- 1.1	20	0	3	1.1	45	21	- 20	11	7	9	0	0	1.5	21	11.6	SW	6	11	14	5	4.4	84
PHOENIX	340	971.9	1009.9	36.9	21.7	29.3	1.1	40.6	5+	16.1	20	30	0	10.0	32	7	- 11	5	3	5	0	0	0.9	14	19.7Y	SE	7	21	4	5	2.8	94
TUCSON	788	924.8	1010.9	33.1	18.7	25.9	- 1.0	36.1	5	12.8	25	23	0	11.1	43	28	2	19	6	7	0	0	1.5	16	21.0	N	1	18	7	5	3.8	86
WINSLOW	1492	853.0	1014.0	29.4	11.9	20.7	- 0.8	33.3	5+	4.4	30	2	0	6.1	43	4	- 19	3	4	6	0	0	1.9	22	13.4	23	19	13	9	8	4.5	
YUMA	59	1002.4	1009.4	36.9	21.9	29.4	- 0.8	40.6	5	16.1	20	29	0	13.3	40	0	- 10	0	0	0	0	0	1.3	19	11.2	SE	18	24	2	4	2.1	94
ARKANSAS																																
FORT SMITH	136	999.7	1016.1	30.1	18.4	24.2	0.4	35.0	19+	6.1	30	14	0	18.3	75	88	- 4	28	11	7	0	0	1.1	9	12.5	N	29	8	3	19	6.7	55
LITTLE ROCK	78	1007.1	1016.7	29.6	19.1	24.3	0.8	35.6	8	8.3	30	9	0	20.0	81	163	81	37	12	10	0	0	0.4	17	15.2	NW	29	5	11	14	6.7	72
CALIFORNIA																																
BAKERSFIELD	145	995.6	1013.0	30.6	17.4	24.0	- 0.7	38.9	1	10.6	12	10	0	11.1	47	1	- 2	1	1	0	0	0	1.6	33	9.4	2	11+	19	8	3	2.7	
BISHOP	1252	873.0		29.2	7.6	18.4	- 1.7	33.9	1	2.2	12	3	0			9	4	8	4		0	0						15	11	4	3.7	
BLUF CANYON	1609			19.9	9.9	14.9	- 2.2	26.7	1	4.4	12	0	0			83	67	62	4		0	0			7.6	17	10+	15	8	7	3.9	
EUREKA U	13			16.2	10.3	13.2	- 0.3	21.7	29	7.2	24+	0	0			27	11	22	4		0	0			11.6	N	6	10	5	15	6.0	53
FRESNO	100	1001.4	1013.1	30.3	13.9	22.1	- 1.3	38.9	1	7.2	25	9	0	10.6	53	7	5	7	2	0	0	0	1.6	29	8.9	NW	19	21	6	3	2.8	82
LONG BEACH	8	1012.5	1014.0	27.4	17.3	22.4	0.6	35.6	21	13.3	13+	3	0	15.6	70	4	2	3	2	1	0	0	1.4	26	7.6	27	19+	8	13	9	5.3	
LOS ANGELES	30	1009.8	1013.5	24.3	17.7	21.0	0.7	31.7	5	14.4	14	0	0	16.1	77	1	- 4	1	1	1	0	0	2.7	25	12.5Y	SW	19	10	8	12	5.3	
LOS ANGELES U	82			27.4	17.3	22.4	0.2	35.6	21	13.3	14+	5	0			1	- 5	T	2		0	0			8.0	SW	19	11	14	5	4.8	72
MT SHASTA R	1080	892.7	1016.0	22.9	5.2	14.1	- 2.3	32.2	1	- 1.1	12	1	3	2.8	54	10	- 12	7	6		0	0	0.6	36								
OAKLAND	2	1014.9	1015.3	21.4	14.1	17.8	- 0.6	27.2	29	10.6	23	0	0	13.3	79	20	14	15	3	0	0	0	2.3	28	9.4	32	7	13	14	3	4.0	
RED BLUFF	104	1000.3	1013.0	29.9	14.4	22.2	- 2.3	38.3	1	10.6	13	12	0	7.8	46	39	30	21	3	1	0	0	0.3	32	9.8	SE	18	20	5	5	2.6	92
SACRAMENTO	5	1012.5	1013.5	29.1	12.6	20.8	- 1.2	34.4	1	7.8	25	5	0	10.6	61	23	18	15	3	0	0	0	2.2	21	11.2	SW	11	20	6	4	2.6	89
SANDBERG R	1377	862.5		23.6	12.1	17.8	- 2.9	30.0	30	6.1	19	0	0			T	- 5	T	1		0	0	0.8	24	15.6	31	19	13	10	7	4.3	
SAN DIEGO	4	1012.5	1013.7	23.3	17.4	20.4	- 0.7	29.4	4	15.0	14+	0	0	15.6	77	11	7	10	4	0	0	0	2.0	29	8.5	NW	3	8	10	12	5.9	65
SAN FRANCISCO	2	1014.9	1015.5	21.9	12.1	17.0	- 0.7	28.3	29	7.2	23	0	0	11.7	75	8	3	8	2	0	0	0	3.3	28	10.3	28	23+	18	8	4	3.5	
SAN FRANCISCO U	16			19.4	13.4	16.4	- 0.3	28.3	29	11.7	25+	0	0			14	8	11	3		0	0			11.2	W	7					81
SANTA MARIA	72			22.7	11.1	16.9	- 0.2	30.6	20	5.0	12	0	0			T	- 4	T	0		0	0						12	10	8	4.7	
STOCKTON	7	1013.2	1014.3	29.6	14.0	21.8	- 0.8	35.0	1	9.4	25	7	0	8.3	49	17	12	15	3	0	0	0	2.5	31	9.4	32	2	20	5	5	2.9	
COLORADO																																
ALAMOSA	2297	775.1		22.9	3.7	13.3	0.2	27.2	18+	- 5.6	30	0	3			25	6	12	7		0	0						7	12	11	5.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No of days (sunrise to sunset): Clear 0-3	No of days: Partly cloudy 4-7	No of days: Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm	Mm.	Mm			Mm	Mm.	M.p.s		M.p.s							%
COLORADO																																
COLORADO SPRINGS	1873	813.8	1015.2	22.5	9.4	16.0	-0.4	28.3	18+	2.8	30	0	0	5.6	58	105	78	35	12	9	0	0	1.1	13	14.3	24	19+	12	7	11	5.3	
DENVER	1610	837.5	1013.3	24.4	8.9	16.7	-0.5	30.0	27	2.2	27	0	0	6.7	58	53	24	31	8	6	0	0	1.1	17	13.0	N	10	13	3	14	5.3	64
GRAND JUNCTION	1476	852.7	1013.0	27.6	12.4	20.1	0.2	34.4	5	6.1	30	3	0	4.4	42	18	-5	15	6	4	0	0	1.8	13	19.2	NW	19	10	14	6	4.8	69
PUEBLO	1428	856.4	1013.4	27.6	10.7	19.2	-0.1	34.4	18+	1.1	30	5	0	7.2	54	28	7	31	6	1	0	0	0.7	10	19.7	SW	19	12	8	10	5.1	80
CONNECTICUT																																
BRIDGEPORT	2	1017.6	1018.3	24.4	14.8	19.6	1.0	29.4	17+	6.1	23	0	0	15.0	76	51	-49	23	9	1	0	0	1.1	34	14.3	34	14	7	9	14	6.3	
HARTFORD	52	1011.5	1017.9	24.8	11.1	17.9	0.6	32.2	17	3.3	23	1	0	12.8	76	47	-46	14	11	1	0	0	0.8	33	10.7	NW	30	7	8	15	6.5	51
DELAWARE																																
WILMINGTON	23	1015.9	1019.0	26.2	15.6	20.9	1.1	32.8	17+	7.8	23	2	0	15.6	74	42	-59	15	8	2	0	0	0.9	35	9.4	30	30+	7	6	17	6.9	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1007.1	1018.7	26.4	13.6	20.0		33.3	17+	5.0	23	4	0	15.6	79	36		16	10	0	0	0	0.4	32	11.2	30	30	7	6	17	6.9	
WASHINGTON NATIONAL	3	1016.3	1018.5	26.5	16.8	21.7	0.7	32.8	17+	10.0	30	2	0	16.1	72	32	-65	10	10	1	0	0	0.3	1	13.9	NW	14	7	8	15	6.8	41
FLORIDA																																
APALACHICOLA U	4			31.2	23.5	27.4	1.3	33.9	19	17.8	30	9	0			15	-201	5	6	2	0	0			12.1	NW	30	12	16	2	4.1	75
DAYTONA BEACH	9	1016.6	1017.9	30.8	21.0	25.9	-0.3	33.3	19+	16.7	22	7	0	20.6	74	11	-167	7	4	3	0	0	1.7	3	11.2	25	30	9	18	3	4.4	
FORT MYERS	5	1016.3	1016.5	33.2	23.0	28.1	0.7	35.0	25	21.1	23	27	0	21.7	75	59	-157	23	7	9	0	0	1.9	7	9.4	3	7+	8	21	1	4.3	
JACKSONVILLE	8	1017.3	1018.2	31.6	19.6	25.6	-0.7	35.6	16+	16.1	23+	12	0	20.0	76	66	-126	21	8	3	0	0	0.9	7	10.7	NW	30	12	15	3	4.3	76
KEY WEST	1	1014.9	1015.4	31.1	25.5	28.3	0.3	32.2	7+	23.3	24+	2	0	23.3	74	221	50	48	19	14	0	0	3.2	11	13.9	SE	11	9	19	2	5.3	77
LAKELAND U	65			31.8	22.2	27.1	0.3	35.6	6	19.4	23	14	0			21	-146	16	6		0	0						11	19	0	4.0	69
MIAMI	2	1015.6	1016.0	30.1	23.7	26.9	-0.5	31.7	6	22.2	30	0	0	22.8	80	129	-112	45	13	6	0	0	2.5	7	9.4	12	24	6	16	8	5.0	
ORLANDO	33	1013.2	1017.5	32.4	22.9	27.7	1.0	34.4	16	18.9	22	20	0	21.1	72	11	-173	7	4	1	0	0	1.9	5	8.9	27	30	12	15	3	4.2	
PENSACOLA	34	1013.2	1017.3	32.6	23.2	27.9	2.2	35.6	9	15.0	30	20	0	21.1	69	42	-153	25	8	4	0	0	0.9	12	8.9	36	30+	10	16	4	4.7	
TALLAHASSEE	17	1015.2	1017.6	33.4	19.1	26.3	0.7	36.1	18+	15.6	30	23	0	20.6	77	3	-137	2	2	4	0	0	1.0	6	8.0	18	25	15	12	3	4.0	
TAMPA	6	1016.9	1017.2	33.0	21.8	27.4	0.4	35.6	19	17.8	23	24	0	21.7	75	33	-142	12	6	3	0	0	1.7	7	9.4	28	30	6	21	3	4.8	71
WEST PALM BEACH	5	1015.6	1016.2	31.8	24.3	28.1	0.3	33.9	1	20.0	30	17	0	21.7	69	94	-151	51	9	3	0	0	2.6	7	13.0	12	12	4	17	9	5.9	
GEORGIA																																
ATHENS	244	989.8	1018.4	30.9	17.5	24.2	1.2	36.1	16	10.0	30	14	0	17.2	70	18	-59	11	4	3	0	0	0.4	36	7.2	29	29+	13	12	5	4.6	
ATLANTA	308	982.1	1018.2	29.1	18.2	23.7	0.8	33.3	15	9.4	30	3	0	17.2	72	47	-36	17	8	5	0	0	0.5	3	11.2	NW	30	7	18	5	5.4	64
AUGUSTA	41	1012.5	1017.9	31.2	17.2	24.2	0.2	36.1	15	12.2	12	13	0	17.8	75	66	-10	24	6	5	0	0	0.7	3	12.5	9	17	16	9	5	4.0	
COLUMBUS	117	1004.1		31.8	19.2	25.5	1.1	36.1	15	10.6	30	18	0	18.3	70	63	-8	38	8	3	0	0	1.0	4	13.0	30	30	16	9	5	4.1	
MACON	108	1005.1	1018.0	32.8	17.4	25.2	0.5	37.2	16+	10.0	30	21	0	18.3	72	45	-25	20	4	1	0	0	0.6	3	13.4	NW	30	13	13	4	4.2	73
ROME	194			30.0	17.4	23.7	1.3	34.4	15+	8.3	30	6	0			87	3	25	11		0	0										
SAVANNAH	14	1016.6	1018.2	30.9	19.4	25.2	0.3	36.1	17+	15.6	22+	11	0	20.0	77	9	-124	7	3	0	0	0	0.9	7	8.5	W	30+	11	13	6	4.5	82
HAWAII																																
HILO	8	1013.5	1014.8	29.1	20.2	24.7	0.5	32.2	15	17.8	6	1	0	20.6	82	132	-84	29	23	1	0	0	0.6	19	8.9	E	13	0	10	20	7.9	31
HONOLULU	2	1013.9	1014.3	30.8	23.1	26.9	0.7	31.7	24+	20.6	13+	0	0	18.9	64	23	-2	20	7	0	0	0	4.6	6	11.6	NE	19+	8	16	6	5.3	80
KAHULUI	15	1011.5	1013.9	31.4	20.3	25.9	0.1	33.9	27	16.1	7	8	0	19.4	69	1	-6	T	2	0	0	0	4.6	5	13.0	E	19	12	16	2	4.2	81
LIHUE	31	1010.5	1015.6	28.8	23.2	26.0	0.4	31.1	14	19.4	13+	0	0	21.1	76	50	-3	29	10	0	0	0	3.4	5	12.5	SE	4+	5	17	8	6.0	63
IDAHO																																
BOISE	865	915.7	1015.2	21.9	7.8	14.9	-2.2	31.1	4	-2.2	25	0	1	2.2	47	28	18	12	6	0	T	0	0.1	6	11.6	S	21	16	5	9	4.1	79
LEWISTON	431			22.8	8.7	15.8	-1.7	32.8	4	2.2	29	2	0			21	-2	15	6		0	0			17.9Y		19	12	10	8	4.7	
POCATELLO	1358	863.5	1015.2	20.9	5.2	13.1	-2.6	30.0	4	-2.2	29	0	4	0.6	45	29	13	8	9	5	0	0	3.2	23	18.8	SW	18	14	9	7	4.6	66
ILLINOIS																																
CAIRO U	96			27.1	19.0	23.1	0.6	32.8	20+	6.1	30	3	0			130	53	46	11		0	0			12.5	N	29	8	8	14	6.4	44
CHICAGO O HARE	201	992.9	1017.3	22.1	12.9	17.5	-0.1	28.3	17	2.2	30	0	0	13.9	80	207	137	70	18	10	0	0	0.6	19	17.4	32	17	6	9	15	6.8	
CHICAGO MIDWAY	185	995.3	1017.8	22.8	13.6	18.2	-0.7	30.6	17	3.9	30	0	0	13.9	77	146	77	93	17	6	0	0	0.7	17	14.3	NW	17	7	6	17	6.8	60
MOLINE	177	995.3	1016.7	24.8	13.7	19.3	0.8	32.2	18+	2.2	30	2	0	14.4	75	84	1	25	10	7	0	0	1.2	18	11.6	NW	29+	8	11	11	5.9	56
PEORIA	199	993.6	1017.4	23.9	14.1	19.0	-0.1	31.1	20+	1.7	30	0	0	14.4	77	132	55	67	13	9	0	0	1.1	16	12.5	NE	19	4	9	17	7.0	41
ROCKFORD	221	992.2	1017.1	22.3	12.4	17.4	-0.3	29.4	20+	2.2	30	0	0	13.9	81	165	76	69	14	10	0	0	0.7	18	17.4	30	28	6	11	13	6.3	
SPRINGFIELD	179	995.3	1017.2	25.7	15.1	20.4	0.6	33.9	18	2.8	30	5	0	16.1	79	100	26	21	15	9	0	0	1.2	18	18.8	S	28	7	8	15	6.6	53
INDIANA																																
EVANSVILLE	116	1004.1	1017.9	26.6	16.1	21.4	0.2	33.3	19	3.3	30	2	0	17.2	80	32	-41	8	10	1	0	0	0.4	21	7.6	NW	29	5	8	17	7.1	50

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
INDIANA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
FORT WAYNE	241	988.5	1018.3	23.4	13.1	18.3	0.1	30.6	17	4.4	30	0	0	14.4	81	171	104	58	15	7	0	0	0.7	22	12.1	SW	13	2	7	21	7.8	60
INDIANAPOLIS	241	989.5	1018.3	25.1	15.2	20.2	1.0	32.8	13	3.9	30	1	0	15.6	77	144	61	32	14	8	0	0	0.4	17	11.6	NW	30	3	9	18	7.5	44
SOUTH BEND	236	989.8	1017.5	21.8	12.4	17.2	- 0.5	28.9	17	5.0	22	0	0	14.4	85	195	117	38	15	8	0	0	0.9	19	15.6	31	17	2	9	19	7.8	
IOWA																																
BURLINGTON	211			24.7	13.9	19.3	0.4	33.3	18	1.1	30	3	0	14.4	73	55	- 26	16	13	8	0	0	0.9	18	15.6	29	28	5	10	15	6.7	
DES MOINES	286	982.4	1016.7	23.7	12.5	18.1	- 0.4	32.2	19	- 0.6	30	1	1	13.9	77	138	65	75	11	9	0	0	1.4	17	14.3	NW	25	6	9	15	6.3	53
DUBUQUE	322	978.0		21.9	11.5	16.7	0.2	28.9	18	- 1.1	30	0	1			142	47	52	11		0	0						7	9	14	6.7	
SIOUX CITY	334	976.0	1015.6	24.1	11.6	17.8	- 0.8	33.3	19	0.6	30	3	0	12.8	74	67	- 3	33	10	8	0	0	1.1	17	13.9	S	19	9	8	13	5.9	57
WATERLOO	265	984.8	1016.5	22.2	10.2	16.2	- 0.9	30.6	18+	- 1.7	30	0	1	12.8	81	123	27	61	11	7	0	0	1.3	17	12.5	17	6	9	6	15	6.4	
KANSAS																																
CONCORDIA	448	962.4	1014.7	26.1	14.1	20.1	- 0.8	35.0	18	4.4	30	7	0	15.0	75	26	- 43	13	7	3	0	0	2.3	17	17.0	S	5	10	8	12	5.5	66
DODGE CITY	787	925.2	1014.5	26.1	13.5	19.8	- 1.5	34.4	18	4.4	30	7	0	11.1	62	63	24	36	4	5	0	0	1.6	17	13.9	W	20	10	8	12	5.6	65
GOODLAND	1114	888.9	1014.2	25.3	10.0	17.7	- 0.9	35.0	18	3.3	29+	5	0	8.3	64	19	- 13	15	3	2	0	0	1.6	18	14.8	32	20	10	13	7	4.7	
TOPEKA	267	984.4	1016.1	25.9	14.7	20.3	- 0.5	34.4	18	- 1.1	30	5	1	16.7	81	124	49	71	6	5	0	0	1.6	17	11.6	S	6	7	6	17	6.8	52
WICHITA	403	967.8	1014.7	27.3	16.1	21.7	- 0.2	36.7	18	2.2	30	10	0	15.6	72	33	- 49	14	8	4	0	0	2.1	17	14.8	N	29	8	7	15	6.2	50
KENTUCKY																																
COVINGTON	265	987.1	1018.4	25.5	15.2	20.4	0.8	31.7	13	3.9	30	0	0	16.1	79	151	80	47	13	5	0	0	0.6	16	11.2	16	1	3	12	15	7.4	
LEXINGTON	294	983.7	1018.7	26.4	15.6	21.0	0.3	31.7	19	5.0	30	0	0	16.1	79	109	38	49	11	5	0	0	0.6	17	8.9	30	23	5	8	17	7.0	
LOUISVILLE	145	1000.3	1017.8	27.3	17.4	22.4	1.6	32.8	13	6.1	30	2	0	16.7	72	108	41	29	11	6	0	0	0.3	16	10.7	SW	11	5	9	16	6.9	48
LOUISIANA																																
ALEXANDRIA	28	1012.2	1016.6	32.6	20.3	26.4	1.4	36.1	15+	10.0	30	21	0	21.1	79	121	41	38	14	10	0	0	0.7	13	10.3	7	19+	12	8	10	5.3	
BATON ROUGE	20	1013.9	1016.6	33.2	22.1	27.6	2.1	35.6	19+	11.7	30	23	0	21.7	77	105	15	32	15	11	0	0	1.2	12	10.7	11	19	4	20	6	5.7	
LAKE CHARLES	3	1014.9	1015.9	30.9	21.9	26.4	0.5	34.4	9	12.2	30	16	0	22.2	85	148	46	79	15	19	0	0	1.1	11	13.9	1	9	5	13	12	6.3	
NEW ORLEANS	1	1015.6	1016.5	32.2	20.7	26.4	0.7	35.0	9	15.6	30	20	0	22.8	83	84	- 44	31	9	7	0	0	1.2	12	12.5	17	21+	8	18	4	5.2	
SHREVEPORT	77	1006.8	1016.0	32.6	20.9	26.8	0.8	35.6	19+	8.9	30	22	0	20.6	74	53	- 5	14	7	5	0	0	1.1	15	11.2	31	29	11	5	14	6.1	57
MAINE																																
CARIBOU	190	992.6		18.4	6.2	12.3	0.2	28.9	1	- 1.1	24	0	1			99	9	67	12		0	0						4	9	17	7.0	
PORTLAND	13	1015.2	1017.6	20.8	8.9	14.8	0.0	27.2	17	2.2	21	0	0	11.7	81	109	20	74	10	0	0	0	1.0	28	14.8	NE	3	10	8	12	5.9	55
MARYLAND																																
BALTIMORE	45	1012.9	1018.5	26.1	15.9	21.0	0.9	33.3	17+	9.4	23	3	0	15.0	72	29	- 55	10	9	2	0	0	0.6	32	13.9	NW	30	[illegible]	7	15	6.7	49
MASSACHUSETTS																																
BLUE HILL OBS R	192			21.7	11.7	16.7	- 0.2	27.8	17	6.1	23	0	0			170	70	97	10		0	0			25.0	WNW	14					53
BOSTON	5	1016.3	1017.4	23.2	14.3	18.7	0.2	31.1	17	10.0	21	0	0	12.8	72	151	63	80	11	5	0	0	0.9	31	15.2	N	3	8	10	12	6.3	54
WORCESTER	301	981.7	1018.4	20.5	10.3	15.4	- 0.6	27.2	17	5.0	23+	0	0	10.6	75	126	27	49	10	1	0	0	1.3	30	13.0	30	30	9	8	13	6.5	
MICHIGAN																																
ALPENA	210	992.2	1017.7	19.4	6.2	12.8	- 0.5	25.0	6	- 1.1	28	0	3	8.9	77	66	- 26	40	10	5	0	0	0.8	26	10.3	SE	23	7	7	16	6.7	56
DETROIT	189			22.3	13.7	18.0	- 0.4	30.6	17	6.7	28+	0	0	13.3	75	70	8	24	9	3	0		0.9	25	10.3	36	14					
DETROIT METRO	193	993.9	1017.8	22.5	11.9	17.2	- 0.2	30.6	1	3.9	30	0	0	12.8	78	86	27	29	11	5	0	0	0.6	24	11.2	SW	17+	3	12	15	6.9	53
FLINT	235	989.8	1017.7	20.7	11.7	16.2	- 0.5	26.7	17	3.9	22	0	0	12.2	76	115	41	30	13	4	0	0	1.1	23	11.2	23	17	5	7	18	7.0	
GRAND RAPIDS	239	988.8	1017.9	21.9	11.4	16.7	- 0.1	28.3	17+	3.3	22	0	0	12.2	78	101	25	43	12	6	0	0	0.8	19	15.6	SW	17	5	6	19	7.0	48
HOUGHTON LAKE	350	976.0	1018.1	19.5	8.1	13.8	- 0.3	24.4	17	0.6	22	0	0	10.6	79	68	- 7	31	10	4	0	0	0.8	24	9.4	21	16	7	5	18	6.7	
LANSING	256	986.5	1018.0	21.0	9.9	15.5	- 1.2	28.9	17	1.1	22	0	0	12.2	81	67	1	22	12	4	0	0	1.1	21	14.8	S	17	4	12	14	6.8	52
MARQUETTE U	206			17.0	8.1	12.6	- 1.7	23.9	4	2.2	30	0	0			135	52	44	13		0	0			17.0	S	6	9	8	13	5.9	50
MUSKEGON	191	994.9	1018.0	21.6	12.0	16.8	- 0.4	28.9	17	4.4	22	0	0	12.2	77	83	6	28	13	7	0	0	1.0	20	13.4	19	28	7	6	17	6.9	
SAULT STE MARIE	220	989.8	1016.4	17.2	6.3	11.8	- 1.4	21.7	15	0.6	27	0	0	9.4	85	83	- 14	18	13	5	0	0	0.7	32	15.2	NW	21	8	7	15	6.3	55
MINNESOTA																																
DULUTH	435	964.1	1015.8	15.8	4.2	10.0	- 2.3	22.8	16	- 3.3	30	0	6	6.7	81	135	62	96	12	4	T	T	0.9	22	17.0	S	20	6	8	16	6.6	43
INTERNATIONAL FALLS	359	971.2	1014.3	17.3	3.9	10.6	- 1.0	25.6	20	- 4.4	22	0	4	4.4	67	43	- 30	12	13	4	T	0	1.9	23	11.6	27	21	6	7	17	7.2	
MINNEAPOLIS	254	985.8	1016.1	20.1	8.7	14.4	- 1.4	28.3	19+	- 2.2	30	0	1	9.4	73	50	- 12	15	11	7	T	0	0.7	21	17.0	SW	6	8	5	17	6.5	51
ROCHESTER	395	969.2	1016.6	20.6	8.2	14.4	- 1.6	28.9	16	- 3.3	30	0	2	10.6	79	179	101	57	10	6	0	0	1.1	19	13.9	22	16	7	5	18	6.6	
ST CLOUD	313	978.7	1016.2	19.6	6.1	12.8	- 2.1	27.8	16	- 3.9	30	0	3			42	- 20	16	5		0	0						8	7	15	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

SEPTEMBER 1972

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
MISSISSIPPI	M	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
JACKSON	94	1005.4	1017.1	33.5	21.5	27.5	2.8	36.7	15	9.4	30	24	0	21.1	75	128	64	35	12	8	0	0	0.8	14	11.6	NW	30	7	14	9	5.1	68
MERIDIAN	88	1006.4	1017.4	34.0	19.8	26.9	2.6	37.8	8	8.9	30	27	0	18.9	68	67	- 18	20	9	7	0	0	0.7	7	8.0	36	30+	7	13	10	5.4	
MISSOURI																																
COLUMBIA REGIONAL	270	985.4	1017.4	26.7	16.1	21.4	1.2	34.4	19	4.4	30	7	0	16.7	78	129	30	45	11	8	0	0	1.2	16	14.8	NW	14	8	6	16	6.8	50
KANSAS CITY	226	989.2	1015.9	26.3	16.9	21.6	- 0.2	35.0	18	3.3	30	7	0	16.1	72	68	- 14	30	6	6	0	0	1.7	17	18.8	NW	13	9	5	16	6.3	59
ST JOSEPH	247			26.4	15.1	20.8	0.4	33.9	18	0.0	30	6	1	16.1	82	111	24		6				1.2	16	9.4	18	6	7	9	14	6.4	
ST LOUIS	163	997.3	1017.3	27.1	16.3	21.7	0.9	34.4	19	4.4	30	7	0	17.8	82	158	88	64	12	5	0	0	1.0	17	11.6	NW	14+	6	8	16	6.7	53
SPRINGFIELD	386	972.2	1017.0	26.7	16.4	21.6	0.2	33.9	18	2.8	30	4	0	16.7	79	163	65	44	11	8	0	0	1.9	16	17.0	NW	7	9	6	15	6.6	56
MONTANA																																
BILLINGS	1087	890.6	1014.1	19.9	5.3	12.7	- 3.1	28.9	16	- 3.9	26	0	6	2.8	57	33	3	12	11	3	119	102	1.7	27	19.2	NW	19	7	11	12	6.0	66
GLASGOW	696	931.6	1013.4	19.2	4.7	12.0	- 1.7	29.4	9+	- 5.0	28	0	5	2.2	57	18	- 7	5	11	1	5	T	0.5	34	19.7	29	20	4	15	11	6.7	
GREAT FALLS	1116	887.6	1014.4	19.2	5.2	12.2	- 1.9	28.3	18+	- 2.2	27+	0	7	0.0	50	22	- 9	10	5	2	13	T	3.2	25	14.3	SW	30+	10	6	14	6.0	70
HAVRE	788	921.8	1013.7	19.3	3.9	11.6	- 1.5	30.6	5	- 3.9	28	0	8	1.1	55	30	4	15	8	0	56	T	1.2	28	15.2	W	5	6	11	13	6.3	67
HELENA	1167	880.5	1015.5	18.3	2.6	10.5	- 2.8	28.9	8	- 5.0	26	0	8	- 1.7	46	2	- 22	1	4	1	8	0	2.6	28	15.6	SW	20	10	6	14	5.9	70
KALISPELL	904	910.9	1015.7	18.4	2.8	10.6	- 2.0	27.8	4	- 4.4	28	0	9	1.7	60	19	- 7	6	10	1	5	T	0.8	22	13.4	4	26	7	5	18	7.1	
MILES CITY	801	920.4	1013.1	21.2	5.8	13.5	- 2.6	33.3	9	- 4.4	26	1	6	2.8	53	17	- 7		4	0	180		1.5	30								
MISSOULA	972	904.5	1016.5	19.1	2.5	10.8	- 2.2	28.3	8+	- 5.6	29	0	9	3.3	66	42	16	29	9	0	5	T	1.1	30	12.1	W	21	9	9	12	5.8	67
NEBRASKA																																
GRAND ISLAND	561	949.5	1015.0	24.7	11.6	18.2	- 0.3	37.8	18	2.2	29	4	0	10.6	66	64	9	29	6	3	0	0	1.0	18	10.7	22	20+	10	8	12	5.3	
LINCOLN	360	973.2	1015.5	25.1	11.7	18.4	- 0.2	34.4	18	0.6	30	5	0	12.2	71	71	- 4	34	8	5	0	0	1.1	16	14.8	S	19	10	10	10	5.4	59
NORFOLK	471			23.9	10.4	17.2	- 1.2	34.4	18	0.6	30	4	0			44	- 13	18	7		0	0						11	6	13	5.6	
NORTH PLATTE	846	918.1	1015.2	24.4	7.9	16.2	- 1.4	36.7	18	- 1.7	30+	5	2	7.8	64	37	- 5	10	7	4	0	0	0.6	14	14.3	N	28	9	9	12	5.5	66
OMAHA	298	980.4	1015.4	25.1	12.0	18.6	- 0.8	33.9	19	- 0.6	30	4	1	14.4	80	125	58	80	12	8	0	0	1.1	17	20.1	SW	12	8	7	15	5.8	63
SCOTTSBLUFF	1206	879.4	1014.0	24.8	7.5	16.2	- 0.7	32.8	18	- 2.8	26	2	3	4.4	53	42	11	19	9	6	0	0	0.5	13	13.0	35	3	11	8	11	5.2	
VALENTINE	789			24.4	8.2	16.3	- 0.2	36.7	18	- 4.4	26	3	3			12	- 20	5	6		0	0			17.9	SW	22	11	11	8	4.9	71
NEVADA																																
ELKO	1539	845.6	1015.6	21.5	3.3	12.4	- 2.0	28.3	17+	- 6.1	25	0	7	0.6	51	26	17	8	9	5	0	0	0.7	25	10.3	24	5	12	11	7	4.8	
ELY	1906	810.0	1014.3	22.1	2.4	12.3	- 1.9	26.7	15	- 8.3	25	0	10	- 1.1	47	46	32	23	7	5	0	0	2.7	21	17.9	S	18+	9	15	6	4.8	80
LAS VEGAS	659	936.7	1012.0	32.8	18.3	25.6	- 1.1	37.2	17+	12.8	25	17	0	5.0	30	16	7	8	3	4	0	0	1.7	21	13.4	S	11+	17	9	4	3.6	85
RENO	1342	866.2	1014.8	24.8	2.4	13.7	- 1.2	31.1	3	- 5.0	24	0	11	0.6	47	8	2	5	5	4	0	0	0.8	27	14.3	W	21	16	6	8	3.9	89
WINNEMUCCA	1311	869.3	1015.2	24.7	2.9	13.8	- 0.9	32.8	3	- 7.8	25	2	9	0.0	45	17	8	5	6	3	0	0	0.4	24	12.5	SW	11	13	9	8	4.5	74
NEW HAMPSHIRE																																
CONCORD	104	1005.4	1018.1	21.6	6.7	14.2	- 1.0	28.9	17	0.0	29	0	1	11.1	85	65	- 30	18	10	0	0	0	0.7	31	11.2	NW	10	7	8	15	6.5	49
MT WASHINGTON OBS	1909			9.4	1.9	5.7	0.7	15.6	1	- 7.2	23	0	11			186	9	49	15	0	0	T			43.8Y	NW	10	5	6	19	7.6	35
NEW JERSEY																																
ATLANTIC CITY	20	1015.6	1018.1	25.1	15.1	20.1	0.6	32.8	17	7.2	23	2	0	15.6	76	93	9	38	13	2	0	0	0.8	33	9.4	30	30+	6	8	16	6.9	43
ATLANTIC CITY U	3			22.8	16.6	19.7	- 0.5	30.0	14	11.1	23	0	0			110	24	47	12						18.3	NNE	20					
NEWARK	2	1016.9	1017.9	25.6	16.4	21.0	1.4	33.9	17	10.0	23	1	0	14.4	67	26	- 69	8	7	1	0	0	1.2	31	10.3	1	19	7	9	14	6.5	
TRENTON U	17			24.8	15.5	20.2	0.7	31.7	17	8.9	23	0	0			42	- 47	18	10		0	0			14.3	N	14	6	9	15	6.5	49
NEW MEXICO																																
ALBUQUERQUE	1619	840.2	1014.1	27.0	13.1	20.1	- 1.1	31.1	16	7.2	30	0	0	7.8	51	25	1	19	7	8	0	0	1.1	18	15.2	S	1	9	10	11	5.3	78
CLAYTON	1515			24.4	11.2	17.8	- 1.1	31.1	16	3.9	30	0	0			77	36	33	6		0	0						12	4	14	5.2	
ROSWELL	1101			29.0	14.1	21.6	0.6	35.0	17	5.0	22	7	0			83	36	24	14		0	0			12.1	NW	10					65
NEW YORK																																
ALBANY	84	1007.8	1018.5	22.9	8.9	15.9	- 0.5	30.0	17	1.7	23	0	0	10.6	72	51	- 40	19	12	1	0	0	0.7	24	11.6	W	30	7	6	17	6.7	49
BINGHAMTON	485	960.4	1019.0	20.7	10.3	15.5	0.2	28.9	17	3.3	23	0	0	12.2	83	52	- 23	17	9	2	0	0	1.2	24	11.6	NW	30	2	11	17	7.4	46
BUFFALO	215	992.6	1018.0	22.1	12.2	17.1	0.8	28.9	1	3.3	23	0	0	12.2	75	78	- 2	32	10	2	0	0	1.9	24	15.2	SW	17	6	5	19	6.9	55
NEW YORK U	40	1014.9	1018.2	25.5	16.2	20.8	0.6	33.3	17	10.0	23	1	0	13.9	68	34	- 65	8	8	1	0	0	0.8	35	11.6	NE	19					43
NEW YORK KENNEDY	4	1017.6	1018.3	24.9	16.6	20.7	0.8	31.7	14	9.4	23	0	0	15.0	72	38	- 68	13	8	2	0	0	0.7	34	11.6	36	3	7	11	12	6.0	
NEW YORK LA GUARDIA	3	1016.9	1018.1	24.0	15.7	19.9	- 0.6	32.2	17	9.4	23	1	0	13.9	70	42	- 58	18	9	2	0	0	1.0	34	13.9	N	14	5	12	13	6.5	
ROCHESTER	167	998.3	1018.3	24.2	11.7	17.9	1.1	31.7	1	3.3	30	0	0	13.3	78	98	33	47	12	2	0	0	1.4	24	11.6	SW	17	7	9	14	6.4	58
SYRACUSE	125	1003.1	1017.9	23.2	11.8	17.5	0.6	29.4	17	2.2	28	0	0	12.8	75	105	33	37	10	0	0	0	0.5	25	14.3	W	30	6	11	13	6.4	53

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NORTH CAROLINA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
ASHEVILLE	652	944.5	1019.9	26.7	14.4	20.6	1.7	31.1	14	6.7	30	0	0	16.7	85	134	42	50	9	6	0	0	0.6	35	9.8	35	30	6	11	13	6.3	74
CAPE HATTERAS R	2	1017.3	1017.8	26.6	19.8	23.2	-0.2	30.0	27	13.3	12	0	0	20.0	83	70	-80	34	12	2	0	0	1.3	2	11.2	4	20	6	7	17	7.0	52
CHARLOTTE	224	991.5	1018.6	28.8	16.3	22.6	-0.1	33.9	14	10.6	11	8	0	15.6	69	96	7	34	8	5	0	0	0.7	1	13.0	SW	17	12	8	10	5.3	78
GREENSBORO	273	987.8	1019.2	27.7	15.3	21.6	-0.4	33.3	14	6.7	30	5	0	16.1	75	94	2	32	6	6	0	0	0.3	35	10.7	SW	17	10	8	12	5.8	58
RALEIGH	132	1003.1	1018.7	27.1	15.6	21.3	-0.4	31.1	19+	8.9	11	0	0	16.1	78	147	50	70	10	5	0	0	0.7	35	15.6	23	29	10	8	12	5.5	61
WILMINGTON	9	1016.6	1018.0	29.3	18.1	23.7	-0.3	33.3	19	12.8	11	4	0	19.4	83	171	11	68	11	6	0	0	0.9	36	12.1	SW	30	10	11	9	5.5	61
NORTH DAKOTA																																
BISMARCK	502	954.3	1013.8	21.1	6.7	13.9	-0.9	34.4	19+	1.7	27+	2	0	3.9	55	7	-23	5	3	0	T	T	0.7	30	17.9	W	20	10	6	14	5.8	61
FARGO	273	981.7	1014.6	20.7	6.9	13.8	-1.1	32.8	19	0.0	29+	1	2	6.7	66	31	-7	23	8	2	T	0	0.8	22	17.9	W	21	8	8	14	6.3	46
WILLISTON	579	945.1	1013.8	18.3	4.6	11.4	-2.6	32.8	9	-3.9	29	1	5	3.9	63	34	5	16	8	2	76	51	1.4	26	18.3	SW	20	2	10	18	7.4	46
OHIO																																
AKRON	368	974.6	1018.9	23.0	13.1	18.1	0.3	29.4	17	5.6	30	0	0	13.3	75	164	98	42	13	4	0	0	0.8	21	10.3	32	30	9	4	17	6.7	
CINCINNATI ABBE OB	232			25.6	15.3	20.4	-0.1	32.2	13	6.7	30	1	0			106	38	37	12		0	0			6.7	NW	29+					43
CLEVELAND	237	989.8	1018.9	22.4	12.9	17.7	-0.2	28.9	17	6.7	30+	0	0	13.3	77	125	51	35	15	4	0	0	0.9	20	12.1	SW	17	8	5	17	6.6	49
COLUMBUS	247	989.2	1018.9	23.1	13.1	18.1	-0.7	30.0	17+	3.9	30	0	0	13.3	77	130	63	34	15	7	0	0	0.6	14	13.0	NW	18	4	12	14	6.8	42
DAYTON	305	982.7	1018.6	24.6	12.9	18.8	-0.6	32.2	13	2.8	30	1	0	14.4	79	118	52	26	13	4	0	0	0.8	17	11.2	N	18	4	8	18	7.3	54
MANSFIELD	395			23.5	13.9	18.7	-0.4	30.6	17	6.1	30	0	0	14.4	80	174	98	61	14	3	0	0	1.3	21	11.2	33	29	6	7	17	7.0	
TOLEDO	204	993.2	1018.2	22.2	11.3	16.8	-0.7	29.4	17+	2.8	30	0	0	12.8	78	206	152	101	14	5	0	0	0.5	22	12.5	SE	17	3	10	17	7.4	48
YOUNGSTOWN	359	976.3	1018.9	21.6	10.6	16.1	-0.9	27.8	17+	2.8	23	0	0	13.9	86	111	38	24	15	4	0	0	0.9	20	11.2	34	30	6	8	16	6.8	
OKLAHOMA																																
OKLAHOMA CITY	392	969.9	1015.3	29.8	18.8	24.3	1.1	37.2	17	2.8	30	14	0	16.7	68	52	-25	28	6	3	0	0	2.1	16	14.8	NW	29	6	9	15	6.5	59
TULSA	198	991.5	1015.5	29.1	19.2	24.2	0.9	35.6	18+	5.6	30	11	0	18.3	74	75	-27	27	9	6	0	0	1.6	17	11.6	NE	21	7	7	16	6.6	46
OREGON																																
ASTORIA	2	1016.3	1017.0	19.7	8.8	14.2	-0.2	35.0	2	0.6	27	2	0	11.1	85	120	40	41	14	3	T	0	1.1	21	12.5	19	20	9	7	14	6.2	
BURNS U	1265	874.0	1016.7	20.3	2.1	11.2	-3.7	31.1	3	-8.3	25	0	10	0.0	52	12	-1	9	5		T	T	1.4	28				14	7	9	4.3	
EUGENE	109	1003.1	1016.6	22.9	7.1	15.0	-1.4	35.6	2	0.0	27	3	1	8.3	71	69	37	29	9	0	0	0	0.6	25	10.3	20	22+	8	11	11	6.0	
MEACHAM	1234	877.4	1016.6	16.0	4.3	10.2	-3.0	27.2	4	-3.3	27	0	5			33	-4	11	8		51	0			8.9	27	16	13	8	9	4.9	
MEDFORD	396	968.5	1016.1	26.1	5.9	16.0	-1.9	37.8	2+	0.0	28+	6	2	6.1	61	13	-2	5	6	1	0	0	0.7	32	8.9	31	18	17	7	6	3.6	
PENDLETON	452	962.4	1015.7	23.8	8.5	16.2	-1.7	34.4	4	1.7	26	3	0	2.2	42	4	-12	2	4	0	0	0	1.8	25	14.3	29	21+	14	7	9	4.6	
PORTLAND	6	1015.6	1016.7	22.7	9.7	16.2	-0.6	36.1	2	3.9	26	3	0	8.9	69	78	36	24	10	2	0	0	0.8	27	12.5	S	21	8	7	15	6.0	55
SALEM	60	1009.1	1016.4	22.2	6.2	14.2	-2.7	36.7	2	-3.3	27	3	3	6.7	68	53	18	25	10	0	0	0	0.4	25	10.3	28	22+	10	8	12	5.5	
SEXTON SUMMIT R	1169	884.9	1015.6	19.4	8.1	13.8	-1.6	31.1	2+	0.0	27	0	1			25	-7	7	8		T	0			14.8	23	21	17	7	6	3.3	
PACIFIC AREA																																
GUAM TAGUAC R	110	995.9	1008.4	30.0	22.7	26.3	0.1	31.7	25	20.6	4+	0	0	23.9	89	409	69	144	26	2	0	0	1.1	7	8.5	SE	11	0	9	21	8.5	32
JOHNSTON	2	1011.2	1011.5	29.1	25.5	27.3	-0.2	30.0	26	23.3	28+	0	0	23.3	78	35	-25	13	14	0	0	0	7.2	9	15.2	NE	27	2	14	14	6.8	76
KOROR R	29	1005.8	1009.4	30.7	24.6	27.7	0.4	32.8	27	21.7	28	4	0	23.9	81	378	14	152	20	6	0	0	3.3	26	10.3	SW	5	0	0	30	9.6	58
KWAJALEIN	2	1007.5	1008.1	30.4	25.1	27.8	0.1	32.2	18+	23.3	28+	2	0	24.4	82	537	279	119	23	0	0	0	0.4	2	11.2	23	28+	0	2	28	9.5	
MAJURO	3	1008.5	1008.8	29.7	25.1	27.4	0.5	30.6	28+	22.8	15	0	0	24.4	82	482	175	139	23	1	0	0	0.7	35	9.8	E	2	1	2	27	9.3	51
PAGO PAGO	4	1010.8	1011.1	28.8	23.8	26.3		30.6	4	21.1	8	0	0	23.3	84	642		261	22	0	0	0	4.2	10	13.9	SE	8	0	7	23	8.8	36
PONAPE R	37	1003.1	1008.1	29.9	23.3	26.6	0.2	31.7	24+	21.7	17	0	0	23.9	87	750	348	178	25	0	0	0	2.0	23	10.3	NW	4	0	2	28	9.4	55
TRUK MOEN ISLAND	2	1008.5	1008.8	29.7	25.0	27.4	0.5	31.1	25+	23.9	30+	0	0	24.4	86	345	26	110	22	1	0	0	4.4	23	22.4	SW	16	0	0	30	9.9	54
WAKE	3	1010.2	1010.5	31.5	25.1	28.3	0.2	32.8	11	21.7	5	7	0	22.2	73	204	71	66	18	1	0	0	4.5	8	11.6	SW	2	7	11	12	6.5	62
YAP R	13			30.1	24.3	27.2	-0.2	31.7	25+	22.8	16	0	0			447	91	130	23	6	0	0			10.7	W	12	0	8	22	8.6	69
PENNSYLVANIA																																
ALLENTOWN	118	1004.7	1018.7	24.3	12.2	18.2	0.1	32.8	17	4.4	23	1	0	12.8	72	32	-63	12	12	1	0	0	0.8	33	13.0	34	9	9	7	14	6.5	
ERIE	223	991.5	1018.4	20.8	11.5	16.2	-0.2	27.8	1	3.3	28	0	0	12.8	81	136	46	41	12	2	0	0	1.2	21	9.8	1	14	5	9	16	6.8	
HARRISBURG	103	1005.8	1018.5	25.7	14.7	20.2	0.8	33.9	17	7.2	23	1	0	14.4	71	36	-36	15	8	2	0	0	0.6	33	14.3	W	30	6	8	16	6.7	53
PHILADELPHIA	2	1017.3	1018.3	25.3	16.0	20.7	1.4	32.2	17	8.9	23	1	0	14.4	72	28	-59	10	10	1	0	0	0.7	34	11.2	W	30	5	8	17	7.0	44
PITTSBURGH	347	975.6	1019.1	24.1	12.9	18.5	0.6	30.0	17	5.6	23+	0	0	13.3	74	138	73	55	14	6	0	0	0.7	26	10.7	34	30	8	7	15	6.5	45
SCRANTON	283	984.4	1018.6	22.4	10.8	16.6	-0.3	30.0	17	3.3	23	0	0	11.7	75	40	-36	14	9	0	0	0	0.4	29	11.6	NW	30	5	8	17	7.0	46
WILLIAMSPORT	160	1000.0	1019.0	22.8	11.7	17.3	-0.6	31.1	17	3.9	23	0	0	13.9	81	41	-42	14	11	1	0	0	0.5	32	14.8	29	30	4	8	18	7.5	
RHODE ISLAND																																
BLOCK ISLAND	34			21.1	14.7	17.9	0.2	24.4	27+	8.3	24+	0	0			166	85	72	11		0	0										
PROVIDENCE	16	1015.6	1017.9	23.6	13.2	18.4	1.1	29.4	27	6.1	23	0	0	13.9	76	186	96	79	10	1	0	0	0.7	34	14.8	2	3	9	7	14	6.3	53

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
SOUTH CAROLINA	M.	Mb	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M p.s							%
CHARLESTON	12	1016.3	1018.2	30.6	18.7	24.7	0.4	35.6	17	13.9	22+	9	0	19.4	78	46	-102	42	4	3	0	0	0.7	3	15.6Y	N	17	14	11	5	4.1	64
CHARLESTON U	3			29.3	21.3	25.3	0.3	33.9	17	17.2	21	5	0			54	-106	49	4		0	0			13.4	N	17					
COLUMBIA	65	1010.5	1018.5	31.0	16.9	24.0	- 0.1	35.6	17	9.4	12	12	0	18.9	78	64	- 46	29	9	5	0	0	0.5	2	13.0	22	17	16	8	6	4.0	72
GRNVLLE-SPRTNBRG	292	984.4	1018.6	29.3	16.3	22.8	0.2	33.9	16+	10.0	30	7	0	17.2	75	56	- 43	27	6	4	0	0	0.5	2	9.4	W	17+	10	10	10	5.0	59
SOUTH DAKOTA																																
ABERDEEN	395	967.5	1014.0	23.8	7.6	15.7	- 0.2	36.7	19	0.0	26	1	1	7.2	61	6	- 29	6	3	0	T	T	0.4	14	13.4	16	27	11	11	8	5.0	
HURON	390	967.5	1013.8	23.8	7.8	15.8	- 0.8	34.4	19	- 1.1	26	1	1	7.2	60	8	- 31	6	3	3	0	0	1.1	17	17.9	S	22	7	15	8	5.5	68
RAPID CITY	964	903.8	1013.7	24.4	5.9	15.2	- 1.2	33.3	9	- 5.6	26	2	5	2.8	50	6	- 18	2	6	1	0	0	0.8	28	20.6	NW	27	10	13	7	5.0	71
SIOUX FALLS	432	964.1	1015.4	22.5	8.1	15.3	- 1.3	33.3	19	- 0.6	30+	1	2	9.4	72	44	- 22	22	8	7	0	0	1.0	15	13.0	16	19	10	7	13	5.7	
TENNESSEE																																
BRISTOL	459	965.8	1019.2	27.3	14.6	21.0	0.4	30.6	25+	6.1	30	0	0	16.7	83	180	114	92	10	4	0	0	0.1	32	8.0	32	30	9	9	12	6.0	
CHATTANOOGA	203	993.6	1018.1	28.2	16.1	22.2	- 1.1	33.3	14	6.1	30	2	0	17.2	80	81	2	39	12	4	0	0	0.3	20	9.8	N	30	10	6	14	6.0	53
KNOXVILLE	299	984.8	1019.3	27.4	16.9	22.2	- 0.2	32.2	14	7.2	30	1	0	17.8	80	119	55	46	13	4	0	0	0.7	30	8.9	NW	30+	7	9	14	6.5	54
MEMPHIS	79	1007.1	1017.2	29.3	19.4	24.4	1.1	35.6	19	7.2	30	8	0	18.3	72	137	65	66	14	9	0	0	0.7	15	17.4	36	29	10	5	15	6.4	51
NASHVILLE	180	996.3	1017.7	29.7	18.9	24.3	1.6	33.3	19+	7.2	30	5	0	18.3	74	94	21	29	14	6	0	0	0.8	20	12.1	NW	29	9	9	12	6.0	55
OAK RIDGE R	276			27.9	16.6	22.3	0.6	33.3	14	6.7	30	1	0			109	25	39	12		0	0			12.1Y		30	6	8	16	7.0	
TEXAS																																
ABILENE	544	953.3	1015.0	29.6	18.6	24.1	- 0.3	34.4	17	5.0	30	12	0	17.8	70	80	27	40	7	4	0	0	2.1	18	13.0	N	29	4	13	13	6.5	85
AMARILLO	1098	892.7	1013.9	27.6	13.7	20.7	- 1.4	34.4	18+	3.9	30	5	0	10.6	60	18	- 30	6	8	5	0	0	2.6	20	15.2	N	29	9	11	10	5.5	72
AUSTIN	182	993.2	1014.8	33.4	22.6	28.0	1.8	36.1	17+	12.8	30	24	0	20.0	67	39	- 48	19	6	4	0	0	1.3	15	15.6	W	26	3	17	10	6.2	62
BROWNSVILLE	6	1013.5	1014.1	32.6	22.9	27.8	0.4	35.0	5	16.7	30	22	0	22.2	75	107	- 20	41	16	9	0	0	2.7	14	11.6	SE	19	9	14	7	5.3	78
CORPUS CHRISTI	12	1012.9	1014.5	33.4	23.9	28.7	1.6	36.1	7+	15.6	30	24	0	23.9	79	241	129	91	13	8	0	0	2.9	12	19.7	NW	21	5	17	8	5.7	69
DALLAS	147	998.3	1015.2	32.8	22.8	27.8	2.3	38.3	9	10.0	30	17	0	20.6	69	52	- 19	15	11	3	0	0	2.2	16	13.9	NW	29	6	12	12	6.6	54
DEL RIO	313	978.3	1013.7	32.6	21.3	26.9	0.3	36.1	7	15.0	30	21	0	19.4	67	23	- 43	8	5	2	0	0	3.0	12	13.4	1	21	7	13	10	5.7	
EL PASO	1194	883.5	1013.4	28.7	16.7	22.7	- 0.9	31.7	19+	8.9	22	0	0	14.4	63	41	12	22	11	6	0	0	0.4	13	15.2	NE	1	11	10	9	5.1	82
FORT WORTH	164	995.3	1015.4	32.4	21.7	27.1	1.3	37.8	8	10.0	30	17	0	20.6	74	61	- 3	22	11	7	0	0	1.8	16	16.5	22	23	6	8	16	7.0	
GALVESTON U	2			30.6	25.8	28.2	1.5	33.3	10	16.7	30	4	0			199	70	57	15		0	0			17.0	NW	29					63
HOUSTON INTERCON	29	1011.9	1015.6	31.9	21.0	26.4	0.7	35.0	10	10.6	30	19	0	22.2	85	158	55	41	17	14	0	0	1.2	10	9.4	23	26	3	12	15	6.8	55
LUBBOCK	992	905.2	1014.6	27.4	15.9	21.7	- 0.2	32.2	17	6.1	22	1	0	15.6	73	75	15	18	9	8	0	0	1.9	15	17.9	18	7+	11	14	5	4.8	
MIDLAND	869	917.4	1014.2	28.9	16.1	22.5	- 1.6	32.8	29+	6.7	30	3	0	15.6	70	27	- 19	16	7	7	0	0	2.4	15	13.9	7	14	10	10	10	5.6	
PORT ARTHUR	5	1015.2		30.8	21.9	26.3	0.7	33.3	18+	12.8	30	13	0	23.3	87	165	41	55	15	16	0	0	1.3	12	14.8	NE	9	4	16	10	6.3	56
SAN ANGELO	580	948.9	1014.2	31.7	19.6	25.7	- 0.1	36.1	17	9.4	30	19	0	18.3	71	135	67	90	7	6	0	0	1.9	18	10.7	2	29+	10	6	14	6.1	
SAN ANTONIO	240	987.5	1014.9	32.9	22.6	27.8	1.9	35.6	7	13.3	30	24	0	21.1	72	36	- 53	26	7	4	0	0	1.5	13	13.0	N	29+	4	15	11	6.1	56
VICTORIA	32	1010.5	1014.7	33.4	23.1	28.3	2.1	35.6	20+	13.3	30	26	0	22.2	76	152	44	61	12	10	0	0	1.7	12	21.5Y	N	29	3	13	14	6.9	
WACO	153	997.3	1015.1	32.8	22.0	27.4	1.3	37.2	10	10.0	30	22	0	20.6	72	65	- 5	20	8	5	0	0	2.1	15	13.0	35	29	6	12	12	6.2	
WICHITA FALLS	303	978.7	1014.5	32.2	17.9	25.1	- 0.2	37.8	17	5.0	30	19	0	18.3	71	56	- 3	22	9	7	0	0	2.3	17	14.3	36	29	6	11	13	6.5	
UTAH																																
MILFORD	1533	847.3		25.3	6.9	16.1	- 1.2	30.0	16	- 1.7	30	0	1			16	5	14	3		0	0			25.0	SW	11	13	10	7	4.4	73
SALT LAKE CITY	1286	872.0	1014.4	25.1	10.3	17.7	- 0.3	31.7	17	2.8	25	0	0	3.3	44	35	21	17	6	4	0	0	1.5	16	24.6	NW	5	13	10	7	4.3	79
WENDOVER	1291	871.3	1015.2	23.2	10.7	16.9	- 2.3	30.6	17	2.8	25	0	0	0.6	37	6	- 2	2	4		0	0						16	8	6	4.2	
VERMONT																																
BURLINGTON	101	1005.1	1017.4	21.0	8.7	14.8	0.2	29.4	1	0.0	28	0	1	11.1	79	43	- 41	23	11	1	0	0	1.1	21	15.2	S	30	9	7	14	6.1	54
VIRGINIA																																
LYNCHBURG	279			26.3	15.3	20.8	0.4	31.7	19+	7.2	11	0	0			79	- 7	32	6		0	0			8.5	NE	20	8	11	11	5.9	51
NORFOLK	7	1016.9	1018.0	26.2	18.1	22.2	- 0.4	32.2	14	10.6	11	1	0	18.9	84	176	68	77	10	4	0	0	1.4	36	20.1	N	21	7	10	13	6.7	57
RICHMOND	50	1012.2	1018.4	26.6	15.7	21.2	- 0.1	32.8	13	7.8	11	2	0	16.7	80	85	- 8	30	10	3	0	0	0.8	35	8.0	NW	30	7	8	15	6.7	51
ROANOKE	350	977.7	1019.1	25.8	13.7	19.8	- 0.8	31.1	18	5.0	30	0	0	15.0	77	122	39	45	11	4	0	0	0.8	34	8.9	32	26	10	9	11	5.6	
WALLOPS ISLAND	3			25.2	18.0	21.6		31.7	14+	11.7	23	0	0			122		59	9		0	0			21.0Y	NNE	21					
WASHINGTON																																
OLYMPIA	59	1009.1	1016.4	19.9	5.7	12.8	- 1.9	32.8	3	- 3.9	27	1	3	8.3	80	128	75	59	12	2	T	T	1.4	19	11.6	17	20	8	6	16	6.5	
QUILLAYUTE	55	1008.8	1016.4	17.3	5.4	11.4	- 2.6	33.3	2	- 2.2	27	1	2	8.3	83	176	57	80	15	0	T	0	0.3	18	14.8	SE	20	12	2	16	6.2	46
SEATTLE-TACOMA	122	1000.0	1016.2	17.3	8.7	13.0	- 2.5	28.3	3+	1.7	27	0	0	8.9	79	104	52	44	14	3	T	T	0.6	18	10.3	SW	21	8	7	15	6.1	47
SPOKANE	718	930.9	1014.3	19.8	6.2	13.0	- 3.1	31.1	4	- 2.2	27	0	3	2.2	53	22	3	12	5	0	0	0	2.5	22	13.4	SW	21	11	9	10	5.1	64
STAMPEDE PASS R	1206	879.4		11.2	4.1	7.7	- 3.4	25.0	3	- 3.3	27	0	8			201	89	41	15		678	127						11	1	18	6.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
																									Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
WASHINGTON	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WALLA WALLA U	289			22.8	10.2	16.6	- 2.3	33.3	4	3.9	27+	2	0			17	- 3	14	6		0	0			10.3	W	5	14	8	8	4.5	71
YAKIMA	321	977.0	1015.2	23.3	4.2	13.8	- 2.5	33.3	4	- 3.3	27+	2	5	3.3	55	2	- 7	1	3	0	0	0	1.9	28	13.0	20	22+	9	15	6	4.7	
WEST INDIES																																
SAN JUAN	4	1012.9	1015.5	31.5	25.0	28.3	1.3	32.8	8+	23.9	30+	6	0	21.7	68	93	- 78	47	14	14	0	0	3.1	10	15.2	NE	1	4	16	10	6.0	59
WEST VIRGINIA																																
BECKLEY	763	931.9	1019.0	22.8	12.4	17.7	0.0	26.7	26+	4.4	30	0	0	14.4	83	93	9	25	10	4	0	0	1.1	21	9.4	16	23	4	11	15	6.9	
CHARLESTON	286	984.8	1018.6	26.4	14.4	20.4	0.3	30.0	13	7.2	30	0	0	15.6	78	92	18	45	12	6	0	0	0.3	20	10.3	30	30	2	12	16	7.2	
ELKINS	594	949.5		23.7	11.2	17.5	0.5	28.3	17	3.3	30	0	0			68	- 10	23	13		0	0						1	11	18	7.6	
HUNTINGTON	252	988.8	1018.8	26.3	15.0	20.7	0.6	30.6	13	6.7	30	0	0	16.1	81	84	20	37	9	4	0	0	0.5	18	9.4	32	30	5	8	17	7.3	
PARKERSBURG U	187			25.5	15.3	20.4	0.3	30.0	1	5.6	30	0	0			126	57	39	11		0	0			12.1	N	14					55
WISCONSIN																																
GREEN BAY	208	991.5	1016.9	20.9	9.7	15.3	- 0.6	26.7	16	1.1	30	0	0	10.6	73	146	72	42	12	11	0	0	0.7	21	13.0	NW	26	4	10	16	7.1	47
LA CROSSE	198	992.6	1017.0	21.9	10.6	16.3	- 0.5	31.1	16	0.0	30	0	1	12.2	81	171	82		12	9	0		0.6	18								
MADISON	262	985.8	1017.0	21.4	9.0	15.2	- 0.9	28.3	20+	- 0.6	30	0	1	12.2	83	134	49	34	14	10	0	0	1.0	19	16.5	NE	19	4	10	16	7.0	48
MILWAUKEE	205	992.2	1017.2	20.7	11.8	16.3	0.6	26.1	16	2.8	30	0	0	13.3	83	192	123	59	15	8	0	0	0.9	22	20.6	N	18	5	11	14	6.8	54
WYOMING																																
CASPER	1627	837.5	1013.7	23.2	4.2	13.7	- 1.7	28.9	18+	- 6.1	26	0	5	0.6	51	9	- 13	8	9	4	5	T	3.1	25	17.9	36	3	10	10	10	5.2	
CHEYENNE	1867	813.4	1014.5	20.9	6.4	13.7	- 1.1	27.2	18	- 1.1	29	0	2	1.1	50	26	- 2	19	8	4	T	T	2.5	25	17.0	NW	20+	11	7	12	5.4	66
LANDER	1696	829.3	1013.5	22.2	5.3	13.8	- 1.2	27.2	17+	- 5.0	26	0	5	- 1.1	41	2	- 24	3	2	1	0	0	1.8	26	20.1	SW	27	14	12	4	4.3	78
SHERIDAN	1208	878.1	1014.3	22.1	3.6	12.8	- 2.1	31.1	17+	- 6.1	26	0	7			24	- 6	7	12	4	91	76	1.4	30	14.8	S	18	8	11	11	5.6	64

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CORRECTION

CLIMATOLOGICAL DATA Table - JULY 1972 and JUNE 1972 (English Units). The column headings "Average Speed" and "Prevailing direction" should be "Resultant Speed" and "Resultant direction", respectively. The column headed "Snow, Sleet" should be "Snow, Ice Pellets".

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	9	9	6
HUNTSVILLE	10	10	12
MOBILE	0	0	0
MONTGOMERY	2	2	0
ALASKA			
ANCHORAGE	608	1045	1003
ANNETTE	376	775	777
BARROW	1009	2440	2678
BARTER ISLAND	1030	2546	2497
BETHEL	632	1153	1325
BETTLES	804	1190	
BIG DELTA	755	1093	
COLD BAY	505	1462	1424
FAIRBANKS	738	985	1145
GULKANA	729	1196	
HOMER	546	1293	
JUNEAU	535	1035	1122
KING SALMON	576	1193	1148
KOTZEBUE	710	1206	1550
MC GRATH	657	1005	1179
NOME	691	1342	1670
ST. PAUL ISLAND	625	1901	1756
SHEMYA	521	1558	1553
SUMMIT	860	1546	
TALKEETNA	675	1063	1109
UNALAKLEET	655	1105	
YAKUTAT	542	1158	1159
ARIZONA			
FLAGSTAFF	241	341	315
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	10	10	6
YUMA	0	0	0
ARKANSAS			
FORT SMITH	14	15	12
LITTLE ROCK	8	8	9
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	36	37	42
BLUE CANYON	199	281	204
EUREKA U	269	690	785
FRESNO	2	2	0
LONG BEACH	0	0	12
LOS ANGELES	0	0	71
LOS ANGELES U	0	0	6
MT SHASTA R	238	319	182
OAKLAND	38	105	148
RED BLUFF	11	11	0
SACRAMENTO	6	6	12
SANDBERG R	81	129	30
SAN DIEGO	0	0	21
SAN FRANCISCO	75	181	219
SAN FRANCISCO U	110	393	468
SANTA MARIA	91	200	288
STOCKTON	0	0	6
COLORADO			
ALAMOSA	267	419	443
COLORADO SPRINGS	136	211	166
DENVER	107	164	132
GRAND JUNCTION	31	31	30
PUEBLO	58	76	54
CONNECTICUT			
BRIDGEPORT	43	52	66
HARTFORD	82	97	105
DIST.OF COLUMBIA			
WASHINGTON DULLES	38	43	
WASHINGTON NATIONAL	8	8	33
DELAWARE			
WILMINGTON	20	20	51
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	3	3	12
ATLANTA	3	3	18
AUGUSTA	0	0	0
COLUMBUS	1	1	0
MACON	1	1	0
ROME	6	6	24
SAVANNAH	0	0	0
IDAHO			
BOISE	222	233	[illegible]
LEWISTON	178	[illegible]	123
POCATELLO	281	320	[illegible]
ILLINOIS			
CAIRO U	17	17	[illegible]
CHICAGO O HARE	109	134	[illegible]
CHICAGO MIDWAY	93	120	81
MOLINE	80	95	[illegible]
PEORIA	87	115	93
ROCKFORD	119	162	129
SPRINGFIELD	58	72	72
INDIANA			
EVANSVILLE	26	31	66
FORT WAYNE	86	118	114
INDIANAPOLIS	36	48	90
SOUTH BEND	112	171	117
IOWA			
BURLINGTON	82	[illegible]	93
DES MOINES	112	129	108
DUBUQUE	141	181	[illegible]
SIOUX CITY	116	127	117
WATERLOO	158	209	169
KANSAS			
CONCORDIA	68	75	57
DODGE CITY	70	76	33
GOODLAND	117	169	87
TOPEKA	59	69	57
WICHITA	46	48	33
KENTUCKY			
COVINGTON	24	29	75
LEXINGTON	20	31	54
LOUISVILLE	16	16	54
LOUISIANA			
ALEXANDRIA	5	5	0
BATON ROUGE	0	0	0
LAKE CHARLES	1	1	0
NEW ORLEANS	0	0	0
SHREVEPORT	6	6	0
MAINE			
CARIBOU	326	526	529
PORTLAND	190	270	260
MARYLAND			
BALTIMORE	16	18	48
MASSACHUSETTS			
BLUE HILL OBS R	115	157	130
BOSTON	51	58	69
WORCESTER	171	228	187
MICHIGAN			
ALPENA	292	472	446
DETROIT	91	130	87
DETROIT METRO	113	165	122
FLINT	139	213	165
GRAND RAPIDS	126	195	170
HOUGHTON LAKE	242	411	382
LANSING	173	285	166
MARQUETTE U	305	529	380
MUSKEGON	118	203	160
SAULT STE MARIE	349	575	480
MINNESOTA			
DULUTH	440	720	510
INTERNATIONAL FALLS	412	558	546
MINNEAPOLIS	218	304	242
ROCHESTER	219	329	245
ST CLOUD	297	421	300
MISSISSIPPI			
JACKSON	4	4	0
MERIDIAN	5	5	0
MISSOURI			
COLUMBIA REGIONAL	43	45	70
KANSAS CITY	37	38	39
ST JOSEPH	[illegible]	64	66
ST LOUIS	29	31	60
SPRINGFIELD	40	49	45
MONTANA			
BILLINGS	311	422	[illegible]
GLASGOW	338	[illegible]	348
GREAT FALLS	331	463	339
HAVRE	360	443	387
HELENA	418	603	384
KALISPELL	413	552	470
MILES CITY	277	342	[illegible]
MISSOULA	400	520	411
NEBRASKA			
GRAND ISLAND	116	131	114
LINCOLN	108	131	124
NORFOLK	145	177	120
NORTH PLATTE	169	[illegible]	129
OMAHA	106	119	96
SCOTTSBLUFF	144	201	[illegible]
VALENTINE	165	233	196
NEVADA			
ELKO	317	362	268
ELY	320	422	305
LAS VEGAS	0	[illegible]	0
RENO	249	283	334
WINNEMUCCA	255	262	244
NEW HAMPSHIRE			
CONCORD	223	332	233
MT WASHINGTON OBS	675	1728	1749
NEW JERSEY			
ATLANTIC CITY	38	41	39
ATLANTIC CITY U	23	25	29
NEWARK	[illegible]	22	39
TRENTON	35	38	57
NEW MEXICO			
ALBUQUERQUE	14	17	12
CLAYTON	91	130	72
ROSWELL	13	13	18
NEW YORK			
ALBANY	154	[illegible]	157
BINGHAMTON	173	248	[illegible]
BUFFALO	113	162	197
NEW YORK U	25	27	[illegible]
NEW YORK KENNEDY	21	21	36
NEW YORK LA GUARDIA	37	41	27
ROCHESTER	[illegible]	123	166
SYRACUSE	98	130	166
NORTH CAROLINA			
ASHEVILLE	8	11	75
CAPE HATTERAS U	0	[illegible]	[illegible]
CHARLOTTE	3	3	6
GREENSBORO	9	10	33
RALEIGH	9	9	21
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	256	[illegible]	284
FARGO	261	327	284
WILLISTON	380	[illegible]	335
OHIO			
AKRON	84	125	105
CINCINNATI ABBE OB	27	39	54
CLEVELAND	95	154	116
COLUMBUS	77	117	90
DAYTON	63	84	84
MANSFIELD	70	95	69
TOLEDO	134	184	133
YOUNGSTOWN	154	244	145
OKLAHOMA			
OKLAHOMA CITY	23	23	15
TULSA	19	19	19
OREGON			
ASTORIA	[illegible]	394	486
BURNS U	304	482	259
EUGENE	202	252	197
MEACHAM	440	659	496
MEDFORD	178	191	78
PENDLETON	165	[illegible]	111
PORTLAND	153	169	167
SALEM	239	315	[illegible]
SEXTON SUMMIT R	288	439	333
PENNSYLVANIA			
ALLENTOWN	59	84	90
ERIE	144	[illegible]	[illegible]
HARRISBURG	25	26	[illegible]
PHILADELPHIA	22	22	60
PITTSBURGH	63	94	114
PITTSBURG	38	[illegible]	80
SCRANTON	125	166	151
WILLIAMSPORT	91	122	120
RHODE ISLAND			
BLOCK ISLAND	53	61	94
PROVIDENCE	64	82	112
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GRNVLLE-SPRTNBRG	4	4	9
[illegible]			
ABERDEEN	176	230	[illegible]
[illegible]	171	235	[illegible]
RAPID CITY	193	[illegible]	[illegible]
SIOUX FALLS	194	266	212
TENNESSEE			
[illegible]	10	18	[illegible]
CHATTANOOGA	10	10	[illegible]
KNOXVILLE	9	9	[illegible]
MEMPHIS	12	12	18
NASHVILLE	10	10	30
OAK RIDGE R	10	10	39
TEXAS			
ABILENE	13	13	[illegible]
AMARILLO	[illegible]	63	18
AUSTIN	0	0	[illegible]
BROWNSVILLE	0		
CORPUS CHRISTI	0	0	[illegible]
DALLAS		[illegible]	
DEL RIO	0		
EL PASO	3	[illegible]	0
FORT WORTH	[illegible]	3	0
GALVESTON		0	0
HOUSTON INTERCON	2	2	
LUBBOCK	23	25	18
MIDLAND	19	19	0
PORT ARTHUR	0	0	[illegible]
SAN ANGELO	3	[illegible]	0
SAN ANTONIO	0	[illegible]	[illegible]
VICTORIA	[illegible]	0	
WACO	4	4	
WICHITA FALLS	8	[illegible]	[illegible]
UTAH			
MILFORD	132	[illegible]	99
SALT LAKE CITY	110	110	81
WENDOVER	[illegible]	133	48
VERMONT			
BURLINGTON	212	307	300
VIRGINIA			
LYNCHBURG	20	22	51
NORFOLK	4	4	[illegible]
RICHMOND	17	17	[illegible]
ROANOKE	33	44	51
WALLOPS ISLAND	[illegible]	8	
WASHINGTON			
OLYMPIA	295	449	337
QUILLAYUTE	379	670	568
SEATTLE-TACOMA	295	[illegible]	280
SPOKANE	292	346	202
STAMPEDE PASS R	574	[illegible]	[illegible]
WALLA WALLA U	146	161	87
YAKIMA	258	295	[illegible]
WEST VIRGINIA			
BECKLEY	74	119	155
CHARLESTON	14	32	[illegible]
ELKINS	76	[illegible]	169
HUNTINGTON	14	24	63
PARKERSBURG U	12	25	60
WISCONSIN			
GREEN BAY	180	271	252
LA CROSSE	147	200	184
MADISON	188	274	239
MILWAUKEE	133	205	264
WYOMING			
CASPER	[illegible]	360	214
CHEYENNE	248	408	260
LANDER	[illegible]	[illegible]	229
SHERIDAN	303	426	275

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

SEPTEMBER 1972

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	318	1620	
HUNTSVILLE	291	1433	
MOBILE	505	2485	
MONTGOMERY	417	2156	
ALASKA			
ANCHORAGE		5	
ANNETTE	[illegible]	16	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	19	
BETTLES	0	89	
BIG DELTA	0	57	
COLD BAY	0	0	
FAIRBANKS	0	95	
GULKANA		5	
HOMER	[illegible]	[illegible]	
JUNEAU	0	0	
KING SALMON	0		
KOTZEBUE	0	15	
MC GRATH	0	24	
NOME	0	26	
ST. PAUL ISLAND		0	
SHEMYA	0	[illegible]	
SUMMIT	0	0	
TALKEETNA	0	19	
UNALAKLEET	0	35	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	100	
PHOENIX	522	3831	
TUCSON	414	2562	
WINSLOW	144	1182	
YUMA	603	3884	
ARKANSAS			
FORT SMITH	338	1747	
LITTLE ROCK	341	2032	
CALIFORNIA			
BAKERSFIELD	317	2320	
BISHOP	53	1079	
BLUE CANYON	24	475	
EUREKA U	0	1	
FRESNO	213	1808	
LONG BEACH	224	1094	
LOS ANGELES	151	688	
LOS ANGELES U	225	1435	
MT SHASTA R	15	378	
OAKLAND	12	129	
RED BLUFF	225	1915	
SACRAMENTO	147	1232	
SANDBERG R	67	816	
SAN DIEGO	117	699	
SAN FRANCISCO	8	95	
SAN FRANCISCO U	13	43	
SANTA MARIA	19	73	
STOCKTON	194	1466	
COLORADO			
ALAMOSA	0	55	
COLORADO SPRINGS	17	407	
DENVER	28	561	
GRAND JUNCTION	132	1364	
PUEBLO	109	1010	
CONNECTICUT			
BRIDGEPORT	116	728	
HARTFORD	79	675	
DELAWARE			
WILMINGTON	165	1055	
DIST.OF COLUMBIA			
WASHINGTON DULLES	134	905	
WASHINGTON NATIONAL	195	1176	
FLORIDA			
APALACHICOLA U	494	2513	
DAYTONA BEACH	415	2515	
FORT MYERS	536	3369	
JACKSONVILLE	400	2222	
KEY WEST	544	3991	
LAKELAND U	479	2814	
MIAMI	471	[illegible]	
ORLANDO	509	3169	
PENSACOLA	484	2614	
TALLAHASSEE	433	2300	
TAMPA	497	2858	
WEST PALM BEACH	534	3405	
GEORGIA			
ATHENS	329	1517	
ATLANTA	297	1421	
AUGUSTA	329	1761	
COLUMBUS	397	2071	
MACON	374	1911	
ROME	304	1471	
SAVANNAH	379	2109	
HAWAII			
HILO	349	2467	
HONOLULU	470	3175	
KAHULUI	413	2710	
LIHUE	420	2933	
IDAHO			
BOISE	40	817	
LEWISTON	46	810	
POCATELLO	6	341	
ILLINOIS			
CAIRO U	280	1665	
CHICAGO O HARE	72	820	
CHICAGO MIDWAY	94	888	
MOLINE	138	1014	
PEORIA	130	899	
ROCKFORD	75	711	
SPRINGFIELD	178	1135	
INDIANA			
EVANSVILLE	196	1154	
FORT WAYNE	88	718	
INDIANAPOLIS	141	979	
SOUTH BEND	55	582	
IOWA			
BURLINGTON	144	948	
DES MOINES	109	909	
DUBUQUE	61	689	
SIOUX CITY	98	978	
WATERLOO	50	664	
KANSAS			
CONCORDIA	171	1174	
DODGE CITY	156	1208	
GOODLAND	85	785	
TOPEKA	169	1184	
WICHITA	234	1514	
KENTUCKY			
COVINGTON	142	912	
LEXINGTON	171	896	
LOUISVILLE	242	1281	
LOUISIANA			
ALEXANDRIA	453	2210	
BATON ROUGE	506	2670	
LAKE CHARLES	445	2482	
NEW ORLEANS	446	2455	
SHREVEPORT	467	2427	
MAINE			
CARIBOU	9	127	
PORTLAND	8	196	
MARYLAND			
BALTIMORE	166	1051	
MASSACHUSETTS			
BLUE HILL OBS R	38	414	
BOSTON	79	671	
WORCESTER	20	394	
MICHIGAN			
ALPENA	0	165	
DETROIT	81	683	
DETROIT METRO	59	550	
FLINT	30	427	
GRAND RAPIDS	42	503	
HOUGHTON LAKE	4	245	
LANSING	26	372	
MARQUETTE U	0	189	
MUSKEGON	41	418	
SAULT STE MARIE	0	79	
MINNESOTA			
DULUTH	0	113	
INTERNATIONAL FALLS	0	262	
MINNEAPOLIS	13	572	
ROCHESTER	14	507	
ST CLOUD	7	400	
MISSISSIPPI			
JACKSON	506	2413	
MERIDIAN	475	2176	
MISSOURI			
COLUMBIA REGIONAL	211	1334	
KANSAS CITY	219	1559	
ST JOSEPH	193	1292	
ST LOUIS	219	1408	
SPRINGFIELD	224	1410	
MONTANA			
BILLINGS	8	453	
GLASGOW	4	378	
GREAT FALLS	5	394	
HAVRE	3	489	
HELENA	0	163	
KALISPELL	0	187	
MILES CITY	20	592	
MISSOULA	0	228	
NEBRASKA			
GRAND ISLAND	111	984	
LINCOLN	119	934	
NORFOLK	90	901	
NORTH PLATTE	64	645	
OMAHA	124	1044	
SCOTTSBLUFF	36	583	
VALENTINE	63	684	
NEVADA			
ELKO	3	242	
ELY	0	191	
LAS VEGAS	398	3002	
RENO	4	385	
WINNEMUCCA	17	730	
NEW HAMPSHIRE			
CONCORD	5	301	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	132	849	
ATLANTIC CITY U	103	624	
NEWARK	175	1118	
TRENTON U	139	964	
NEW MEXICO			
ALBUQUERQUE	113	1159	
CLAYTON	71	640	
ROSWELL	197	1575	
NEW YORK			
ALBANY	31	421	
BINGHAMTON	27	400	
BUFFALO	57	450	
NEW YORK U	169	1061	
NEW YORK KENNEDY	159	964	
NEW YORK LA GUARDIA	129	801	
ROCHESTER	79	637	
SYRACUSE	61	570	
NORTH CAROLINA			
ASHEVILLE	134	721	
CAPE HATTERAS R	271	1412	
CHARLOTTE	241	1294	
GREENSBORO	188	1062	
RALEIGH	177	1143	
WILMINGTON	298	1641	
NORTH DAKOTA			
BISMARCK	24	462	
FARGO	23	574	
WILLISTON	15	342	
OHIO			
AKRON	77	545	
CINCINNATI ABBE OB	145	996	
CLEVELAND	64	529	
COLUMBUS	71	591	
DAYTON	94	831	
MANSFIELD	102	723	
TOLEDO	55	528	
YOUNGSTOWN	39	394	
OKLAHOMA			
OKLAHOMA CITY	351	1976	
TULSA	339	2056	
OREGON			
ASTORIA	16	59	
BURNS U	16	333	
EUGENE	26	358	
MEACHAM	4	207	
MEDFORD	58	735	
PENDLETON	55	911	
PORTLAND	44	531	
SALEM	21	307	
SEXTON SUMMIT R	49	376	
PACIFIC AREA			
GUAM TAGUAC R	438	3690	
JOHNSTON	492	1296	
KOROR R	510	4603	
KWAJALEIN	518	4681	
MAJURO	499	4449	
PAGO PAGO	436	4114	
PONAPE R	455	4259	
TRUK MOEN ISLAND	496	4450	
WAKE	545	3876	
YAP R	490	4463	
PENNSYLVANIA			
ALLENTOWN	69	719	
ERIE	35	322	
HARRISBURG	137	947	
PHILADELPHIA	153	1071	
PITTSBURGH	76	589	
SCRANTON	42	514	
WILLIAMSPORT	40	551	
RHODE ISLAND			
BLOCK ISLAND	38	428	
PROVIDENCE	76	582	
SOUTH CAROLINA			
CHARLESTON	351	1860	
CHARLESTON U	386	2008	
COLUMBIA	313	1700	
GRNVLLF-SPRTNBRG	253	1283	
SOUTH DAKOTA			
ABERDEEN	43	639	
HURON	46	605	
RAPID CITY	34	401	
SIOUX FALLS	35	619	
TENNESSEE			
BRISTOL	160	859	
CHATTANOOGA	224	1106	
KNOXVILLE	223	1199	
MEMPHIS	346	1919	
NASHVILLE	341	1543	
OAK RIDGE R	229	1130	
TEXAS			
ABILENE	330	2167	
AMARILLO	182	1152	
AUSTIN	529	2849	
BROWNSVILLE	517	3311	
CORPUS CHRISTI	561	3344	
DALLAS	518	2852	
DEL RIO	473	2889	
EL PASO	247	1843	
FORT WORTH	480	2672	
GALVESTON U	540	2922	
HOUSTON INTERCON	447	2521	
LUBBOCK	211	1489	
MIDLAND	249	1857	
PORT ARTHUR	440	2346	
SAN ANGELO	406	2444	
SAN ANTONIO	515	2736	
VICTORIA	541	3073	
WACO	499	2755	
WICHITA FALLS	377	2358	
UTAH			
MILFORD	18	659	
SALT LAKE CITY	85	1058	
WENDOVER	67	1149	
VERMONT			
BURLINGTON	30	358	
VIRGINIA			
LYNCHBURG	159	944	
NORFOLK	217	1209	
RICHMOND	178	1154	
ROANOKE	118	842	
WALLOPS ISLAND	193	956	
WASHINGTON			
OLYMPIA	5	88	
QUILLAYUTE	11	74	
SEATTLE-TACOMA	11	212	
SPOKANE	10	430	
STAMPEDE PASS R	3	59	
WALLA WALLA U	55	913	
YAKIMA	19	549	
WEST INDIES			
SAN JUAN	543	4472	
WEST VIRGINIA			
BECKLEY	42	379	
CHARLESTON	132	827	
ELKINS	36	317	
HUNTINGTON	147	838	
PARKERSBURG U	132	887	
WISCONSIN			
GREEN BAY	22	495	
LA CROSSE	39	685	
MADISON	27	465	
MILWAUKEE	26	417	
WYOMING			
CASPER	7	304	
CHEYENNE	2	151	
LANDER	3	297	
SHERIDAN	11	294	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

SEPTEMBER 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS
Alabama											1	4																4	
Alaska*																													
Arizona	4	3		2	6							4																	
Arkansas															2													3	
California*																													
Colorado*																													
Connecticut*																													
Delaware*																													
Florida	1	1			3										3														
Georgia												4				4													
Hawaii*																													
Idaho								3	4			3	0																
Illinois	1	1		20	6			4	4	4	7	5	3	1		5												6	5
Indiana								5	4							4												4	4
Iowa	7	4		3	6			5	5			6	6		1	4										2	2	7	7
Kansas	3	1			5			4	5			4	4			5												5	5
Kentucky	1	1		3	4							4°	C		1	4													
Louisiana												4			4													4	
Maine										2		5																5	
Maryland																3													
Massachusetts	2	1			3					2	3	6	1															5	
Michigan	3	2			5							5			1	4													
Minnesota												5				4										2		6	
Mississippi	1	1		4	5							4		1														7	
Missouri	2	1			4							4																4	
Montana*																													
Nebraska								5	6			5	5			4												5	5
Nevada										1																			
New Hampshire												4																4	
New Jersey*																													
New Mexico	1	1																								5	2	6°	C
New York												4				5												4	
North Carolina	1	1						4	4			5			1	5												4	
North Dakota								2	4											2	3								
Ohio											?	4	?		?	4	?										?	5	4
Oklahoma								4	6			5			1														
Oregon														1	2	4												?	
Pacific Area*																													
Pennsylvania	1	1			3							3°	C			5										1		5°	C
Puerto Rico																										1		4	
Rhode Island	1	1			3						2	5	4															4	3
South Carolina									4			4				4													
South Dakota	1	1			5							5	4																
Tennessee								5			1	5			8	5													
Texas	8	5		1	5			3	4			5				4													
Utah												4	3															4	
Vermont												4																	
U.S. Virgin Is.*																													
Virginia	1	1			4																							6	
Washington*																													
West Virginia	1	1			3																								
Wisconsin	10	3			6			4	4			6				5												6	7
Wyoming								3°	C																				

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

SEPTEMBER 1972

Elmer R. Nelson, Office of Hydrology

The most damaging floods during September were the flash floods in the Duluth, Minn. - Superior, Wisc., area. Defense Civil Preparedness Agency estimated the damage in southern St. Louis County (Minn.) at $22 million.

The heaviest flooding since 1947 occurred on the Nodway and Nishnabotna Rivers in southwestern Iowa. Record high stages occurred on the East Fork Nishnabotna and the Nishnabotna Rivers.

Only flood events resulting in loss of life and/or flood damage during the month are summarized. They are listed by drainage basins below:

Date (Sept.)	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	ST LAWRENCE DRAINAGE Lake Superior		
20	Heavy rain on the morning of the 20th caused flash flooding in the Duluth, Minn., - Superior, Wisc., area. Duluth reported a total of 3.77 inches of rain in 24 hours. Heavy damage occurred in Duluth, Two Harbors, and Proctor, Minn., as well as in portions of Superior, Wisc. Most of the damage at Two Harbors resulted from the overflow of Skunk Creek which flows through part of the City. Two deaths were reported near Two Harbors, Minn.	3	$22,000
	Lake Erie		
18-19	Heavy thundershowers during the evening of the 17th caused minor overflow of the Raisin River near Tecumseh, Mich. The heaviest rain recorded was 3.36 inches at Tecumseh, the center of the basin. The average rainfall over the basin was 1.8 inches. The heavy rainfall caused the bridge at the river gage, on North Raisin Center Highway, 4.5 miles south of Tecumseh to collapse.	0	Minor
	MISSISSIPPI SYSTEM Upper Mississippi Basin		
25-Oct. 2	Excessive rains from the 20th through the 28th caused flooding on the Root River in southeastern Minnesota, the upper Iowa in northeastern Iowa, and the Kickapoo, Trempealeau, and Black Rivers in southwestern Wisconsin. The rainfall during the period ranged from 4.5 inches to over 6 inches.	0	N.A.
13	Heavy precipitation (2 to 5 inches) on the 11th-13th caused flash flooding on the Little Maquoketa River at Durango, Iowa. The crest on the 13th was 21.7 feet (flood stage 15 feet), 1.4 feet lower than the record crest of last month (August 2).	0	N.A.
11-14	Flooding occurred on tributary streams of the Des Moines River in Warren County, Iowa. The flooding was almost solely over farmland. Crests on the Middle River near Indianola, Iowa, and the South River at Ackworth, Iowa, averaged 6 feet above flood stage.	0	25
	Missouri Basin		
5	Heavy thundershowers northeast of Mountain Home, Idaho, caused flooding in Little Valley. Irrigation ditches were washed out, fences damaged, and several acres of third crop hay destroyed. One ranch home was severely damaged as the yard was buried in 2 to 3 feet of silt and debris. Many farm items, tools, and equipment were either lost or damaged. Some poultry were drowned.	0	N.A.

Date (Sept.)	Flood Event	Lives Lost	Preliminary estimates of damage (thousands of dollars)
	MISSISSIPPI SYSTEM - Continued		
	Missouri Basin - Continued		
11-12	Heavy rains over eastern Nebraska and western Iowa during the night of the 10th caused small streams to run bankfull or higher. The Boyer River at Logan, Iowa, crested nearly 3 feet above flood stage. Flood damage was limited to crops in low lying areas.	0	N.A.
12-19	Four to 8 inches of rain over southwest Iowa on the 10th-11th caused the heaviest flooding on the Nodway and Nishnabotna Rivers, including the East and West Forks, since 1947. Record high stages occurred on the Nishnabotna River and the East Fork. The heaviest rainfall occurred in an area about 50 miles in diameter near Anita, Iowa. A bucket survey indicates a rainfall center of over 20 inches covered most of the northern half of Shelby County.	2	$ 10,000
12-16	Seven to 9 inches of rain in north-central Missouri on the 10th-11th caused light flooding on the Grand River and the Missouri River in the reach from St. Joseph to Waverly, Mo.	0	80
5-6	Considerable agricultural flooding occurred on Prairie Dog Creek due to 4- to 6-inch rains above Norton Dam. Minor overflow occurred on the North Fork of the Solomon River at Lenora, Kans.	0	N.A.
6-8	Excessive 5- to 7-inch rains caused severe flash flooding on Rock Creek near Louisville, Kans. The crest of 34.3 feet (flood stage 2 feet) on the 7th was 3.4 feet below the August 1968 flood. Near record flooding occurred on Fancy Creek at Winkler, Kans., for the second month in a row. The crest 22.0 feet on the 7th was 0.3 foot below the record crest of 22.3 feet of August 1944. Damage was primarily to crops. Minor flooding occurred on Stranger Creek near Tonganoxie, Kans.	0	N.A.
12	Heavy rains of 6 to 8 inches in extreme northeast Kansas on the evening of the 11th produced considerable flash flooding on Wolf Creek from runoff and over streets, highways, and residential sections from surface water.	0	75
	White Basin		
26	Local flooding occurred in the Black Basin at Corning, Ark., due to 6.47 inches of rain on the 26th. Floors of some business houses were covered with 3 to 4 inches of water. Some damage resulted to field crops.	0	N.A.
	WEST GULF OF MEXICO DRAINAGE		
27-Oct. 1	Moderate flooding occurred on the lower Frio and minor flooding on the lower Nueces River in Texas. Moderate flooding occurred on the extreme lower Nueces, immediately below the Wesley Seale Dam.	0	N.A.
3	A wall of water, estimated at 2 to 4 feet high, swept down a normally dry creek, very rapidly, through the small foothill community of Hillsboro, New Mex. Extensive damage and four deaths resulted. The heavy	4	1,500

Date (Sept.)	Flood Event	Lives Lost	Preliminary estimate of damage (thousands of dollars)
	WEST GULF OF MEXICO DRAINAGE-Continued		
	rain (1.35 inches) fell over a small headwater area a short distance west of Hillsboro. Substantial rains that fell over the area the preceding few weeks contributed to the runoff.		
	GREAT BASIN		
18-19	Moderate to heavy rains (up to 2.5 inches) caused flooding of some creeks in southwestern Utah.	0	N.A.
19	Runoff, from heavy rains, in the lower Grand Valley of Western Colorado deposited debris on roads and bridges, and washed out several fill areas around bridge abutments.	0	$ 15

N.A. Not Available

FLOOD STAGE DATA

(All dates in September unless otherwise specified)

SEPTEMBER 1972

River and station		Flood stage	Above flood stages -dates		Crest *	
			From–	To–	Stage	Date
		Ft.			Ft.	
ST LAWRENCE DRAINAGE						
Lake Erie						
Raisin:	Tecumseh, Mich.	9	18	19	9.4	19
MISSISSIPPI SYSTEM						
Upper Mississippi Basin						
Trempealeau:	Dodge, Wis.	7	26	Oct. 2	10.0	28
Black:	Galesville, Wis.	12	28	30	12.1	29
Root:	Hokah, Minn.	47	29	Oct. 1	48.4	30
Upper Iowa:	Dorchester (nr), Iowa	14	25	26	16.5	25
Kickapoo:	Soldiers Grove, Wis.	723	28	28	723.3	28
	Steuben, Wis.	8	28	Oct. 3	8.4	30
Wisconsin:	Portage, Wis.	17	28	Oct. 3	18.35	30
North:	Norwalk, Iowa	19	11	11	19.55	11
Middle:	Indianola (nr), Iowa	19	12	14	25.3	13
South:	Ackworth, Iowa	19	12	14	24.8	13
Turkey:	Spillville, Iowa	U	U	U	16.0	25
	Elkader, Iowa	U	27	29	U	27
	Garber, Iowa	17	11 27	11 29	17.5 21.1	11 28
Little Maquoketa:						
	Durango, Iowa	15	13	13	21.7	13
Pecatonica:	Martintown, Wisc.	11	13	15	12.7	13
	Freeport, Ill.	13	14	16	13.4	15
	Shirland, Ill.	12	16	21	13.0	18
Rock:	Joslin, Ill.	12	16 21	17 25	12.0 12.7	16-17 22
Illinois:	La Salle, Ill.	20	30	Oct. 3	20.5	Oct. 1
Missouri Basin						
Boyer:	Logan, Iowa	19	11 12	11 12	21.9 19.0	11 12
West Nishnabotna:						
	Hancock, Iowa	U	U	U	22.1	13
	Randolph, Iowa	19	12	12	21.9	14
East Nishnabotna:						
	Atlantic, Iowa	16	11	12	22.8	12
	Red Oak, Iowa	18	12	14	27.5	13
Nishnabotna:	Hamburg, Iowa	18	12	19	28.8	15
Nodaway:	Clarinda, Iowa	14	12	14	19.8	13
	Burlington Junc., Mo.	18	14	14	18.15	14
Little Platte:						
	Smithville, Mo.	24	7	7	24.0	7

River and station		Flood stage	Above flood stages -dates		Crest *	
			From–	To–	Stage	Date
		Ft.			Ft.	
MISSISSIPPI SYSTEM (Continued)						
Missouri Basin (Continued)						
Platte:	Agency (nr), Mo.	20	14	14	20.2	14
North Fork Solomon:						
	Lenora, Kans.	10	6	6	12.0	6
Gypsum Creek:						
	Gypsum, Kans.	13	2	2	18.7	2
Black Vermillion:						
	Frankfort, Kans.	19	19	19	21.5	19
Fancy Creek:						
	Winkler, Kans.	11	6	7	22.0	7
Rock Creek:						
	Louisville (nr), Kans.	20	7	7	34.3	7
Stranger Creek:						
	Tonganoxie (nr), Kans.	22	7	8	24.8	7
Grand:	Chillicothe, Mo.	24	14	15	25.6	14
	Sumner, Mo.	26	14	16	30.0	15
	Brunswick, Mo.	12	15	15	13.2	15
Missouri:	St. Joseph, Mo.	17	12	18	19.7	14
	Leavenworth, Kans.	19	16	17	20.8	17
	Lexington, Mo.	22	15	15	22.0	15
	Waverly, Mo.	18	14	15	18.5	15
Ohio Basin						
Wabash:						
	Lafayette, Ind.	11	28	Oct. 1	14.0	Oct. 1
	Covington, Ind.	16	30	Oct. 2	17.7	Oct. 1
	Montezuma, Ind.	14	28	Oct. 3	16.6	Oct. 1
	Terre Haute, Ind.	14	E28	Oct. 3	14.4	Oct. 3
WEST GULF OF MEXICO DRAINAGE						
Frio:	Tilden, Tex.	12	1 27	1 27	18.65 16.75	1 27
	Calliham, Tex.	12	27	28	24.3	27
Nueces:						
	Three Rivers (nr), Tex.	25	28	28	25.1	28
	Mathis (nr), Tex.	15	27	30	22.7	29
	Calallen, Tex.	7	30	Oct. 1	7.6	Oct. 1
Rio Grande:						
	Presidio, Tex.	12.8	12	16	17.1 16.0 14.5	12 13 15
			22	22	15.0	22

* Provisional

1 Continued at the end of month

__Highest stage of record

E Estimated

U Unknown

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1972

Standard pressure surface (mb)	ALBANY, N. Y. 1009 MB						ALBUQUERQUE, N. MEX. 840 MB						AMARILLO, TEXAS 893 MB						* ANCHORAGE, ALASKA 1008 MB						* ANNETTE, ALASKA 1012 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	12.6	11.4	19	.3	30	1,619	14.5	8.0	10	1.2	30	1,095	15.9	11.8	21	2.0	30	45	5.6	2.9	01	.1	30	37	9.3	6.7	32	.7
1000	28	171	13.3	11.4	24	.4													27	129	7.9	.3	04	1.1	29	138	9.3	6.0	34	1.9
950	30	595	13.8	10.0	25	1.9													30	533	6.0	-1.5	06	1.4	30	557	6.9	3.8	35	1.5
900	30	1,050	12.1	7.0	28	3.6													30	974	3.3	-3.8	11	.8	30	1,000	4.4	1.1	31	1.3
850	30	1,529	11.0	1.3	28	5.3							30	1,517	17.6	8.8	23	7.0	30	1,435	.5	-7.1	18	1.6	30	1,464	1.9	-1.6	30	2.5
800	30	2,034	9.7	-3.8	28	6.4	30	2,035	15.0	3.5	24	.7	30	2,034	15.8	5.2	23	7.0	30	1,919	-2.1	-9.7	20	1.9	30	1,951	-.5	-4.5	29	3.6
750	30	2,568	7.8	-8.5	27	6.9	30	2,580	12.1	.1	26	3.2	30	2,580	12.4	1.4	24	6.1	30	2,430	-4.7	-13.0	22	1.7	30	2,465	-3.2	-8.0	30	4.9
700	30	3,134	4.9	-13.0	27	8.0	30	3,154	8.2	-2.4	26	4.6	30	3,155	8.4	-1.9	24	5.3	30	2,970	-7.4	-16.4	26	2.6	30	3,009	-5.9	-12.4	30	5.0
650	30	3,735	1.5	-16.2	27	8.5	30	3,761	3.6	-5.2	26	5.2	30	3,763	4.6	-5.6	24	4.8	30	3,545	-10.4	-19.6	26	4.6	30	3,586	-9.3	-16.7	30	5.8
600	30	4,374	-2.5	-18.7	27	10.1	30	4,406	-.5	-12.1	26	5.5	30	4,411	.7	-12.5	24	4.6	30	4,157	-13.8	-23.7	27	6.3	30	4,201	-12.9	-20.5	30	6.5
550	30	5,059	-6.6	-22.3	27	10.8	30	5,097	-4.6	-17.8	26	6.7	30	5,104	-3.4	-18.2	24	5.4	30	4,813	-17.9	-27.5	27	7.6	30	4,858	-17.0	-24.5	30	7.8
500	29	5,796	-11.4	-27.5	27	12.4	30	5,841	-8.9	-23.9	25	9.1	30	5,852	-7.7	-24.4	25	7.4	30	5,520	-22.5	-33.5	27	8.8	29	5,570	-21.9	-29.3	29	9.1
450	29	6,597	-16.7	-32.7	28	13.1	30	6,649	-14.1	-27.9	25	11.0	30	6,663	-13.3	-28.4	25	8.9	30	6,286	-27.7	-38.1	28	10.0	28	6,344	-27.0	-35.1	29	10.0
400	29	7,471	-22.9	-37.1	28	14.5	30	7,532	-20.5	-33.6	25	12.6	30	7,550	-19.5	-33.3	25	10.4	30	7,123	-33.5	-42.4	27	11.9	28	7,183	-33.1	-39.2	30	11.9
350	29	8,439	-30.1	-43.9	28	16.3	30	8,509	-27.6	-39.1	25	14.8	30	8,531	-26.8	-39.2	26	12.3	30	8,050	-39.7	-44.1	27	13.3	27	8,106	-40.3	-42.3	30	14.1
300	29	9,515	-38.3	-49.8	28	18.3	29	9,599	-35.8	-47.3	25	18.4	30	9,621	-35.3	-47.7	26	14.2	30	9,087	-46.4		28	17.2	27	9,139	-46.8		30	17.7
250	29	10,745	-47.3		28	21.6	29	10,841	-45.5		25	20.9	30	10,865	-45.2		26	17.4	30	10,282	-51.4		28	19.6	27	10,335	-51.1		31	19.7
200	29	12,191	-55.9		28	23.9	29	12,294	-55.9		25	23.1	30	12,319	-56.2		26	19.6	30	11,724	-53.2		28	17.1	26	11,763	-54.1		31	18.3
175	28	13,036	-58.6		28	23.7	28	13,134	-60.3		26	22.5	30	13,157	-61.0		26	19.2	30	12,587	-52.0		28	15.7	26	12,619	-54.5		31	18.0
150	28	13,998	-61.4		28	21.3	28	14,085	-64.7		26	19.0	29	14,105	-65.2		26	17.2	29	13,588	-52.7		28	13.3	26	13,605	-54.7		30	15.7
125	28	15,125	-63.1		28	17.9	28	15,187	-68.9		26	15.8	29	15,204	-69.5		26	14.9	29	14,764	-53.3		28	12.3	26	14,770	-55.6		30	14.0
100	28	16,497	-62.9		28	15.4	28	16,517	-69.2		26	10.0	27	16,523	-69.9		26	10.4	29	16,200	-53.8		28	10.0	26	16,191	-55.8		30	11.7
80	27	17,877	-61.4		28	9.3	28	17,857	-66.5		27	5.8	27	17,861	-67.0		26	5.3	28	17,636	-53.9		28	9.9	24	17,612	-55.0		30	9.4
70	27	18,710	-59.7		27	6.2	28	18,671	-63.8		27	3.3	27	18,674	-63.8		27	2.5	28	18,494	-54.0		29	9.0	24	18,466	-54.9		31	8.5
60	27	19,677	-58.0		29	4.0	28	19,623	-61.1		30	.7	27	19,626	-60.9		24	.7	27	19,480	-54.5		29	8.2	24	19,451	-55.1		31	7.0
50	27	20,832	-56.0		29	2.4	28	20,763	-58.1		14	1.2	27	20,767	-58.5		12	2.1	27	20,647	-54.9		29	7.2	22	20,614	-55.4		30	5.9
40	26	22,258	-54.3		35	1.0	27	22,177	-55.6		11	2.3	27	22,178	-55.9		10	3.4	25	22,084	-54.8		29	5.7	22	22,041	-54.5		29	5.4
30	25	24,117	-51.5		05	1.4	26	24,025	-53.1		09	4.5	27	24,022	-52.9		09	4.1	24	23,922	-54.6		29	5.6	21	23,903	-52.9		28	4.2
25	25	25,305	-50.0		04	.7	25	25,202	-51.3		09	4.3	27	25,204	-50.8		08	3.8	22	25,088	-54.0		30	6.0	18	25,087	-51.0		27	5.3
20	24	26,768	-48.1		30	1.4	23	26,659	-49.2		09	3.9	26	26,662	-48.8		09	4.4	18	26,552	-51.9		29	5.3	16	26,551	-48.3		26	7.0
15	20	28,676	-45.8		05	.9	20	28,562	-46.9		08	4.3	22	28,566	-46.7		08	5.8	17	28,422	-50.0		28	5.9	13	28,455	-45.8		26	7.7
10	7	31,434	-41.8				12	31,263	-43.5		08	6.8	15	31,256	-43.2				10	31,056	-47.0		28	9.7	11	31,231	-41.3			
7																			7	33,415	-42.8									

Standard pressure surface (mb)	ATHENS, GEORGIA 990 MB						* BARROW, ALASKA 1018 MB						BARTER IS., ALASKA 1015 MB						BETHEL, ALASKA 1008 MB						* BISMARCK, N. DAK. 955 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	18.5	16.5	01	.7	27	8	-.6	-2.1	04	1.5	30	15	-1.0	-2.2	31	.6	30	39	5.1	3.5	35	.7	30	503	9.3	4.2	34	1.1
1000							27	151	-1.3	-2.5	06	1.4	29	139	-1.2	-3.5	28	1.1	23	143	6.6	2.7	02	1.1						
950	30	605	20.6	15.1	10	.2	27	559	-2.8	-6.4	07	1.2	30	543	-2.2	-4.9	29	1.1	30	528	5.4	-.4	13	.4	24	566	8.8	3.1	34	.8
900	30	1,072	18.3	12.4	27	.3	27	987	-3.7	-10.6	05	1.0	30	972	-3.7	-7.6	30	1.0	30	969	3.4	-4.0	18	.2	30	992	10.0	1.0	28	2.7
850	30	1,560	15.2	9.8	30	2.3	27	1,437	-5.4	-13.0	01	1.3	30	1,422	-5.4	-9.8	28	2.4	30	1,431	1.1	-6.8	18	.7	30	1,466	8.5	-1.7	29	4.9
800	30	2,072	12.7	4.4	30	3.6	27	1,912	-7.3	-16.1	36	1.9	30	1,896	-7.5	-13.4	29	2.9	30	1,917	-1.1	-9.8	22	1.5	30	1,965	6.2	-4.0	28	7.2
750	30	2,612	10.0	-2.1	29	3.8	27	2,413	-9.5	-18.5	36	2.2	30	2,397	-9.8	-15.3	29	3.5	30	2,430	-3.6	-12.9	24	2.3	30	2,493	3.5	-6.7	27	9.5
700	30	3,182	6.9	-6.4	29	3.3	27	2,943	-12.0	-21.8	34	2.6	30	2,926	-12.8	-17.7	30	3.5	30	2,972	-6.4	-17.1	24	3.0	30	3,047	.0	-10.8	27	11.6
650	30	3,788	4.0	-11.1	29	3.4	26	3,500	-14.8	-26.4	34	2.3	30	3,489	-15.8	-21.1	30	4.3	30	3,549	-9.4	-20.9	25	3.8	30	3,639	-3.5	-14.4	27	13.6
600	30	4,435	.5	-14.0	28	3.9	26	4,103	-18.1	-28.6	34	2.2	30	4,088	-19.0	-25.0	31	4.8	30	4,163	-13.0	-25.8	25	4.9	30	4,268	-7.4	-17.1	27	16.0
550	30	5,129	-2.9	-19.6	28	4.8	26	4,747	-22.2	-31.5	32	3.2	30	4,732	-22.9	-29.8	30	6.0	30	4,821	-17.2	-28.7	26	6.1	30	4,940	-11.8	-21.2	27	18.0
500	30	5,878	-7.6	-23.8	28	5.6	26	5,442	-26.4	-37.7	32	3.1	30	5,424	-27.4	-33.1	30	6.9	30	5,530	-21.5	-32.5	26	7.4	30	5,663	-16.6	-27.2	27	20.6
450	30	6,689	-12.8	-29.2	28	6.1	26	6,196	-31.7	-38.8	31	3.4	30	6,175	-32.2	-37.5	30	7.7	30	6,299	-26.7	-37.5	26	8.7	30	6,447	-21.7	-32.7	26	24.0
400	30	7,577	-19.0	-34.7	29	7.6	26	7,019	-37.8	-43.7	31	3.5	30	6,997	-38.0	-41.0	30	8.6	30	7,138	-32.6	-40.9	26	10.3	30	7,305	-27.6	-38.8	26	26.4
350	30	8,561	-26.0	-41.0	29	8.2	26	7,929	-44.2	-42.9	31	4.3	30	7,906	-44.4	-42.7	30	9.8	30	8,069	-38.9	-42.3	25	11.6	30	8,254	-34.8	-45.0	26	27.7
300	30	9,655	-34.8	-48.7	30	8.7	26	8,947	-49.9		31	5.5	30	8,922	-50.2		29	8.4	30	9,109	-45.7		26	14.3	30	9,310	-42.5	-46.9	26	30.6
250	30	10,901	-44.6		30	9.1	25	10,130	-52.0		32	4.3	30	10,108	-51.2		30	8.1	30	10,310	-50.1		26	17.7	30	10,519	-50.4		26	33.7
200	30	12,358	-55.6		30	10.3	25	11,577	-50.4		30	6.0	30	11,563	-49.8		29	8.2	30	11,760	-52.5		26	15.9	30	11,955	-55.3		26	33.5
175	30	13,199	-60.9		30	11.5	24	12,453	-50.4		30	5.1	29	12,437	-49.1		29	8.0	30	12,624	-52.2		26	14.3	30	12,805	-56.5		26	31.8
150	30	14,145	-65.8		30	10.2	24	13,458	-50.4		31	6.0	27	13,434	-49.3		29	7.0	30	13,622	-52.2		27	13.2	30	13,781	-57.8		26	28.2
125	30	15,240	-70.4		31	7.3	24	14,647	-50.8		30	4.6	26	14,627	-49.9		30	6.1	30	14,801	-53.1		27	12.3	30	14,929	-58.8		26	24.3
100	30	16,561	-70.7		30	3.3	24	16,100	-51.0		31	4.4	24	16,082	-50.2		30	6.3	30	16,239	-52.9		27	9.9	30	16,331	-58.4		26	17.6
80	30	17,894	-67.3		01	.8	24	17,551	-51.4		30	4.2	19	17,482	-51.1		30	6.1	30	17,677	-53.4		27	8.3	30	17,737	-57.1		26	12.9
70	30	18,706	-64.0		05	1.5	23	18,408	-51.7		30	4.0	17	18,343	-52.1		30	5.1	30	18,536	-53.9		27	8.4	30	18,583	-56.6		26	10.1
60	30	19,658	-61.1		06	2.2	22	19,398	-52.4		31	3.1	16	19,325	-53.0		30	4.5	30	19,525	-54.2		28	7.4	29	19,569	-55.3		27	8.0
50	30	20,797	-58.5		07	3.7	21	20,578	-53.2		32	3.4	15	20,472	-54.2		30	4.9	30	20,694	-54.4		28	6.8	28	20,741	-54.1		26	6.3
40	30	22,211	-55.5		08	4.5	18	22,041	-53.1		31	2.0	15	21,901	-55.0		30	4.2	30	22,122	-55.0		28	6.5	28	22,179	-51.9		27	5.0
30	29	24,058	-52.6		08	5.7	16	23,906	-53.4		30	2.9	15	23,737	-55.4		30	3.3	30	23,964	-54.4		29	6.1	27	24,047	-49.9		26	2.8
25	29	25,241	-50.9		09	6.4	8	25,146	-52.3				14	24,889	-55.7		29	2.4	26	25,129	-53.8		29	6.7	27	25,241	-49.1		28	1.3
20	28	26,701	-48.2		09	6.5							11	26,329	-54.9		30	2.4	24	26,570	-52.8		29	7.2	27	26,711	-47.6		04	.1
15	25	28,611	-46.3		09	6.4							10	28,187	-53.0				16	28,440	-50.7		29	7.8	27	28,621	-45.5		05	1.3
10	18	31,321	-43.3		08	7.1							[illegible]	30,846	-49.4										26	31,337	-42.2		01	.8
7																									23	33,762	-38.7		35	2.0
5																									15	36,053	-35.9			
																									5	37,599	-34.3			

Standard pressure surface (mb)	BOISE, IDAHO 916 MB						BOOTHVILLE, LA. 1017 MB						* BROWNSVILLE, TEXAS 1013 MB						BUFFALO, N. Y. 993 MB						CAPE HATTERAS, N. C. 1017 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	871	10.3	1.3	14	1.5	30	1	25.6	23.4	09	.5	30	7	24.0	21.5	14	.9	30	218	14.3	11.5	21	1.4	30	4	21.2	19.1	36	1.8
1000							30	146	26.3	23.3	12	1.7	30	122	26.5	24.1	16	2.9							30	153	21.8	19.0	35	2.3
950							30	598	23.1	20.5	14	2.7	30	574	23.5	21.6	16	6.6	30	590	14.2	10.0	25	3.4	30	598	19.3	15.7	34	2.5
900	30	1,015	12.8	.3	15	.7	30	1,069	20.1	15.9	14	3.1	30	1,047	20.7	17.2	16	6.5	30	1,046	12.6	7.1	27	5.2	30	1,062	16.9	10.7	31	2.2
850	30	1,494	11.8	-2.9	27	2.3	30	1,561	17.2	11.2	14	3.9	30	1,540	17.6	12.2	16	5.2	30	1,525	10.5	3.7	26	6.7	30	1,548	14.7	6.5	31	2.9
800	30	1,998	8.3	-5.1	27	4.1	30	2,077	14.3	7.3	15	3.4	30	2,057	14.8	8.7	14	4.3	30	2,028	8.3	-1.2	27	8.2	30	2,060	12.6	2.3	30	3.2
750	30	2,528	4.8	-8.2	27	5.6	30	2,620	11.4	1.8	14	2.3	30	2,601	11.9	5.2	13	3.7	30	2,560	6.7	-7.1	27	9.0	30	2,600	10.0	-1.7	29	3.7
700	30	3,087	1.2	-11.1	27	7.5	30	3,193	8.2	-2.0	12	1.7	30	3,176	8.7	-.8	13	3.4	30	3,124	4.3	-12.4	27	9.2	30	3,170	6.9	-4.6	29	4.1
650	30	3,679	-2.3	-15.9	26	8.8	30	3,802	5.3	-7.3	10	1.5	30	3,786	5.4	-4.2	13	2.9	30	3,724	1.2	-15.9	27	10.4	30	3,777	3.9	-10.8	28	4.3
600	30	4,310	-6.3	-21.2	26	10.4	30	4,453	2.1	-12.7	03	1.1	30	4,436	1.9	-11.0	13	2.8	30	4,364	-2.3	-20.0	27	11.4	30	4,423	.4	-16.4	28	5.0
550	30	4,985	-10.6	-25.3	25	12.1	30	5,150	-2.0	-16.7	31	.8	30	5,133	-2.2	-16.8	13	3.0	30	5,049	-6.7	-23.6	27	12.7	30	5,116	-3.4	-21.3	28	5.4
500	30	5,712	-15.2	-30.1	26	12.9	30	5,901	-6.8	-22.4	33	.5	30	5,884	-6.7	-23.0	12	2.8	30	5,786	-11.9	-26.9	26	13.7	30	5,863	-8.2	-24.5	28	6.2
450	30	6,500	-20.6	-34.5	26	14.2	30	6,716	-11.7	-28.0	32	.5	30	6,699	-11.9	-29.1	10	2.7	30	6,585	-17.2	-32.6	27	15.1	30	6,673	-13.2	-30.0	29	7.3
400	30	7,360	-26.8	-39.8	26	15.5	30	7,607	-18.1	-34.2	01	.5	30	7,590	-18.1	-35.0	09	2.7	30	7,457	-23.6	-37.9	26	16.1	30	7,560	-19.5	-34.2	28	7.6
350	30	8,313	-34.0	-45.4	26	15.9	30	8,593	-25.4	-40.0	05	1.3	30	8,577	-25.0	-41.3	07	2.0	30	8,422	-30.7	-43.7	26	17.6	30	8,541	-26.6	-41.2	28	7.3
300	30	9,371	-42.4	-51.5	25	17.3	30	9,690	-34.0	-47.9	05	1.5	30	9,677	-33.4	-48.7	04	2.8	30	9,496	-38.8	-49.1	27	20.6	30	9,633	-34.7	-48.4	28	8.8
250	30	10,580	-50.6		26	19.1	30	10,940	-44.1		05	2.7	30	10,930	-43.6		03	3.2	30	10,723	-47.8		27	24.7	30	10,880	-44.9		29	10.0
200	30	12,017	-55.4		25	22.2	30	12,401	-55.5		03	2.6	30	12,392	-55.1		01	4.3	30	12,167	-56.1		27	26.6	30	12,336	-55.9		29	11.5
175	30	12,866	-57.0		26	21.4	30	13,241	-61.4		36	3.3	30	13,233	-61.3		35	3.6	30	13,010	-59.3		28	27.8	30	13,175	-61.3		29	12.1
150	30	13,839	-58.2		26	20.6	30	14,184	-66.7		35	4.7	30	14,175	-67.7		01	3.2	30	13,971	-60.8		28	22.5	30	14,120	-65.9		30	10.8
125	29	14,983	-60.2		26	18.8	29	15,273	-72.0		36	4.1	29	15,258	-73.1		01	2.5	30	15,100	-62.8		27	18.6	29	15,219	-68.7		30	7.1
100	29	16,371	-60.5		26	14.4	29	16,581	-73.1		06	3.5	23	16,554	-75.1		05	3.4	29	16,470	-63.0		27	13.9	29	16,553	-68.9		30	2.9
80	29	17,765	-59.3		26	10.5	29	17,902	-68.6		08	3.5	21	17,859	-70.1		07	4.4	29	17,849	-61.1		27	9.7	28	17,894	-65.9		33	1.4
70	29	18,603	-58.9		26	8.8	29	18,710	-64.7		08	4.5	19	18,660	-66.0		07	5.3	29	18,683	-59.2		27	6.9	27	18,708	-63.2		02	1.3
60	29	19,573	-57.8		27	7.9	29	19,658	-61.9		08	5.2	19	19,602	-63.4		09	6.1	29	19,652	-57.7		28	4.7	25	19,662	-61.0		04	2.2
50	29	20,728	-55.9		27	5.7	29	20,794	-59.0		08	7.1	18	20,729	-60.6		10	6.8	28	20,808	-56.3		28	2.6	25	20,803	-57.8		08	4.1
40	29	22,155	-53.6		26	4.8	29	22,203	-56.2		09	9.0	18	22,128	-57.8		08	10.0	27	22,232	-54.4		31	1.5	25	22,220	-55.0		09	4.1
30	29	24,014	-51.5		26	3.0	28	24,050	-52.2		09	10.0	18	23,964	-53.1		09	12.2	26	24,091	-51.7		03	1.6	25	24,075	-51.2		08	4.8
25	29	25,201	-50.4		26	1.6	27	25,241	-49.9		09	11.1	18	25,145	-51.0		09	13.1	25	25,275	-50.3		03	1.7	23	25,269	-49.5		09	5.4
20	28	26,669	-48.6		02	.6	26	26,706	-47.9		09	11.1	18	26,604	-48.8		08	13.0	25	26,738	-48.4		35	1.0	21	26,743	-47.7		09	5.8
15	26	28,572	-46.8		06	1.4	23	28,613	-45.8		08	12.3	14	28,488	-46.8		08	14.8	18	28,665	-45.8		01	1.0	19	28,661	-45.4		09	5.5
10	24	31,282	-44.0		02	1.3	14	31,318	-42.4				11	31,203	-41.9		10	15.8	8	31,427	-42.0				9	31,370	-42.6			
7	10	33,740	-40.5										8	33,643	-38.4															

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	9.3	7.7	25	1.7
1000	6	218	6.6	3.3		
950	30	562	10.1	5.1	27	4.2
900	30	1,011	8.8	1.6	28	6.1
850	30	1,483	7.1	-2.0	27	7.2
800	30	1,981	5.8	-6.9	27	9.1
750	30	2,508	3.8	-10.7	27	10.4
700	30	3,065	1.1	-13.2	27	12.2
650	30	3,659	-1.5	-16.8	28	13.8
600	30	4,292	-4.9	-21.8	27	15.0
550	30	4,972	-8.9	-25.3	27	16.7
500	30	5,703	-13.7	-28.9	27	18.2
450	30	6,495	-19.3	-35.7	27	18.6
400	30	7,360	-25.8	-39.4	27	19.5
350	30	8,317	-32.8	-45.5	27	21.5
300	30	9,381	-40.8	-49.7	27	23.1
250	30	10,600	-49.1		28	25.6
200	30	12,040	-56.0		28	27.1
175	29	12,886	-57.8		27	26.5
150	28	13,855	-59.0		27	22.2
125	26	14,991	-59.2		27	19.6
100	26	16,389	-59.4		27	15.4
80	26	17,792	-57.9		27	9.9
70	26	18,636	-56.7		27	7.9
60	26	19,616	-55.8		27	5.4
50	26	20,780	-54.4		28	3.5
40	25	22,219	-53.1		31	1.8
30	23	24,076	-51.2		02	.7
25	23	25,265	-49.8		30	1.5
20	22	26,728	-48.3		31	2.0
15	19	28,626	-46.4		32	.7
10	18	31,350	-42.2		32	1.1
7	15	33,777	-39.0		27	3.7
5	8	36,044	-37.2			

CHARLESTON, S. C. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	20.5	19.1	33	.9
1000	30	155	22.3	18.9	02	.8
950	30	601	20.6	16.1	34	.7
900	30	1,068	18.0	13.1	33	1.2
850	30	1,556	15.4	9.7	34	1.7
800	30	2,068	12.7	4.1	33	2.1
750	30	2,608	10.3	-.9	32	2.4
700	30	3,180	7.5	-5.9	32	2.9
650	30	3,787	4.2	-10.0	31	3.3
600	30	4,435	1.1	-15.8	30	3.4
550	30	5,130	-2.6	-21.3	30	3.7
500	30	5,878	-7.5	-26.0	30	4.3
450	30	6,691	-12.6	-31.4	30	4.3
400	30	7,579	-18.8	-36.3	31	5.1
350	30	8,563	-26.1	-41.6	31	6.1
300	30	9,657	-34.4	-49.9	31	6.6
250	30	10,905	-44.2		31	6.6
200	30	12,365	-55.4		33	7.5
175	30	13,205	-61.2		33	7.7
150	30	14,150	-66.2		33	8.1
125	30	15,245	-69.9		33	6.0
100	30	16,569	-70.6		35	2.3
80	29	17,901	-67.4		03	1.5
70	29	18,712	-64.3		07	2.0
60	29	19,662	-61.5		07	3.5
50	28	20,803	-57.7		09	5.0
40	27	22,218	-55.0		09	5.5
30	27	24,071	-51.8		09	6.1
25	27	25,256	-50.5		08	6.7
20	27	26,719	-48.4		09	7.2
15	25	28,626	-46.2		09	7.2
10	19	31,338	-42.1		08	6.7

CHATHAM, MASS. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	16	15.9	13.9	01	1.0
1000	30	152	16.4	11.8	36	1.0
950	30	588	15.3	8.1	32	1.1
900	30	1,046	13.5	4.6	29	1.7
850	30	1,525	11.5	-.2	28	3.5
800	30	2,032	10.4	-6.4	28	5.3
750	30	2,567	8.1	-10.4	28	6.1
700	30	3,133	4.9	-13.1	28	7.1
650	30	3,734	1.7	-16.5	27	7.1
600	30	4,374	-1.9	-19.8	27	7.9
550	30	5,061	-5.8	-23.1	27	9.1
500	30	5,801	-10.9	-26.9	27	10.4
450	30	6,602	-16.2	-32.3	27	11.9
400	30	7,478	-22.6	-37.7	27	13.7
350	30	8,448	-29.3	-42.7	27	15.9
300	30	9,528	-37.5	-49.0	27	18.5
250	30	10,762	-46.7		27	20.4
200	30	12,211	-56.0		28	22.3
175	30	13,053	-59.5		28	23.1
150	28	14,010	-62.3		28	21.3
125	28	15,129	-64.6		28	17.0
100	28	16,493	-64.3		28	12.2
80	28	17,865	-62.1		28	7.3
70	28	18,694	-60.7		28	4.7
60	27	19,656	-58.5		29	2.8
50	27	20,808	-56.3		29	1.5
40	26	22,236	-54.4		01	.6
30	26	24,092	-51.6		04	.5
25	25	25,274	-50.2		02	.8
20	24	26,736	-48.4		02	.1
15	21	28,650	-45.6		24	.9
10	17	31,378	-42.4		24	2.5
7	14	33,840	-38.2		27	5.1
5	7	36,189	-35.3			

CHIHUAHUA, MEXICO 858 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	17.3	14.3	25	.2
850	30	1,512	17.7	13.6	26	.5
800	30	2,032	16.6	10.6	19	.4
750	30	2,580	13.5	7.8	14	2.2
700	30	3,158	9.5	5.3	17	2.4
650	30	3,770	5.6	.3	19	2.4
600	30	4,421	1.5	-5.2	21	2.6
550	30	5,117	-2.2	-11.0	21	2.8
500	30	5,869	-6.2	-18.4	22	2.2
450	30	6,686	-11.7	-24.0	24	2.7
400	30	7,578	-17.6	-30.3	26	4.3
350	30	8,566	-24.8	-35.9	26	4.6
300	29	9,668	-33.4	-43.7	26	5.3
250	29	10,920	-43.8		27	7.0
200	29	12,381	-55.5		26	8.6
175	28	13,220	-61.4		26	9.9
150	27	14,164	-67.2		27	8.8
125	27	15,251	-72.1		27	7.1
100	27	16,555	-74.2		25	2.2
80	24	17,872	-69.6		07	3.0
70	24	18,674	-67.0		07	4.2
60	24	19,614	-63.3		09	5.6
50	24	20,742	-60.7		09	7.1
40	24	22,141	-57.8		09	9.2
30	24	23,974	-53.5		09	10.0
25	24	25,152	-51.8		09	10.8
20	23	26,603	-49.8		09	11.1
15	22	28,500	-47.0		08	12.3
10	17	31,210	-43.7		09	15.0

* COLD BAY, ALASKA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	30	7.5	6.0	19	3.8
1000	25	126	7.7	4.5	19	5.5
950	28	531	6.0	2.8	20	5.4
900	28	974	4.7	-.4	23	5.3
850	28	1,439	2.9	-2.0	24	6.0
800	28	1,928	.9	-5.0	23	6.8
750	28	2,445	-1.3	-7.1	24	8.0
700	28	2,993	-4.3	-11.2	23	9.3
650	28	3,574	-7.6	-14.4	23	11.0
600	28	4,193	-10.7	-19.7	23	12.6
550	28	4,856	-14.5	-24.3	23	13.4
500	27	5,570	-19.2	-29.1	24	16.0
450	27	6,345	-24.0	-33.1	24	17.6
400	27	7,194	-29.6	-37.0	24	17.8
350	26	8,150	-36.2	-41.8	23	20.2
300	26	9,201	-43.1		24	23.2
250	26	10,413	-49.4		24	18.2
200	26	11,862	-52.6		24	16.3
175	26	12,723	-53.7		24	14.7
150	24	13,718	-54.0		24	13.1
125	21	14,893	-54.8		25	10.9
100	20	16,317	-55.0		25	7.7
80	19	17,742	-54.8		25	5.5
70	19	18,597	-54.7		25	4.7
60	18	19,586	-54.4		25	3.9
50	17	20,758	-54.5		25	4.5
40	17	22,188	-54.1		26	2.7
30	14	24,062	-52.1		28	3.4
25	13	25,243	-51.0		29	2.3
20	13	26,701	-49.6		28	3.1
15	11	28,580	-47.6			
10	6	31,323	-40.8			

DAYTON, OHIO 984 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	299	15.6	14.1	16	.8
1000						
950	30	595	17.1	12.9	23	2.7
900	30	1,057	15.7	9.0	27	4.5
850	30	1,541	13.8	4.1	27	5.7
800	30	2,050	11.1	.4	27	6.1
750	30	2,586	8.0	-3.8	27	6.3
700	30	3,152	5.0	-7.9	27	7.2
650	30	3,754	1.8	-12.5	27	8.4
600	30	4,395	-1.5	-16.1	27	9.7
550	30	5,084	-5.5	-19.6	27	10.1
500	30	5,825	-10.2	-23.6	27	11.3
450	30	6,629	-15.3	-31.2	27	12.9
400	30	7,508	-21.6	-37.8	27	13.8
350	30	8,481	-28.7	-43.9	27	15.3
300	30	9,564	-36.6	-50.3	27	18.1
250	30	10,803	-45.7		27	22.4
200	30	12,255	-56.0		28	24.8
175	30	13,096	-60.2		28	24.7
150	30	14,050	-63.2		28	20.7
125	30	15,165	-65.8		27	17.2
100	30	16,517	-66.1		27	11.3
80	30	17,879	-63.5		27	7.6
70	29	18,705	-61.3		27	4.2
60	29	19,666	-59.4		28	2.5
50	29	20,815	-56.9		33	.8
40	29	22,235	-54.9		04	1.0
30	28	24,089	-51.8		08	1.5
25	26	25,277	-50.6		07	1.3
20	25	26,738	-48.3		06	1.2
15	24	28,641	-46.2		04	1.6
10	19	31,344	-42.7		05	1.5
7						

DEL RIO, TEXAS 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	23.0	19.9	11	2.9
950	30	572	21.9	19.3	15	5.9
900	30	1,041	19.7	17.2	17	8.1
850	30	1,534	17.9	12.9	16	7.7
800	30	2,051	15.3	8.9	16	6.1
750	30	2,597	12.4	4.7	16	4.1
700	30	3,173	9.1	-.2	16	2.4
650	30	3,783	5.3	-4.2	18	1.6
600	30	4,433	1.5	-11.1	20	1.1
550	30	5,128	-2.7	-15.0	20	.9
500	30	5,878	-7.0	-22.4	20	1.8
450	30	6,693	-12.0	-27.3	23	2.0
400	30	7,584	-17.7	-33.8	26	2.4
350	30	8,572	-24.8	-40.7	28	3.3
300	30	9,672	-33.4	-47.4	28	4.8
250	30	10,926	-43.3		29	5.6
200	30	12,389	-55.3		29	8.9
175	30	13,229	-61.1		29	7.8
150	30	14,174	-67.0		28	5.6
125	30	15,261	-72.1		27	4.9
100	29	16,568	-73.6		30	1.7
80	29	17,882	-70.0		06	2.5
70	27	18,685	-66.6		09	4.3
60	27	19,626	-63.0		09	5.4
50	27	20,758	-59.8		09	7.1
40	26	22,159	-57.1		09	9.1
30	25	23,999	-52.8		09	10.1
25	25	25,181	-51.1		09	10.7
20	24	26,640	-48.9		09	10.4
15	22	28,542	-46.4		08	11.9
10	18	31,255	-42.5		09	12.5
7	5	33,661	-40.7			

DENVER, COLO. 839 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	11.3	5.7	20	1.6
800	30	2,011	14.0	-.4	23	2.6
750	30	2,553	11.2	-3.8	26	2.7
700	30	3,125	7.4	-6.1	26	5.4
650	30	3,731	2.9	-8.7	27	7.0
600	30	4,373	-2.0	-12.5	27	8.5
550	30	5,059	-6.4	-19.0	27	10.3
500	30	5,798	-10.9	-26.9	26	11.5
450	30	6,599	-16.5	-32.5	25	14.3
400	30	7,473	-23.2	-36.6	25	17.0
350	30	8,439	-30.5	-42.1	25	20.9
300	30	9,513	-38.7	-48.6	25	23.7
250	30	10,740	-47.8		25	28.4
200	30	12,184	-56.3		25	32.5
175	29	13,023	-59.1		25	31.4
150	29	13,982	-62.6		25	26.9
125	29	15,100	-64.6		26	22.6
100	29	16,462	-64.9		26	14.2
80	29	17,824	-63.9		26	8.9
70	29	18,648	-61.4		26	6.8
60	29	19,610	-59.0		26	4.5
50	29	20,759	-57.3		25	3.0
40	29	22,181	-54.1		24	1.4
30	28	24,031	-52.0		14	.2
25	28	25,216	-50.7		11	.6
20	28	26,675	-49.2		08	1.1
15	24	28,568	-47.1		07	1.9
10	21	31,269	-43.5		14	.3
7	8	33,739	-40.1			

DODGE CITY, KANS. 925 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	15.6	11.2	18	1.4
900	30	1,026	16.5	11.9	20	4.4
850	30	1,514	17.2	7.5	23	7.8
800	30	2,030	15.2	2.8	24	8.2
750	30	2,575	12.2	-1.7	25	7.5
700	30	3,149	8.3	-5.1	25	6.6
650	30	3,757	4.2	-9.7	24	6.3
600	30	4,403	-.2	-14.3	24	6.4
550	30	5,094	-4.4	-19.1	24	6.9
500	30	5,838	-9.1	-24.8	24	8.8
450	30	6,647	-13.9	-30.7	25	11.4
400	30	7,530	-20.4	-34.4	25	13.7
350	30	8,508	-27.5	-39.6	26	15.5
300	30	9,596	-36.1	-47.2	26	18.9
250	30	10,837	-45.6		26	22.0
200	30	12,289	-56.0		26	23.4
175	30	13,129	-60.6		26	23.3
150	28	14,076	-64.3		26	21.6
125	23	15,170	-66.9		26	19.7
100	19	16,507	-67.0		26	12.4
80	18	17,859	-65.2		26	9.7
70	18	18,679	-62.2		25	7.1
60	17	19,631	-60.2		25	4.8
50	17	20,774	-58.1		23	3.2
40	17	22,189	-55.6		21	1.6
30	17	24,034	-52.6		21	1.6
25	17	25,216	-51.2		24	.9
20	17	26,672	-49.6		24	.3
15	17	28,563	-47.9		15	.3
10	14	31,281	-43.8		21	2.0

EL PASO, TEXAS 883 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	18.1	13.3	19	.4
850	30	1,522	18.9	10.7	18	.9
800	30	2,041	16.2	7.6	21	1.2
750	30	2,588	12.9	4.8	22	1.5
700	30	3,164	8.6	2.1	23	1.5
650	30	3,773	4.7	-3.0	22	1.9
600	30	4,421	.9	-9.4	23	4.2
550	30	5,116	-2.9	-16.7	25	4.2
500	30	5,865	-7.5	-21.8	26	5.6
450	30	6,677	-12.8	-26.2	24	7.2
400	30	7,565	-19.3	-30.2	25	8.3
350	30	8,548	-26.2	-39.3	25	10.3
300	30	9,641	-34.7	-45.8	25	11.6
250	29	10,887	-44.6		25	13.4
200	29	12,344	-55.8		25	14.8
175	29	13,184	-61.1		26	15.6
150	29	14,130	-66.4		26	14.3
125	29	15,222	-70.9		25	11.8
100	29	16,539	-71.7		26	7.7
80	27	17,869	-68.3		28	2.2
70	27	18,676	-65.5		07	.8
60	27	19,621	-62.5		10	2.7
50	27	20,755	-59.0		09	4.0
40	27	22,161	-57.0		10	5.3
30	25	23,996	-53.6		09	7.1
25	25	25,174	-51.4		09	7.1
20	24	26,633	-49.1		09	6.9
15	24	28,528	-47.4		08	7.4
10	18	31,238	-44.6		10	7.5
7	[illegible]	33,640	-40.5			

ELY, NEV. 810 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	6.0	-.6	19	3.9
1000						
950						
900						
850						
800	30	2,014	9.5	.4	19	3.5
750	30	2,551	9.3	-2.6	20	3.8
700	30	3,119	5.2	-5.5	23	6.2
650	30	3,720	.8	-9.9	24	8.0
600	30	4,358	-3.6	-15.7	24	9.6
550	30	5,040	-8.2	-21.9	25	10.7
500	30	5,773	-12.7	-27.7	24	12.7
450	30	6,569	-18.0	-32.5	24	14.1
400	30	7,439	-24.3	-37.9	25	15.8
350	30	8,401	-31.5	-43.9	24	17.9
300	30	9,471	-39.6	-50.2	24	21.0
250	30	10,695	-48.3		25	25.4
200	30	12,139	-55.6		25	27.7
175	30	12,985	-58.0		25	26.6
150	30	13,950	-60.8		25	23.5
125	30	15,078	-62.9		25	19.8
100	30	16,452	-63.0		26	12.6
80	28	17,828	-62.8		26	8.2
70	28	18,654	-61.1		27	6.1
60	28	19,617	-59.1		27	4.1
50	28	20,766	-57.0		26	2.0
40	27	22,192	-54.7		26	1.7
30	27	24,046	-52.1		04	.7
25	27	25,231	-50.6		06	1.6
20	26	26,667	-48.9		09	2.8
15	24	28,587	-46.9		08	3.4
10	20	31,301	-44.1		08	4.6
7	9	33,731	-40.7			

EMPALME, MEXICO 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	25.0	20.6	02	1.4
1000	30	93	26.3	20.4	03	1.2
950	30	547	25.4	16.2	11	.9
900	30	1,022	23.3	12.0	15	.9
850	30	1,518	20.3	9.8	15	1.2
800	30	2,039	16.7	7.0	14	1.9
750	30	2,586	13.4	2.6	16	2.5
700	30	3,163	9.7	-2.2	17	2.3
650	30	3,774	6.2	-7.1	19	2.7
600	30	4,426	2.3	-12.2	20	2.5
550	30	5,124	-2.1	-16.8	23	2.8
500	30	5,875	-6.6	-21.9	25	3.5
450	30	6,690	-11.7	-28.6	25	4.9
400	30	7,582	-18.1	-33.4	25	6.8
350	30	8,568	-25.2	-38.5	24	7.9
300	30	9,666	-33.7	-45.4	24	10.2
250	30	10,919	-43.6		25	11.4
200	30	12,382	-54.9		25	13.5
175	30	13,225	-60.6		24	14.0
150	30	14,171	-66.1		25	11.7
125	30	15,263	-71.5		25	9.7
100	28	16,575	-73.1		24	3.9
80	26	17,898	-69.2		09	1.2
70	26	18,702	-66.1		07	3.9
60	26	19,643	-63.5		09	6.1
50	26	20,772	-60.2		09	8.6
40	26	22,173	-57.5		09	10.3
30	25	24,011	-53.7		09	10.2
25	25	25,188	-51.8		09	11.5
20	23	26,643	-49.7		09	12.5
15	21	28,543	-47.4		08	13.4
10	16	31,254	-44.0		09	15.1

* FAIRBANKS, ALASKA 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	2.5	-.8	33	1.0
1000	13	188	.1	-4.4	02	1.7
950	30	531	2.9	-2.1	07	.7
900	30	967	.5	-4.4	23	1.2
850	30	1,424	-2.2	-7.1	25	2.4
800	30	1,904	-4.7	-9.6	24	3.5
750	30	2,409	-7.4	-12.3	25	4.5
700	30	2,944	-10.0	-15.8	26	4.7
650	30	3,513	-13.2	-19.2	26	5.6
600	30	4,118	-16.5	-23.1	27	5.3
550	30	4,768	-20.5	-26.1	27	6.1
500	30	5,467	-25.0	-30.6	28	7.2
450	30	6,225	-30.2	-34.6	28	8.5
400	30	7,053	-36.2	-40.8	28	9.9
350	30	7,970	-42.5	-42.6	28	11.1
300	30	8,993	-49.2		28	12.7
250	30	10,176	-53.7		28	13.9
200	30	11,613	-52.7		29	12.6
175	30	12,478	-51.8		29	11.3
150	30	13,477	-52.2		29	10.6
125	30	14,655	-52.8		29	10.3
100	30	16,094	-53.1		28	9.0
80	28	17,542	-53.4		30	7.6
70	27	18,406	-53.5		29	6.9
60	26	19,406	-53.9		30	6.4
50	24	20,562	-54.5		29	5.4
40	24	22,012	-54.5		30	5.0
30	22	23,857	-54.3		31	4.3
25	21	25,035	-53.7		31	3.1
20	20	26,485	-52.4		30	3.9
15	16	26,377	-49.8		28	4.3
10	9	31,114	-45.7			

FLINT, MICH. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	236	13.7	10.8	21	1.0
950	30	584	13.9	9.0	24	2.9
900	30	1,040	12.2	5.6	26	5.0
850	30	1,518	11.2	-1.1	27	6.4
800	30	2,023	9.0	-4.2	27	7.6
750	30	2,555	6.5	-9.2	27	8.9
700	30	3,117	3.3	-11.8	27	10.6
650	30	3,714	-.4	-14.8	27	11.8
600	30	4,350	-4.1	-19.7	27	12.5
550	30	5,031	-8.1	-25.5	27	13.2
500	30	5,765	-12.7	-31.0	26	15.5
450	30	6,562	-17.6	-35.6	26	16.9
400	30	7,434	-23.5	-40.6	27	18.8
350	30	8,399	-30.6	-45.0	27	20.3
300	30	9,473	-38.9	-50.1	27	23.0
250	29	10,697	-48.2		27	28.3
200	29	12,138	-56.8		28	31.9
175	29	12,978	-59.5		27	30.0
150	29	13,937	-61.9		27	26.2
125	29	15,062	-63.1		27	20.4
100	29	16,432	-63.5		27	16.1
80	28	17,810	-61.7		27	9.9
70	28	18,642	-59.7		27	7.2
60	27	19,607	-58.1		27	4.7
50	27	20,761	-56.5		28	3.4
40	27	22,184	-54.6		29	1.6
30	27	24,036	-52.1		04	1.0
25	25	25,225	-50.8		05	1.1
20	23	26,680	-48.7		35	1.5
15	20	28,590	-46.2		02	.6
10	8	31,366	-42.8			

FORT WORTH, TEXAS 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	22.4	19.8	19	1.1
950	30	578	21.9	17.5	20	5.7
900	30	1,048	20.2	14.8	21	6.4
850	30	1,540	17.6	11.5	21	4.8
800	30	2,057	14.7	7.2	21	3.7
750	30	2,601	11.7	2.3	22	3.0
700	30	3,175	8.3	-.9	21	2.3
650	30	3,784	4.9	-5.0	23	2.4
600	30	4,433	1.0	-9.9	24	2.6
550	30	5,128	-2.6	-18.7	24	3.4
500	30	5,878	-6.9	-23.9	25	3.8
450	30	6,692	-12.2	-26.3	25	4.7
400	30	7,582	-18.4	-33.4	25	5.7
350	30	8,568	-25.4	-40.3	25	7.0
300	30	9,665	-34.0	-48.2	26	7.6
250	30	10,915	-44.0		27	9.5
200	30	12,374	-55.5		27	11.8
175	30	[illegible]	-61.2		27	11.4
150	30	14,160	-66.0		27	10.8
125	28	15,260	-70.5		27	8.2
100	25	16,580	-72.1		28	3.6
80	24	17,911	-68.0		26	.9
70	23	18,720	-64.6		07	1.4
60	23	19,670	-61.4		09	2.9
50	23	20,807	-58.9		09	4.0
40	23	22,218	-56.0		10	6.0
30	22	24,069	-52.4		09	7.3
25	22	25,252	-50.7		09	7.2
20	22	26,714	-48.3		08	8.0
15	21	28,618	-46.5		09	8.0
10	10	31,337	-42.3			

* See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1972

GLASGOW, MONT.
933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	7.2	1.4	01	.5
1000						
950						
900	30	991	8.8	.1	27	2.4
850	30	1,463	7.4	-2.6	28	5.0
800	30	1,950	4.8	-4.8	28	5.9
750	30	2,463	1.5	-6.4	28	8.3
700	30	3,035	-1.8	-10.0	27	10.7
650	30	3,621	-5.5	-12.7	27	12.2
600	30	4,245	-9.3	-16.9	27	13.9
550	30	4,913	-13.5	-22.9	27	14.9
500	30	5,632	-18.3	-28.1	27	17.0
450	30	6,411	-23.3	-34.2	27	18.9
400	30	7,262	-29.2	-40.8	27	21.7
350	30	8,206	-36.3	-44.7	27	22.0
300	30	9,254	-44.3		27	25.2
250	30	10,456	-51.5		27	27.8
200	30	11,891	-54.8		27	28.1
175	30	12,744	-55.6		26	26.9
150	30	13,726	-56.0		27	24.1
125	28	14,901	-57.2		27	21.6
100	26	16,320	-57.4		27	17.5
80	26	17,732	-56.6		27	12.7
70	25	18,581	-55.7		27	10.9
60	26	19,563	-55.7		27	8.3
50	26	20,728	-54.4		27	7.2
40	26	22,162	-53.0		26	5.1
30	25	24,033	-50.5		27	4.9
25	25	25,226	-49.2		27	3.4
20	25	26,696	-47.5		26	2.5
15	25	28,604	-46.0		24	1.1
10	22	31,327	-43.5		32	.6
7	7	33,193	-39.8			

GRAND JUNCTION, COLO.
853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,472	14.0	3.6	12	3.3
1000						
950						
900						
850	26	1,512	15.0	3.3	12	3.7
800	30	2,017	14.7	1.2	16	3.7
750	30	2,560	11.5	-1.6	22	3.5
700	30	3,132	7.0	-4.6	25	6.1
650	30	3,737	2.5	-6.8	25	8.1
600	30	4,378	-2.6	-9.8	25	10.5
550	30	5,062	-7.6	-15.1	25	11.9
500	30	5,798	-12.0	-24.6	25	14.1
450	30	6,597	-16.9	-30.8	25	15.9
400	30	7,470	-23.3	-35.8	25	18.1
350	29	8,438	-30.2	-41.5	25	21.1
300	29	9,512	-38.7	-47.6	25	25.3
250	29	10,742	-47.3		25	30.1
200	29	12,190	-55.5		25	32.0
175	29	13,036	-58.4		25	29.4
150	29	13,998	-61.7		25	27.2
125	28	15,121	-64.0		26	21.3
100	28	16,484	-65.0		25	14.6
80	28	17,847	-63.6		26	10.0
70	28	18,672	-60.9		26	6.1
60	28	19,634	-59.0		26	5.2
50	27	20,782	-57.3		26	2.1
40	26	22,205	-54.5		26	.8
30	25	24,058	-52.1		08	2.1
25	24	25,248	-50.2		08	2.0
20	23	26,708	-48.9		07	2.7
15	16	28,615	-46.9		05	2.7
10	10	31,310	-43.1			
7						

* GREAT FALLS, MONT.
887 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,118	7.0	-.1	24	3.0
1000						
950						
900						
850	30	1,468	8.4	-3.6	25	5.6
800	30	1,967	5.6	-5.2	25	7.0
750	30	2,492	2.3	-7.2	26	7.7
700	30	3,045	-1.4	-9.8	27	8.9
650	30	3,632	-4.9	-14.4	27	11.5
600	30	4,257	-8.8	-20.0	27	12.7
550	30	4,926	-13.1	-24.3	27	15.8
500	30	5,645	-18.0	-27.5	26	17.4
450	30	6,425	-23.2	-34.1	27	17.9
400	30	7,277	-29.4	-39.0	26	18.5
350	30	8,219	-36.7	-44.7	26	19.6
300	30	9,266	-44.4		27	21.5
250	30	10,469	-50.8		26	25.0
200	30	11,908	-54.6		26	25.6
175	30	12,761	-55.7		26	23.9
150	28	13,743	-56.7		26	22.7
125	28	14,895	-57.6		26	20.5
100	25	16,304	-57.3		26	16.5
80	23	17,719	-56.0		26	12.0
70	22	18,570	-56.8		26	10.3
60	20	19,546	-55.0		26	9.0
50	18	20,717	-54.5		26	7.1
40	15	22,134	-52.8		25	6.4
30	13	24,017	-51.2		26	4.9
25	11	25,216	-49.7		26	3.2
20	10	26,669	-48.6		26	3.2
15	8	28,575	-46.0			
10	8	31,289	-43.7			
7						

GREEN BAY, WIS.
992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	11.9	9.3	29	.6
1000	6	215	8.7	5.9		
950	30	572	12.1	7.2	27	1.8
900	30	1,024	10.5	4.5	26	4.3
850	30	1,500	9.7	-2.9	27	7.1
800	30	2,002	7.8	-7.3	27	8.3
750	30	2,531	4.9	-8.8	27	9.7
700	30	3,091	2.0	-12.5	27	11.7
650	30	3,686	-1.2	-16.0	27	13.4
600	30	4,320	-4.8	-19.2	27	14.4
550	30	4,999	-8.6	-24.9	27	15.8
500	30	5,732	-13.2	-29.9	27	17.3
450	30	6,526	-18.7	-35.2	27	19.8
400	30	7,394	-24.5	-39.2	27	22.0
350	30	8,356	-31.5	-44.1	27	25.2
300	30	9,426	-39.5	-46.0	27	28.3
250	30	10,649	-48.7		26	32.1
200	30	12,087	-57.1		27	34.5
175	30	12,928	-58.8		27	33.5
150	30	13,893	-60.1		27	28.5
125	30	15,028	-61.2		27	22.4
100	30	16,413	-61.2		27	17.5
80	30	17,802	-59.4		26	12.4
70	29	18,645	-58.4		27	9.2
60	29	19,621	-56.0		27	6.5
50	29	20,784	-54.9		26	4.5
40	29	22,218	-53.0		26	2.8
30	29	24,083	-51.0		32	1.3
25	29	25,272	-49.9		33	.7
20	29	26,737	-48.6		03	.9
15	27	28,634	-46.0		32	1.4
10	24	31,346	-42.7		31	2.5
7	10	33,657	-40.8			

GREENSBORO, N. C.
988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	275	16.9	14.9	32	.6
1000						
950	30	608	18.8	14.2	31	1.8
900	30	1,072	17.1	11.6	31	2.8
850	30	1,558	14.7	8.7	29	3.4
800	30	2,069	12.2	2.5	29	4.4
750	30	2,608	10.0	-3.6	29	4.8
700	30	3,179	7.0	-6.5	29	4.9
650	30	3,784	3.7	-10.1	29	5.1
600	30	4,430	.0	-13.6	29	5.4
550	30	5,122	-3.5	-19.0	29	6.0
500	30	5,870	-7.9	-24.7	29	7.6
450	30	6,680	-13.0	-29.5	29	8.8
400	30	7,568	-19.3	-32.1	29	9.4
350	30	8,550	-26.3	-40.7	29	10.2
300	30	9,643	-34.8	-49.0	29	11.7
250	30	10,890	-44.6		29	12.7
200	30	12,348	-55.3		29	14.5
175	29	13,187	-60.5		30	14.4
150	29	14,136	-65.0		30	13.3
125	29	15,238	-68.4		29	9.5
100	29	16,573	-68.7		29	5.4
80	29	17,919	-65.8		29	2.8
70	28	18,737	-63.1		34	1.3
60	27	19,690	-60.7		05	1.5
50	27	20,832	-58.0		07	3.5
40	27	22,251	-54.6		08	2.8
30	26	24,106	-51.6		09	2.8
25	25	25,298	-49.8		08	3.5
20	25	26,766	-47.5		09	4.7
15	22	28,675	-46.2		08	4.2
10	15	31,395	-43.1		08	4.3
7						

GUADALUPE IS., MEXICO
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	23	18.9	16.9	34	4.4
1000	29	125	16.4	13.8	34	4.5
950	29	561	14.3	9.8	33	3.3
900	29	1,019	15.1	.6	29	1.3
850	29	1,503	15.2	-5.6	24	1.3
800	29	2,015	14.0	-8.7	22	2.8
750	29	2,557	11.6	-11.2	22	4.0
700	29	3,129	8.3	-14.5	22	5.1
650	28	3,737	4.7	-17.5	21	6.1
600	28	4,394	.8	-21.4	22	7.3
550	28	5,077	-3.6	-25.1	22	8.4
500	28	5,823	-8.8	-30.2	22	9.3
450	28	6,630	-14.6	-33.2	23	11.8
400	28	7,511	-21.1	-38.5	23	12.5
350	28	8,486	-28.2	-43.4	24	12.7
300	28	9,570	-36.7	-50.1	25	13.3
250	28	10,809	-45.6		26	14.8
200	28	12,264	-55.6			
175	28	13,105	-60.7			
150	28	14,051	-66.2			
125	27	15,150	-70.6			
100	26	16,470	-72.0			
80	24	17,796	-69.2			
70	23	18,598	-67.2			
60	23	19,535	-64.2			
50	22	20,661	-61.4		09	10.3
40	19	22,068	-58.0			
30	17	23,902	-54.3		08	12.5
25	17	25,075	-52.6		08	14.5
20	17	26,524	-50.7		08	14.2
15	13	28,409	-48.2		08	14.0
10	8	31,099	-44.3			
7						
5						
4						

* GUAM, MARIANA IS.
997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	25.1	23.7	08	.9
1000						
950	30	536	23.8	22.0	07	2.9
900	30	1,008	21.2	18.4	07	2.6
850	30	1,502	18.4	14.9	08	2.3
800	30	2,021	15.6	11.9	09	2.3
750	30	2,568	13.1	6.3	09	3.2
700	30	3,147	10.5	1.8	09	4.0
650	30	3,761	7.1	-2.9	09	3.9
600	30	4,415	3.4	-8.1	09	3.6
550	30	5,116	-.5	-12.2	09	4.1
500	30	5,873	-4.8	-16.3	10	4.6
450	30	6,694	-9.8	-21.0	09	3.8
400	30	7,594	-15.4	-27.0	09	3.4
350	30	8,593	-21.9	-34.5	10	2.9
300	30	9,706	-30.1	-43.4	10	2.7
250	30	10,977	-40.4	-51.4	09	2.8
200	30	12,457	-53.0		08	3.6
175	30	13,304	-60.3		08	4.3
150	30	14,247	-68.1		09	6.3
125	29	15,319	-76.0		09	8.8
100	27	16,588	-80.2		10	11.0
80	24	17,868	-74.4		09	10.7
70	24	18,651	-71.5		09	12.5
60	24	19,572	-67.2		09	15.4
50	23	20,683	-63.4		09	18.6
40	22	22,065	-60.0		09	22.8
30	18	23,882	-55.3		09	26.8
25	18	25,052	-52.9		09	28.0
20	17	26,501	-49.7		09	28.8
15	13	28,410	-45.8		09	29.4
10	8	31,130	-42.3			
7						
5						
4						

HILO, HAWAII
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	21.9	19.1	24	2.0
1000	30	129	23.0	19.3	24	1.2
950	30	576	19.9	17.5	10	1.8
900	30	1,041	16.8	14.3	09	2.9
850	30	1,527	13.9	10.7	09	2.7
800	30	2,037	12.0	4.2	09	2.7
750	30	2,576	10.2	-3.0	09	1.9
700	30	3,149	8.6	-11.7	09	1.1
650	30	3,758	5.7	-14.7	19	.3
600	30	4,408	2.1	-20.3	28	1.1
550	30	5,105	-2.0	-24.6	28	1.0
500	30	5,855	-6.5	-29.6	27	1.5
450	30	6,670	-11.7	-34.4	30	2.3
400	30	7,561	-18.1	-39.1	30	4.6
350	30	8,548	-25.5	-44.6	30	7.5
300	30	9,644	-33.9	-49.7	29	11.9
250	30	10,896	-43.5		29	17.5
200	30	12,359	-55.1		29	21.6
175	30	13,200	-61.1		29	22.2
150	30	14,143	-67.4		29	22.7
125	30	15,226	-73.3		[illegible]	17.1
100	30	16,523	-74.3		28	5.1
80	29	17,837	-69.9		09	4.4
70	29	18,637	-67.6		09	8.0
60	29	19,572	-65.0		09	12.0
50	29	20,692	-62.5		09	14.9
40	28	22,082	-58.9		09	17.9
30	28	23,906	-54.6		09	21.0
25	28	25,080	-52.4		09	22.8
20	28	26,531	-49.8		09	24.2
15	27	28,425	-47.1		09	22.3
10	23	31,140	-42.7		09	20.0
7	11	33,560	-40.6			
5						
4						

HUNTINGTON W. VA.
990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	16.2	15.4	16	.3
1000						
950	30	603	18.7	14.4	26	3.0
900	30	1,067	16.6	11.1	28	4.7
850	30	1,552	13.8	8.0	28	5.2
800	30	2,061	11.2	3.4	28	5.4
750	30	2,599	8.9	-2.3	28	5.6
700	30	3,167	5.8	-7.7	28	6.1
650	30	3,770	2.9	-12.3	27	6.9
600	30	4,415	-.5	-16.7	27	8.1
550	30	5,105	-4.6	-20.8	28	8.7
500	30	5,848	-9.2	-25.2	27	10.6
450	30	6,656	-14.0	-30.6	27	12.6
400	30	7,540	-20.4	-36.3	27	14.7
350	30	8,518	-27.3	-41.4	27	16.9
300	30	9,607	-35.5	-48.6	27	19.3
250	30	10,851	-44.8		[illegible]	24.3
200	30	12,309	-55.4		28	25.8
175	30	13,151	-60.3		28	26.3
150	30	14,104	-63.3		28	20.5
125	30	15,217	-66.2		[illegible]	15.4
100	30	16,565	-66.8		27	9.3
80	30	17,921	-64.1		[illegible]	4.8
70	30	18,744	-61.3		30	2.0
60	30	19,706	-59.1		02	1.3
50	29	20,854	-56.8		06	2.3
40	27	22,279	-54.3		07	3.6
30	26	24,143	-51.1		08	3.6
25	25	25,332	-49.5		07	2.9
20	23	26,795	-47.2		07	2.6
15	20	28,708	-45.4		07	3.3
10	6	31,429	-41.7			
7						
5						
4						

* INTERNATIONAL FALLS, MINN.
971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	8.1	4.2	20	1.9
1000						
950	30	540	8.7	5.0	22	3.2
900	30	986	7.1	2.4	24	6.1
850	30	1,456	5.2	-1.6	26	8.2
800	30	1,949	2.9	-5.9	26	10.2
750	30	2,470	.2	-8.8	26	11.4
700	30	3,020	-2.8	-12.0	26	13.7
650	30	3,604	-5.6	-15.0	27	15.8
600	30	4,228	-8.9	-20.3	27	18.1
550	30	4,897	-13.1	-24.4	27	20.1
500	30	5,617	-17.7	-29.9	27	22.3
450	30	6,398	-22.7	-34.9	27	24.4
400	30	7,252	-28.4	-41.4	27	29.1
350	30	8,199	-35.1	-47.2	26	31.4
300	30	9,254	-42.9	-49.1	26	32.6
250	30	10,462	-50.4		26	35.1
200	30	11,901	-54.6		27	33.2
175	30	12,755	-55.4		27	30.1
150	30	13,737	-56.0		27	27.9
125	30	14,894	-56.9		27	22.3
100	30	16,306	-57.0		26	17.5
80	30	17,722	-56.0		27	13.2
70	29	18,575	-55.4		26	11.1
60	29	19,561	-54.2		26	8.7
50	29	20,733	-53.1		26	6.4
40	28	22,181	-51.7		27	5.2
30	28	24,052	-50.4		27	3.6
25	27	25,247	-49.3		27	2.6
20	27	26,715	-48.1		30	2.0
15	24	28,638	-46.2		34	.6
10	19	31,360	-43.0		35	.6
7	14	33,806	-39.3		29	1.7
5	8	36,109	-36.6			
4	5	37,596	-36.4			

JACKSON, MISS.
1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	22.1	20.6	13	1.2
1000	30	152	22.2	20.0	16	1.5
950	30	600	22.6	17.9	20	4.0
900	30	1,070	19.9	14.8	20	3.9
850	30	1,562	16.9	11.2	21	3.7
800	30	2,077	13.9	6.8	21	3.1
750	30	2,619	10.5	3.2	23	2.2
700	30	3,190	6.9	-1.4	25	2.1
650	30	3,757	4.1	-7.1	26	2.6
600	30	4,444	.9	-11.6	26	3.6
550	30	5,139	-2.7	-16.3	25	3.6
500	30	5,869	-7.2	-20.9	26	4.3
450	30	6,702	-12.5	-26.7	26	5.4
400	30	7,591	-18.7	-33.3	27	6.6
350	30	8,577	-25.5	-39.2	26	6.9
300	30	9,672	-34.3	-46.0	28	6.9
250	30	10,922	-44.4		27	7.1
200	30	12,380	-55.8		28	8.3
175	30	13,219	-61.5		28	8.3
150	30	14,162	-67.0		29	7.9
125	30	15,250	-71.3		29	6.4
100	26	16,568	-72.1		31	2.3
80	24	17,898	-67.6		05	1.6
70	24	18,709	-64.5		08	3.0
60	24	19,656	-62.2		09	3.5
50	24	20,792	-59.2		08	4.9
40	23	22,204	-56.0		09	6.8
30	22	24,049	-52.6		09	7.9
25	[illegible]	25,233	-50.6		09	8.4
20	16	26,698	-48.3		09	8.8
15	14	28,501	-46.4		09	9.0
10	12	31,303	-44.0			
7						

JOHN F. KENNEDY INT. AP NY
1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	18.2	14.5	34	1.5
1000	29	160	18.0	13.4	34	2.5
950	30	594	16.5	11.3	35	1.9
900	30	1,054	14.6	8.6	30	1.8
850	30	1,536	12.7	2.7	28	3.5
800	30	2,044	11.4	-3.1	28	4.9
750	30	2,581	8.9	-5.4	28	5.8
700	30	3,149	5.6	-9.4	28	6.8
650	30	3,752	2.1	-12.8	28	6.8
600	30	4,394	-1.4	-18.3	28	7.9
550	30	5,082	-5.2	-22.4	28	8.9
500	30	5,824	-9.8	-26.7	28	9.6
450	30	6,629	-15.1	-30.2	28	11.0
400	30	7,509	-21.1	-34.7	28	13.5
350	30	8,484	-28.2	-39.1	27	15.8
300	30	9,568	-36.7	-47.9	28	18.9
250	30	10,806	-46.1		28	22.0
200	29	12,261	-55.1		28	22.7
175	29	13,106	-59.1		28	23.4
150	29	14,065	-62.0		28	20.7
125	29	15,186	-64.6		28	16.7
100	29	16,548	-64.3		28	12.8
80	29	17,920	-61.8		28	8.0
70	29	18,749	-60.5		28	4.9
60	29	19,715	-58.1		29	2.2
50	28	20,868	-55.9		33	1.0
40	28	22,295	-53.7		36	1.3
30	27	24,161	-50.9		06	2.4
25	25	25,349	-49.7		06	1.8
20	25	26,818	-47.2		01	1.4
15	25	28,732	-44.6		29	.3
10	20	31,482	-41.0		27	1.8
7						

JOHNSTON IS., PACIFIC AREA
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	26.8	23.1	09	7.0
1000	30	105	25.4	22.5	09	7.5
950	30	556	21.8	20.4	09	8.3
900	30	1,025	19.2	16.5	09	8.2
850	30	1,515	16.8	12.5	09	6.9
800	30	2,031	14.4	8.0	10	5.8
750	30	2,575	11.8	2.3	09	4.4
700	30	3,150	9.2	-2.0	09	3.2
650	30	3,761	6.2	-6.4	10	2.1
600	30	4,414	2.8	-9.5	10	1.4
550	30	5,114	-1.0	-14.3	08	1.2
500	30	5,868	-5.5	-18.1	19	.3
450	30	6,687	-10.6	-22.5	24	1.3
400	30	7,583	-16.6	-29.1	24	3.3
350	30	8,575	-23.7	-34.0	26	6.0
300	30	9,680	-32.0	-43.4	26	9.2
250	30	10,941	-42.3		26	13.7
200	30	12,410	-54.4		26	16.8
175	30	13,253	-61.0		26	17.4
150	30	14,194	-68.1		27	16.4
125	29	15,272	-74.9		27	11.9
100	29	16,549	-78.4		27	2.9
80	28	17,842	-72.3		09	6.0
70	27	18,636	-68.4		09	8.9
60	27	19,565	-66.1		09	12.4
50	26	20,681	-62.6		09	16.7
40	26	22,068	-59.5		09	19.6
30	24	23,887	-55.0		09	24.5
25	24	25,060	-52.3		09	26.4
20	23	26,519	-48.7		09	27.3
15	21	28,422	-45.6		09	25.0
10	12	31,158	-41.6			
7						

KEY WEST, FLA.
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	26.3	23.1	08	2.2
1000	30	132	26.1	22.5	08	3.2
950	30	584	22.9	20.1	09	4.3
900	30	1,055	20.0	15.9	10	4.1
850	30	1,546	16.9	11.3	10	3.9
800	30	2,062	14.3	7.1	09	3.6
750	30	2,605	11.4	1.5	09	3.7
700	30	3,178	8.1	-1.6	08	3.0
650	30	3,787	4.8	-5.9	08	3.2
600	30	4,435	1.2	-11.5	09	3.0
550	30	5,130	-2.8	-18.4	[illegible]	2.8
500	30	5,879	-7.4	-21.6	08	3.5
450	30	6,692	-12.4	-28.4	07	4.4
400	30	7,582	-18.4	-35.0	06	4.7
350	30	8,568	-25.5	-41.6	06	5.6
300	30	9,664	-34.1	-49.7	06	5.7
250	30	10,913	-44.4		06	4.8
200	30	12,371	-55.7		04	4.2
175	30	13,211	-61.3		04	6.5
150	29	14,156	-66.7		03	6.6
125	29	15,247	-70.3		03	6.2
100	29	16,565	-72.1		06	5.2
80	28	17,889	-67.9		08	5.9
70	28	18,698	-65.0		08	6.5
60	28	19,644	-62.8		09	8.2
50	28	20,774	-59.9		09	11.8
40	28	22,177	-57.0		09	14.5
30	28	24,019	-52.3		09	15.3
25	28	25,204	-50.3		09	16.1
20	28	26,668	-48.3		08	17.0
15	27	28,571	-46.0		09	19.4
10	18	31,305	-41.9		09	20.6
7						

* KOROR, CAROLINE IS.
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	27.7	24.1	25	2.6
1000	30	90	27.0	23.9	25	3.2
950	30	543	23.6	21.7	26	5.7
900	30	1,016	20.9	17.5	27	5.7
850	30	1,509	17.9	14.0	27	4.8
800	30	2,028	15.4	12.0	27	3.2
750	30	2,574	12.6	8.4	[illegible]	2.4
700	30	3,151	9.4	3.3	32	1.7
650	30	3,763	6.3	-.8	34	1.8
600	30	4,416	2.7	-6.3	35	1.4
550	30	5,116	-1.1	-10.5	04	1.9
500	30	5,871	-5.1	-15.1	07	2.6
450	30	6,693	-9.6	-20.8	08	2.8
400	30	7,594	-15.0	-27.2	09	2.9
350	30	8,593	-22.2	-33.5	10	4.2
300	30	9,705	-30.4	-40.7	07	5.6
250	30	10,974	-40.6	-49.8	07	8.8
200	30	12,453	-53.3		07	11.5
175	30	13,300	-60.2		06	12.5
150	30	14,244	-67.5		09	14.6
125	30	15,323	-74.4		09	12.2
100	30	16,605	-78.3		08	6.6
80	30	17,887	-74.2		09	6.9
70	30	18,673	-70.4		09	9.3
60	30	19,595	-67.7		09	14.0
50	30	20,701	-64.6		09	20.3
40	28	22,079	-60.7		09	26.1
30	28	23,891	-55.8		09	30.2
25	26	25,058	-52.8		09	32.0
20	24	26,511	-49.8		09	33.6
15	18	28,423	-45.8		09	37.0
10	17	31,172	-38.3		09	25.2
7	13	33,668	-34.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KHAJALEIN, MARSHALL IS. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	27.2	24.3	05	.6
1000	30	83	26.6	24.0	06	.6
950	30	537	23.7	21.9	05	.7
900	30	1,009	20.9	18.2	04	.9
850	30	1,503	18.3	15.3	05	1.0
800	30	2,022	15.7	12.4	06	1.3
750	30	2,569	12.9	9.2	07	2.0
700	30	3,147	9.8	5.3	08	2.7
650	30	3,760	6.6	.8	10	3.8
600	30	4,414	2.7	-2.6	10	4.5
550	30	5,115	-.9	-6.5	11	5.4
500	30	5,871	-5.1	-10.9	11	5.3
450	30	6,692	-9.7	-16.8	10	5.6
400	30	7,593	-15.2	-24.7	10	5.9
350	30	8,590	-21.7	-32.0	10	5.5
300	30	9,707	-30.2	-39.9	10	4.6
250	30	10,977	-40.7	-50.3	11	4.1
200	29	12,455	-53.4	-61.9	10	6.1
175	27	13,299	-60.9		10	6.0
150	27	14,240	-68.7		07	5.7
125	23	15,305	-77.2		08	5.4
100	17	16,564	-82.0		08	7.1
80	15	17,840	-74.5		09	6.4
70	14	18,618	-72.0		09	8.6
60	12	19,531	-68.8		08	14.6
50	11	20,630	-65.2		09	21.0
40	11	22,004	-60.7		09	28.0
30	11	23,815	-55.6		09	31.3
25	11	24,983	-53.1		09	31.5
20	11	26,431	-50.4		09	33.1
15	9	28,327	-46.5			
10	5	31,049	-41.6			
7						

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	22.5	21.5	06	1.4
1000	30	137	24.7	22.4	13	1.6
950	30	588	22.6	18.7	17	3.7
900	30	1,058	20.3	13.9	17	4.2
850	30	1,550	17.4	10.1	17	4.0
800	30	2,066	14.4	6.0	17	3.8
750	30	2,609	11.4	2.0	18	2.4
700	30	3,162	8.0	-2.0	19	1.3
650	30	3,791	4.6	-5.7	21	.9
600	30	4,439	1.0	-11.3	25	.5
550	30	5,134	-2.7	-17.5	22	1.2
500	30	5,883	-7.2	-23.8	24	1.3
450	30	6,697	-12.4	-26.9	24	1.7
400	30	7,587	-18.3	-34.4	23	2.6
350	30	8,573	-25.5	-40.1	24	2.7
300	30	9,669	-33.9	-48.9	25	2.6
250	30	10,920	-44.2		26	2.8
200	29	12,383	-55.3		28	3.3
175	29	13,224	-61.1		27	4.1
150	29	14,167	-66.9		29	4.2
125	28	15,258	-71.7		30	2.2
100	28	16,567	-72.7		01	1.9
80	28	17,888	-69.3		07	2.3
70	28	18,693	-65.5		08	3.6
60	28	19,639	-62.4		08	4.8
50	28	20,774	-59.3		09	5.9
40	28	22,179	-56.8		09	7.9
30	27	24,020	-52.6		09	9.5
25	27	25,204	-50.6		09	9.9
20	26	26,665	-48.8		09	10.3
15	26	28,562	-46.8		09	10.1
10	17	31,251	-43.2		08	11.5
7	8	33,626	-41.9			

LANDER, WYO. 83[illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,697	7.8	-2.4	23	1.6
1000						
950						
900						
850						
800	30	2,001	10.3	-3.4	25	.7
750	30	2,535	7.5	-6.8	27	2.4
700	30	3,099	4.0	-9.9	26	6.8
650	30	3,697	-.3	-13.1	27	11.2
600	30	4,333	-4.7	-16.9	26	14.5
550	30	5,011	-9.1	-23.3	26	14.9
500	30	5,742	-13.7	-30.5	26	16.6
450	30	6,535	-19.2	-35.1	26	18.9
400	30	7,400	-25.7	-40.2	26	20.9
350	30	8,357	-32.9	-46.4	25	21.4
300	30	9,420	-41.3	-52.6	25	24.8
250	30	10,635	-50.0		25	28.9
200	30	12,071	-56.2		26	32.2
175	30	12,917	-57.6		26	29.2
150	30	13,887	-59.4		26	27.6
125	30	15,023	-61.2		26	23.1
100	30	16,404	-62.0		26	16.8
80	30	17,786	-60.8		26	11.8
70	30	18,620	-59.7		26	9.6
60	30	19,589	-57.5		26	7.2
50	30	20,745	-56.1		26	4.2
40	30	22,169	-54.0		25	3.6
30	30	24,028	-51.7		29	.7
25	30	25,214	-50.4		27	.6
20	30	26,676	-48.8		07	1.2
15	28	28,575	-47.1		07	2.0
10	16	31,263	-43.4			
7						

• LIHUE KAUAI, HAWAII 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	24.2	21.0	06	2.8
1000	30	138	24.2	20.3	07	3.6
950	30	586	20.5	18.8	08	5.3
900	30	1,052	17.2	14.9	08	5.1
850	30	1,539	14.2	9.8	08	4.5
800	30	2,049	12.1	4.9	08	3.4
750	30	2,589	10.9	-3.8	08	2.3
700	30	3,162	8.9	-9.8	09	2.0
650	30	3,772	5.9	-13.7	10	.7
600	30	4,423	2.2	-17.1	01	.1
550	30	5,120	-1.9	-21.1	25	.2
500	30	5,872	-6.2	-26.8	28	1.2
450	30	6,688	-11.5	-30.0	28	2.8
400	30	7,579	-18.3	-35.5	27	4.0
350	30	8,564	-25.9	-41.6	28	6.4
300	30	9,658	-34.6	-47.7	28	11.0
250	30	10,905	-44.6		28	15.4
200	30	12,364	-55.2		28	21.7
175	30	13,205	-61.2		28	21.3
150	30	14,148	-67.1		28	18.5
125	30	15,234	-72.2		28	13.5
100	30	16,540	-73.4		29	4.4
80	30	17,859	-68.9		09	3.6
70	30	18,664	-66.4		09	6.4
60	30	19,604	-63.8		09	10.1
50	30	20,730	-61.0		09	12.3
40	30	22,125	-58.5		09	14.8
30	30	23,954	-53.8		09	18.4
25	29	25,131	-51.5		09	19.8
20	28	26,588	-48.4		09	20.6
15	27	28,494	-46.5		09	19.0
10	21	31,220	-42.9		09	18.2
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LITTLE ROCK, ARK. 10[illegible]8 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	20.4	18.8	05	.7
1000	30	[illegible]	21.0	19.1	21	[illegible]
950	30	[illegible]	21.4	16.9	21	4.0
900	30	1,058	19.3	14.7	22	[illegible]
850	30	1,549	16.4	11.5	23	4.6
800	30	2,064	13.8	7.0	24	[illegible]
750	30	2,606	10.5	2.9	24	3.8
700	30	3,177	7.0	-1.2	25	3.2
650	30	3,784	3.7	-5.8	26	3.6
600	30	4,430	.3	-10.3	26	4.5
550	30	5,123	-3.4	-16.6	26	[illegible]
500	30	5,871	-7.8	-23.2	26	6.0
450	30	6,682	-13.0	-26.8	27	[illegible]
400	30	7,570	-19.1	-33.1	27	[illegible]
350	30	8,553	-26.2	-39.1	27	[illegible]
300	30	9,646	-34.7	-45.2	27	12.6
250	30	10,894	-44.6		27	14.6
200	30	12,350	-56.0		27	15.7
175	30	13,189	-61.6		27	15.4
150	30	14,132	-66.3		28	13.0
125	28	15,228	-70.3		28	10.5
100	27	16,552	-70.6		28	5.0
80	26	17,890	-67.5		28	1.2
70	26	18,702	-63.6		08	.7
60	26	19,654	-61.1		09	2.6
50	26	20,794	-58.5		09	3.6
40	26	22,207	-55.8		09	4.5
30	26	24,052	-52.6		08	5.6
25	26	25,236	-50.5		08	6.4
20	25	26,695	-48.2		09	6.2
15	25	28,598	-46.3		09	5.8
10	10	31,309	-42.8			
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MCGRATH, ALASKA 1001 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	103	3.8	-.8	27	.6
1000	16	175	3.2	-3.0	35	.6
950	30	532	3.9	-.8	06	.5
900	30	970	1.7	-2.6	31	.5
850	30	1,429	-.6	-5.4	27	1.3
800	30	1,912	-2.8	-8.4	26	2.4
750	30	2,421	-5.3	-12.1	27	2.8
700	30	2,960	-8.0	-15.8	26	3.4
650	30	3,533	-11.0	-20.5	26	3.8
600	30	4,144	-14.5	-25.3	28	5.5
550	30	4,799	-18.5	-29.2	27	5.8
500	30	5,504	-23.1	-33.5	27	7.2
450	30	6,268	-28.2	-38.3	26	8.1
400	30	7,103	-34.1	-43.2	26	9.7
350	30	8,027	-40.7	-42.9	25	13.3
300	30	9,059	-47.0		26	15.2
250	30	10,254	-51.5		27	16.4
200	30	11,698	-52.2		27	15.4
175	29	12,558	-51.1		27	13.7
150	29	13,559	-51.8		27	11.1
125	29	14,741	-52.1		28	10.8
100	29	16,184	-52.6		27	8.9
80	28	17,626	-53.0		28	8.5
70	27	18,489	-53.0		28	7.1
60	27	19,482	-53.6		28	7.1
50	24	20,635	-54.3		29	7.2
40	23	22,062	-54.7		29	6.2
30	23	23,903	-54.7		29	6.1
25	22	25,075	-54.3		29	6.0
20	19	26,528	-52.9		29	6.0
15	13	28,415	-51.1		30	5.4
10						
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5						

+ MAJURO, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	28.7	24.7	36	.9
1000	30	88	27.0	23.2	01	1.0
950	30	541	23.7	21.3	03	1.2
900	30	1,014	21.0	18.0	04	1.1
850	30	1,508	18.5	14.6	04	1.2
800	30	2,027	15.9	11.6	07	1.5
750	30	2,574	13.2	8.3	08	2.3
700	30	3,153	10.4	4.6	09	2.2
650	30	3,767	7.0	1.3	10	3.2
600	30	4,422	3.3	-2.8	10	4.4
550	30	5,124	-.4	-6.9	10	5.0
500	30	5,881	-4.5	-10.9	10	5.0
450	30	6,705	-9.1	-16.3	10	5.2
400	30	7,608	-14.3	-23.5	10	5.5
350	30	8,611	-20.9	-31.3	09	5.4
300	30	9,728	-29.4	-39.1	10	5.0
250	30	11,002	-39.7	-48.7	10	5.1
200	30	12,486	-52.7		09	4.9
175	30	13,335	-59.8		09	6.0
150	30	14,279	-67.9		07	7.2
125	30	15,355	-75.8		08	8.3
100	30	16,623	-80.0		08	4.8
80	30	17,907	-73.6		07	4.9
70	30	18,696	-69.9		09	8.6
60	29	19,622	-67.1		09	13.5
50	29	20,733	-63.8		09	20.4
40	29	22,114	-59.8		09	25.8
30	27	23,935	-54.4		09	30.2
25	27	25,112	-51.2		09	31.5
20	26	26,577	-46.7		09	31.5
15	21	28,495	-42.3		09	30.9
10	16	31,282	-35.8		10	10.9
7						
5						

• MEDFORD, OREG. 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	8.6	5.3	18	.2
1000						
950	30	573	12.2	6.1	29	.2
900	30	1,027	12.5	3.6	10	.1
850	30	1,505	10.4	.5	14	1.2
800	30	2,008	8.0	-4.4	22	.3
750	30	2,538	5.4	-9.8	27	2.9
700	30	3,098	1.9	-12.2	27	4.4
650	30	3,692	-1.9	-17.7	28	5.8
600	30	4,324	-5.4	-22.7	28	6.4
550	30	5,001	-9.6	-27.1	28	7.2
500	30	5,730	-14.5	-30.7	28	7.0
450	30	6,520	-20.1	-35.6	28	7.4
400	30	7,382	-26.5	-41.1	28	8.1
350	30	8,336	-33.5	-47.3	29	8.1
300	30	9,397	-41.5	-53.8	29	8.1
250	30	10,612	-49.7		28	9.1
200	30	12,052	-55.1		27	10.5
175	30	12,902	-56.8		26	12.2
150	30	13,875	-58.0		26	13.4
125	30	15,020	-59.7		26	12.9
100	30	16,414	-60.0		27	11.1
80	30	17,808	-59.5		27	9.1
70	30	18,646	-58.6		27	7.1
60	30	19,618	-57.3		27	5.9
50	29	20,772	-56.2		27	5.4
40	26	22,199	-54.1		26	3.6
30	25	24,055	-51.3		26	4.3
25	23	25,243	-49.7		27	3.0
20	21	26,712	-48.1		27	1.8
15	21	28,614	-46.7		33	.1
10	19	31,323	-42.9		03	.8
7	14	33,728	-40.7		12	1.0
5	6	35,967	-39.3			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	22.7	22.4	09	.7
1000	30	120	24.9	23.6	10	3.0
950	30	572	23.4	20.4	11	5.0
900	30	1,044	21.2	16.2	11	6.0
850	30	1,538	18.3	12.3	11	5.4
800	30	2,056	15.4	8.2	11	5.5
750	30	2,601	12.4	4.7	11	4.8
700	30	3,177	9.2	.3	10	4.7
650	30	3,788	5.6	-4.2	09	4.6
600	30	4,439	1.9	-10.0	09	4.7
550	30	5,136	-2.1	-15.8	09	4.7
500	30	5,887	-6.7	-18.6	08	4.8
450	29	6,702	-11.7	-23.2	08	4.8
400	29	7,595	-17.3	-29.8	07	4.6
350	29	8,585	-24.3	-36.7	06	4.6
300	29	9,687	-32.6	-46.2	03	3.1
250	29	10,945	-42.6		01	2.8
200	29	12,415	-54.3		34	3.5
175	29	13,260	-59.9		32	4.4
150	29	14,209	-65.8		32	3.6
125	28	15,301	-71.2		34	3.6
100	28	16,612	-73.1		03	4.7
80	28	17,930	-68.8		06	5.9
70	28	18,736	-65.6		08	7.6
60	28	19,677	-63.7		09	8.4
50	28	20,801	-61.1		10	9.7
40	27	22,201	-57.8		09	12.4
30	27	24,035	-53.4		09	14.6
25	26	25,218	-50.6		09	16.5
20	25	26,682	-48.0		09	18.3
15	18	28,600	-45.3		09	19.6
10	8	31,347	-42.1			
7						
5						

MIAMI, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	24.2	22.6	03	1.3
1000	30	140	25.7	22.8	07	2.3
950	30	591	22.4	19.8	10	4.5
900	30	1,061	19.6	15.9	09	4.0
850	30	1,552	16.7	11.8	09	3.4
800	30	2,067	14.1	7.3	09	2.7
750	30	2,610	11.3	2.9	09	2.6
700	30	3,183	7.9	-1.0	09	2.5
650	30	3,792	4.7	-6.1	08	2.7
600	30	4,440	1.1	-11.8	08	2.6
550	30	5,135	-2.7	-15.7	07	2.7
500	30	5,884	-7.5	-20.4	07	3.3
450	30	6,697	-12.4	-26.8	07	3.7
400	30	7,587	-18.6	-32.9	06	4.1
350	30	8,572	-25.5	-38.8	06	4.6
300	30	9,667	-34.2	-46.2	06	5.3
250	30	10,916	-44.6		06	5.6
200	30	12,373	-55.9		05	4.7
175	30	13,211	-61.5		03	5.9
150	29	14,155	-66.8		03	6.4
125	29	15,247	-70.5		04	5.9
100	28	16,565	-71.6		06	5.5
80	28	17,892	-67.9		08	5.4
70	28	18,701	-65.1		08	6.1
60	28	19,648	-62.4		09	7.7
50	28	20,779	-60.0		09	10.8
40	28	22,184	-56.5		10	12.9
30	24	24,027	-52.1		09	13.7
25	21	25,212	-50.4		09	14.9
20	20	26,674	-48.8		09	15.3
15	15	28,574	-46.3		09	16.3
10	9	31,289	-42.3			
7						
5						

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	17.6	15.8	14	1.9
1000						
950						
900	30	1,037	19.3	15.1	16	4.2
850	30	1,530	18.6	11.0	18	7.1
800	30	2,049	16.1	7.8	20	5.1
750	30	2,596	12.9	3.6	22	3.6
700	30	3,172	9.0	-.2	23	2.2
650	30	3,782	4.9	-4.1	24	2.5
600	30	4,430	1.2	-11.3	24	3.3
550	30	5,126	-2.6	-18.2	24	3.9
500	30	5,875	-7.3	-21.7	24	4.4
450	30	6,689	-12.1	-28.5	25	5.3
400	30	7,580	-18.1	-35.7	25	5.4
350	30	8,566	-25.4	-41.3	26	6.3
300	30	9,663	-33.9	-46.7	27	8.9
250	30	10,914	-44.0		27	10.8
200	30	12,373	-55.9		27	12.7
175	30	13,211	-61.7		27	12.1
150	30	14,156	-66.1		26	11.1
125	30	15,250	-70.7		26	9.4
100	27	16,568	-72.5		27	4.9
80	25	17,894	-68.7		27	1.5
70	25	18,700	-65.4		11	1.0
60	25	19,644	-62.9		08	2.8
50	24	20,777	-59.5		09	4.9
40	23	22,184	-56.7		09	6.3
30	23	24,022	-53.5		09	7.1
25	23	25,202	-51.2		09	7.6
20	21	26,661	-49.2		09	7.6
15	21	28,555	-47.6		09	8.5
10	16	31,273	-43.7		09	10.0
7	8	33,633	-41.7			

MONTERREY, MEXICO 964 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	22.2	21.0	09	.3
1000						
950	30	574	22.2	20.5	12	2.0
900	30	1,044	19.8	17.9	14	5.1
850	30	1,537	18.4	12.8	15	6.7
800	30	2,056	15.8	8.5	15	6.6
750	30	2,602	13.0	2.4	15	4.4
700	30	3,179	9.6	-2.8	14	1.8
650	30	3,790	5.8	-5.2	13	1.1
600	30	4,441	1.7	-10.1	12	.9
550	30	5,137	-2.1	-16.7	14	1.5
500	30	5,888	-6.6	-22.2	12	1.8
450	30	6,704	-11.6	-29.2	10	1.8
400	30	7,596	-17.4	-35.3	07	2.5
350	30	8,586	-24.2	-41.7	04	3.0
300	30	9,689	-32.7	-50.1	03	3.9
250	30	10,945	-43.0		01	5.7
200	30	12,411	-54.7		36	6.3
175	30	13,253	-60.8		35	6.3
150	30	14,197	-67.4		35	4.5
125	30	15,281	-72.6		02	3.4
100	28	16,585	-74.3		07	3.8
80	26	17,903	-69.5		09	5.4
70	25	18,705	-66.4		09	6.9
60	24	19,646	-64.0		11	8.8
50	24	20,772	-60.8		11	10.8
40	24	22,173	-57.6		10	12.3
30	23	24,003	-53.8		10	14.0
25	23	25,180	-51.6		11	14.7
20	23	26,637	-49.4		10	16.1
15	22	28,533	-46.0		10	15.8
10	14	31,261	-42.7			
7						

MONETT, MO. 967 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	438	18.4	16.7	14	1.9
1000						
950	30	585	18.7	16.0	18	3.4
900	30	1,051	18.1	12.7	22	6.0
850	30	1,539	15.6	11.0	24	5.6
800	30	2,053	13.4	5.6	25	5.2
750	30	2,594	10.2	2.6	25	4.9
700	30	3,165	6.7	-2.4	25	4.8
650	30	3,770	3.0	-5.9	26	5.4
600	30	4,415	-.6	-12.5	26	6.1
550	30	5,105	-4.4	-20.8	26	7.3
500	30	5,850	-8.5	-28.0	27	7.9
450	30	6,659	-13.8	-32.9	27	9.0
400	30	7,543	-20.0	-36.2	27	11.1
350	30	8,522	-27.3	-42.7	27	12.8
300	30	9,611	-35.6	-48.4	27	14.2
250	30	10,853	-45.3		27	16.6
200	30	12,307	-56.0		27	17.0
175	30	13,146	-61.2		27	18.0
150	30	14,093	-65.3		27	16.1
125	28	15,194	-68.3		27	13.3
100	27	16,526	-69.3		27	8.4
80	27	17,868	-65.6		26	4.7
70	27	18,666	-62.8		26	3.3
60	27	19,641	-60.5		27	1.1
50	25	20,789	-57.9		11	.7
40	24	22,206	-55.7		08	1.8
30	24	24,055	-52.2		07	2.2
25	24	25,240	-50.6		08	2.3
20	24	26,702	-48.4		07	3.0
15	23	28,609	-46.7		08	3.6
10	17	31,314	-42.2		09	3.5
7						

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	57	20.2	18.7	11	.5
1000	30	155	21.9	19.5	15	.8
950	30	603	22.0	17.4	18	1.6
900	30	1,072	19.4	14.7	21	1.2
850	30	1,562	16.2	10.9	22	1.5
800	30	2,076	12.9	7.3	24	1.4
750	30	2,616	10.1	.5	27	1.1
700	30	3,187	6.7	-6.1	27	1.7
650	30	3,793	4.2	-11.7	28	2.5
600	30	4,441	1.1	-15.4	28	3.1
550	30	5,135	-2.9	-19.1	28	3.1
500	30	5,884	-7.3	-25.0	28	4.0
450	30	6,697	-12.3	-30.3	28	4.4
400	30	7,586	-18.7	-34.8	29	5.1
350	30	8,571	-25.7	-39.6	29	6.5
300	30	9,666	-34.3	-47.5	29	6.2
250	30	10,915	-44.3		31	6.4
200	30	12,374	-55.7		31	6.8
175	30	13,213	-61.4		30	6.8
150	30	14,157	-67.0		31	7.6
125	30	15,248	-70.7		31	5.6
100	30	16,565	-71.6		35	1.6
80	30	17,896	-67.5		06	1.9
70	30	18,706	-64.4		08	2.9
60	29	19,659	-61.4		08	3.2
50	29	20,799	-58.2		08	4.5
40	28	22,211	-55.8		09	5.5
30	26	24,059	-52.2		08	7.4
25	25	25,247	-49.9		09	8.1
20	22	26,721	-47.6		09	8.3
15	19	28,630	-45.5		09	7.5
10	13	31,358	-42.7			
7						

NASHVILLE, TENN. 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	18.8	17.5	11	[illegible]
1000	6	189	19.0	16.9		
950	30	601	20.1	16.2	22	4.6
900	30	1,067	17.6	14.0	24	5.4
850	30	1,554	14.8	10.4	26	5.3
800	30	2,066	12.1	4.5	27	4.5
750	30	2,605	9.1	-2.4	27	4.5
700	30	3,174	6.2	-6.4	27	4.5
650	30	3,778	3.1	-10.9	27	4.8
600	30	4,423	.0	-16.0	27	6.0
550	30	5,115	-3.9	-21.8	27	7.2
500	30	5,861	-8.5	-25.3	27	9.2
450	30	6,670	-13.8	-29.8	27	10.4
400	30	7,554	-20.0	-33.1	27	10.9
350	30	8,534	-27.0	-37.8	27	12.2
300	30	9,624	-35.2	-46.7	27	14.6
250	30	10,869	-44.8		28	16.9
200	30	12,325	-55.9		28	18.7
175	30	13,164	-61.2		28	18.3
150	29	14,110	-66.0		29	16.0
125	29	15,207	-69.1		28	11.7
100	29	16,538	-69.3		27	7.4
80	29	17,879	-66.1		27	2.6
70	27	18,695	-62.8		31	.7
60	29	19,650	-61.0		08	.3
50	27	20,790	-58.0		08	1.9
40	27	22,207	-55.1		08	2.2
30	25	24,057	-52.0		09	3.4
25	25	25,243	-50.1		09	3.7
20	25	26,7[illegible]9	-47.6		09	3.3
15	22	28,611	-46.1		08	3.8
10	18	31,32[illegible]	-43.1		[illegible]	4.4
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1972

* NOME, ALASKA 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	4.2	1.4	02	1.8
1000	24	126	5.4	1.5	07	1.5
950	30	534	2.7	-1.1	04	1.8
900	30	970	.5	-5.4	03	.9
850	30	1,421	-1.9	-8.4	35	1.1
800	30	1,907	-4.3	-11.2	33	1.5
750	30	2,414	-6.5	-14.8	32	1.7
700	30	2,951	-9.1	-19.4	30	2.1
650	30	3,521	-12.2	-21.9	29	2.9
600	30	4,129	-15.5	-26.3	29	4.2
550	30	4,781	-19.6	-28.8	28	5.1
500	30	5,482	-24.3	-33.1	28	6.4
450	30	6,242	-29.5	-38.2	28	7.8
400	30	7,073	-35.3	-44.3	27	8.5
350	30	7,993	-41.5	-43.0	27	9.5
300	30	9,021	-47.9		27	12.4
250	30	10,213	-51.4		26	12.7
200	30	11,660	-51.7		27	11.7
175	30	12,527	-51.5		27	10.4
150	29	13,527	-51.6		27	9.5
125	29	14,708	-52.3		27	7.8
100	28	16,150	-52.6		27	7.0
80	27	17,584	-53.0		28	7.4
70	27	18,445	-53.2		28	6.7
60	27	19,437	-53.8		28	5.9
50	25	20,613	-54.3		28	5.6
40	24	22,050	-54.4		28	4.8
30	23	23,902	-54.2		29	4.6
25	21	25,074	-53.6		29	4.8
20	18	26,543	-52.8		29	4.9
15	16	28,445	-50.3		29	4.4
10	12	31,190	-45.8		27	5.4
7	8	33,550	-42.3			
5						

NORTH PLATTE, NEBR. 918 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	847	10.6	7.4	06	.8
1000						
950						
900	30	1,015	13.0	6.7	32	.3
850	30	1,498	14.5	3.4	24	2.6
800	30	2,009	12.6	-.4	25	5.0
750	30	2,548	9.9	-3.9	26	7.3
700	30	3,118	6.3	-6.3	27	8.5
650	30	3,721	2.3	-10.1	26	9.3
600	30	4,363	-2.3	-13.2	26	10.8
550	30	5,048	-7.0	-17.1	25	12.2
500	30	5,785	-11.6	-24.3	25	14.6
450	30	6,584	-17.0	-30.0	25	16.7
400	30	7,457	-23.4	-35.6	25	19.7
350	30	8,423	-30.3	-42.6	25	21.9
300	30	9,499	-38.7	-49.8	26	26.3
250	30	10,727	-47.8		25	29.8
200	30	12,169	-56.5		26	31.9
175	29	13,010	-59.1		26	31.0
150	29	13,970	-61.9		26	27.4
125	29	15,092	-64.4		26	21.4
100	29	16,456	-64.7		26	16.0
80	29	17,827	-62.2		26	9.6
70	28	18,660	-59.9		26	8.1
60	28	19,629	-57.7		26	5.4
50	28	20,787	-55.2		26	3.3
40	27	22,219	-53.0		24	1.2
30	27	24,084	-50.9		11	.5
25	26	25,275	-49.3		08	1.1
20	24	26,748	-47.3		05	2.3
15	20	28,678	-44.4		08	1.4
10	5	31,439	-40.7			
7						
5						

OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	14.1	12.1	26	.8
1000	30	124	14.2	12.3	26	1.2
950	30	557	14.0	5.5	28	1.8
900	30	1,016	16.3	-2.6	29	1.7
850	30	1,501	14.9	-8.5	25	1.5
800	30	2,010	11.8	-10.1	23	1.9
750	30	2,546	8.2	-13.8	22	2.6
700	30	3,111	4.5	-16.1	22	2.9
650	30	3,710	.7	-20.0	23	4.2
600	30	4,348	-3.6	-22.9	23	5.3
550	30	5,029	-8.0	-27.7	24	6.1
500	30	5,763	-12.8	-33.2	24	7.3
450	30	6,558	-18.4	-37.9	24	8.0
400	30	7,426	-24.8	-40.6	25	9.6
350	30	8,386	-32.2	-47.5	25	12.3
300	30	9,453	-40.3	-54.1	25	14.5
250	30	10,673	-48.6		25	18.5
200	30	12,121	-54.3		25	21.9
175	30	12,973	-56.8		25	21.2
150	30	13,944	-59.3		25	18.5
125	30	15,079	-62.1		25	15.4
100	30	16,454	-62.8		26	10.6
80	29	17,835	-62.0		25	7.5
70	29	18,663	-60.9		26	5.0
60	29	19,624	-59.7		27	3.3
50	27	20,778	-57.6		26	2.1
40	26	22,202	-54.9		04	.1
30	26	24,054	-52.3		09	2.0
25	25	25,239	-50.6		08	2.6
20	24	26,704	-48.7		08	4.0
15	20	28,608	-46.8		09	4.9
10	11	31,341	-44.3			
7						
5						

OMAHA, NEBR. 968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	14.4	13.0	18	1.4
1000						
950	30	565	16.2	11.5	21	1.5
900	30	1,026	16.5	5.6	24	4.5
850	30	1,512	14.8	1.2	25	4.9
800	30	2,022	11.8	-1.7	25	6.6
750	30	2,560	8.8	-5.6	25	8.2
700	30	3,127	5.6	-11.2	25	8.9
650	29	3,728	2.0	-11.8	25	9.6
600	29	4,369	-2.2	-16.2	26	11.4
550	29	5,055	-6.3	-22.5	26	13.1
500	29	5,794	-10.8	-28.1	26	15.7
450	29	6,596	-16.1	-33.2	26	17.7
400	29	7,471	-22.5	-36.9	26	20.6
350	28	8,435	-29.8	-43.8	26	22.7
300	28	9,512	-38.0	-50.2	26	27.1
250	28	10,743	-47.5		26	30.8
200	28	12,187	-56.5		26	32.8
175	28	13,027	-59.6		26	32.4
150	28	13,987	-62.1		26	29.5
125	28	15,106	-64.5		27	24.1
100	28	16,470	-63.9		27	15.7
80	27	17,839	-61.6		26	10.6
70	27	18,671	-59.7		26	8.2
60	26	19,643	-57.5		26	4.6
50	26	20,799	-55.9		26	2.4
40	26	22,227	-53.5		22	.7
30	26	24,088	-51.6		08	1.2
25	25	25,278	-50.2		05	1.4
20	25	26,744	-47.8		06	2.1
15	23	28,655	-46.2		06	2.9
10	13	31,349	-42.8			
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	27.7	23.7	09	4.8
1000	30	102	26.1	23.0	[illegible]	5.8
950	30	554	22.5	20.7	09	7.1
900	30	1,024	19.3	17.8	08	6.7
850	30	1,515	16.6	13.7	07	6.7
800	30	2,032	14.8	10.0	06	5.3
750	30	2,576	12.1	6.4	05	3.3
700	30	3,152	8.9	2.1	01	2.3
650	30	3,764	6.0	.2	34	2.2
600	30	4,416	2.6	-7.5	30	2.2
550	30	5,116	-1.1	-13.2	30	3.6
500	30	5,871	-5.1	-18.6	32	4.1
450	30	6,691	-9.9	-23.4	31	5.6
400	30	7,592	-14.9	-32.3	30	6.1
350	30	8,591	-22.0	-37.0	29	7.8
300	30	9,703	-30.4	-45.2	27	9.0
250	30	10,972	-40.7	-53.5	26	10.7
200	30	12,451	-52.9		26	11.5
175	30	13,300	-59.6		26	11.1
150	30	14,247	-67.2		26	9.3
125	29	15,327	-74.8		26	7.5
100	29	16,601	-79.9		26	4.0
80	29	17,874	-75.5		20	.8
70	29	18,659	-70.1		11	2.0
60	29	19,586	-65.5		10	4.9
50	28	20,708	-61.6		09	8.9
40	27	22,101	-59.1		08	13.0
30	26	23,916	-56.0		09	15.6
25	25	25,083	-53.0		09	15.4
20	24	26,535	-49.3		[illegible]	15.6
15	21	28,441	-44.4		09	11.9
10	15	31,172	-39.5		10	8.1
7	[illegible]	33,677	-36.5			
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* PEORIA, ILL. 994 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	15.5	13.1	17	.6
1000						
950	30	584	16.5	11.8	24	2.5
900	30	1,045	15.5	7.8	27	5.2
850	30	1,529	13.7	4.2	27	5.9
800	30	2,038	11.4	.3	27	6.5
750	30	2,575	8.6	-3.9	26	7.5
700	30	3,142	5.2	-7.8	27	8.3
650	30	3,744	1.7	-12.7	27	9.4
600	30	4,384	-2.3	-16.2	26	10.9
550	30	5,070	-6.5	-21.6	26	12.2
500	30	5,809	-10.7	-28.6	26	12.9
450	30	6,612	-15.7	-32.1	27	14.8
400	30	7,489	-22.0	-38.5	27	16.1
350	30	8,461	-29.1	-43.1	27	18.1
300	30	9,541	-37.4	-47.8	27	19.2
250	30	10,775	-46.8		27	23.4
200	30	12,222	-56.6		27	28.2
175	30	13,061	-60.7		27	28.9
150	30	14,013	-63.4		27	24.2
125	30	15,127	-65.7		27	19.7
100	30	16,481	-65.4		27	14.4
80	30	17,846	-63.1		27	8.1
70	30	18,671	-61.3		27	6.2
60	30	19,633	-59.0		26	4.0
50	29	20,783	-56.5		27	1.9
40	28	22,201	-54.9		31	.1
30	25	24,050	-52.3		09	.8
25	25	25,234	-50.6		01	1.1
20	24	26,693	-48.3		04	1.0
15	24	28,596	-46.3		31	.7
10	22	31,316	-42.5		32	1.2
7	17	33,741	-39.5		23	1.6
5	9	36,035	-36.9			

* PITTSBURGH, PA. 977 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	14.7	13.1	17	.5
1000						
950	30	594	15.9	11.9	25	1.7
900	30	1,053	14.4	8.4	28	3.8
850	30	1,535	12.7	2.7	29	5.5
800	30	2,042	10.3	-1.2	28	6.5
750	30	2,577	8.0	-5.9	27	6.5
700	30	3,143	5.2	-10.1	27	7.3
650	30	3,745	2.0	-12.8	27	8.1
600	30	4,387	-1.5	-17.6	27	8.9
550	30	5,075	-5.9	-22.5	27	9.8
500	30	5,815	-10.6	-27.9	27	11.3
450	30	6,617	-15.7	-33.1	27	11.7
400	30	7,495	-21.9	-36.8	27	14.3
350	30	8,467	-29.0	-42.3	27	16.2
300	30	9,547	-37.2	-50.6	28	19.5
250	30	10,783	-46.6		28	23.5
200	30	12,233	-55.7		28	25.8
175	30	13,075	-59.9		28	25.9
150	30	14,030	-62.7		28	21.1
125	30	15,147	-65.1		28	17.0
100	30	16,504	-65.3		27	11.0
80	30	17,866	-63.7		27	7.8
70	29	18,694	-61.0		28	5.4
60	29	19,658	-58.7		28	3.1
50	29	20,808	-57.1		33	.8
40	29	22,228	-54.7		05	.9
30	29	24,080	-51.7		06	.6
25	26	25,267	-50.2		04	.8
20	26	26,734	-48.4		05	1.1
15	22	28,643	-45.8		07	1.2
10	22	31,362	-42.5		16	.4
7	19	33,787	-39.5		29	.5
5	12	36,111	-36.2			

+ PONAPE, CAROLINE IS. 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	28.0	24.6	24	2.3
1000	29	73	26.9	23.5	25	2.6
950	29	526	23.4	21.1	25	4.5
900	29	998	20.4	17.4	26	4.4
850	29	1,491	17.7	14.5	27	3.6
800	29	2,009	15.4	11.1	28	2.6
750	29	2,555	12.6	7.9	28	1.6
700	29	3,132	9.4	4.1	03	.6
650	29	3,745	6.6	1.0	09	1.7
600	29	4,399	2.9	-2.3	09	3.0
550	29	5,099	-.7	-7.8	10	2.8
500	28	5,857	-4.5	-13.1	11	3.2
450	28	6,680	-9.3	-18.8	11	4.1
400	28	7,582	-14.8	-25.7	11	4.8
350	28	8,583	-21.4	-32.6	10	5.0
300	28	9,699	-29.6	-41.4	10	5.5
250	28	10,972	-39.9	-52.3	09	5.8
200	28	12,455	-52.7		09	8.3
175	28	13,303	-59.9		09	10.7
150	28	14,248	-68.0		09	13.0
125	28	15,323	-75.6		09	13.7
100	27	16,603	-79.2		08	7.9
80	27	17,884	-74.4		09	5.9
70	27	18,668	-70.9		09	8.8
60	27	19,590	-67.6		09	13.3
50	24	20,698	-65.1		09	20.2
40	23	22,074	-61.2		09	26.3
30	19	23,887	-55.3		09	30.6
25	19	25,058	-52.9		09	31.3
20	18	26,507	-50.1		09	33.9
15	16	28,405	-45.0		09	33.0
10	15	31,163	-38.5			
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PORTLAND, MAINE 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	11.7	9.3	28	1.3
1000	29	156	14.0	9.4	31	1.7
950	30	585	13.9	7.2	30	2.4
900	30	1,040	12.2	3.2	28	3.8
850	30	1,518	10.7	-2.2	28	5.0
800	30	2,022	9.1	-7.6	28	6.3
750	30	2,555	6.9	-10.2	27	8.1
700	30	3,119	4.1	-12.8	28	9.4
650	30	3,718	1.0	-16.5	28	10.5
600	30	4,357	-2.9	-20.4	28	10.9
550	30	5,040	-7.3	-24.7	28	11.9
500	30	5,776	-12.1	-29.1	27	12.8
450	30	6,573	-17.6	-32.8	27	13.9
400	30	7,444	-24.0	-38.0	27	16.0
350	30	8,408	-30.9	-42.4	27	17.0
300	30	9,480	-39.0	-48.7	27	19.6
250	30	10,708	-47.4		27	21.0
200	30	12,156	-55.8		28	22.3
175	30	13,000	-58.6		28	22.2
150	30	13,963	-60.7		28	21.7
125	30	15,094	-62.1		28	17.6
100	30	16,473	-61.9		27	13.6
80	30	17,857	-60.3		28	8.6
70	30	18,693	-58.9		28	5.6
60	30	19,664	-57.4		28	4.8
50	30	20,822	-55.7		30	2.3
40	30	22,250	-53.6		32	.3
30	28	24,113	-51.2		04	1.5
25	27	25,300	-50.0		05	1.2
20	26	26,759	-48.2		06	.8
15	24	28,663	-45.5		26	1.7
10	13	31,364	-42.4			
7						
5						

* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	8.2	6.8	07	.6
1000	30	136	10.1	7.8	10	.9
950	30	564	10.4	5.4	18	.9
900	30	1,013	8.7	2.0	28	2.1
850	30	1,484	6.0	-1.6	28	3.9
800	30	1,978	3.5	-4.7	29	4.7
750	30	2,500	1.3	-11.2	29	6.2
700	30	3,053	-1.4	-15.3	30	7.6
650	30	3,640	-4.5	-19.1	30	8.7
600	30	4,265	-8.3	-21.9	30	9.7
550	30	4,935	-12.5	-25.9	30	11.1
500	30	5,656	-17.4	-31.1	30	11.7
450	30	6,437	-22.8	-35.8	29	12.9
400	30	7,290	-29.1	-39.3	29	14.4
350	30	8,234	-36.0	-45.0	30	16.4
300	30	9,285	-43.3	-50.4	30	18.1
250	30	10,493	-50.5		30	18.2
200	30	11,930	-55.8		30	17.2
175	30	12,779	-56.7		30	16.4
150	30	13,755	-57.2		29	14.9
125	29	14,906	-58.1		29	13.0
100	29	16,313	-57.9		29	11.0
80	29	17,722	-57.2		28	9.7
70	29	18,569	-56.7		29	8.1
60	28	19,547	-56.5		28	7.1
50	28	20,707	-55.0		28	5.8
40	26	22,137	-53.9		27	4.7
30	24	24,009	-51.0		26	5.6
25	23	25,198	-49.2		26	5.5
20	21	26,665	-47.6		26	5.2
15	20	28,583	-45.7		26	4.9
10	18	31,315	-43.1		26	3.7
7	12	33,750	-40.4			
5	7	36,015	-37.8			

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	8.9	2.0	32	1.8
1000						
950						
900	27	1,019	9.8	2.4	32	1.8
850	30	1,485	11.9	-1.0	29	3.8
800	30	1,991	9.8	-3.8	28	4.9
750	30	2,524	6.7	-5.8	27	5.9
700	30	3,087	3.0	-8.2	26	8.2
650	30	3,683	-.7	-11.6	26	11.6
600	30	4,318	-5.1	-15.8	26	13.4
550	30	4,997	-9.1	-22.9	26	14.8
500	30	5,727	-14.2	-28.8	26	16.7
450	30	6,518	-19.6	-33.8	26	19.1
400	30	7,382	-26.1	-38.9	26	20.8
350	30	8,337	-33.1	-44.9	26	23.2
300	30	9,400	-41.0	-50.7	25	26.2
250	29	10,615	-50.3		25	30.0
200	29	12,046	-57.0		26	30.5
175	29	12,890	-58.1		26	29.1
150	29	13,858	-59.7		26	28.2
125	29	14,992	-61.6		26	23.8
100	29	16,373	-61.9		26	16.1
80	29	17,759	-60.1		26	12.5
70	29	18,594	-59.4		26	9.5
60	29	19,564	-57.3		26	8.3
50	28	20,718	-55.8		26	6.0
40	27	22,148	-53.9		26	3.9
30	27	24,006	-51.6		28	1.6
25	27	25,194	-50.3		27	.8
20	25	26,655	-48.6		23	.4
15	25	28,555	-47.0		09	.3
10	21	31,264	-43.7		01	.6
7	11	33,676	-40.1			

ST CLOUD, MINN. 979 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3.6	9.4	7.6	22	.2
1000						
950	30	567	11.5	6.3	22	2.5
900	30	1,019	10.6	3.4	24	5.0
850	30	1,494	9.1	-1.8	26	6.6
800	30	1,995	6.9	-6.1	27	8.7
750	30	2,524	4.6	-9.1	27	11.4
700	30	3,083	1.5	-11.9	27	13.4
650	30	3,676	-1.9	-16.0	27	15.3
600	30	4,308	-5.9	-19.7	27	17.3
550	30	4,985	-9.7	-24.2	27	19.2
500	30	5,714	-14.2	-30.2	27	20.9
450	30	6,506	-19.2	-34.4	27	22.7
400	30	7,372	-25.5	-40.2	26	24.0
350	30	8,330	-32.5	-45.7	26	26.4
300	30	9,395	-40.8	-50.2	26	29.8
250	30	10,611	-49.9		26	31.8
200	30	12,045	-56.9		26	33.6
175	30	12,889	-58.0		26	30.8
150	30	13,857	-59.3		26	28.3
125	30	14,995	-60.6		26	23.6
100	30	16,383	-60.6		26	17.4
80	29	17,784	-58.3		26	11.9
70	29	18,626	-57.5		26	10.1
60	29	19,604	-56.1		26	7.8
50	29	20,758	-54.3		27	5.8
40	29	22,204	-52.6		27	3.9
30	28	24,074	-51.0		27	1.9
25	27	25,266	-50.0		29	.6
20	26	26,723	-48.6		35	.4
15	24	28,633	-45.9		04	1.6
10	20	31,346	-42.5		27	1.9
7	9	33,820	-38.9			

* ST PAUL IS., ALASKA 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	6.2	5.5	09	2.4
1000	26	112	5.9	4.9	09	3.0
950	30	512	5.0	2.1	12	3.1
900	30	953	3.5	.7	13	3.4
850	30	1,416	1.6	-.7	16	3.7
800	30	1,903	-.6	-4.1	17	3.4
750	30	2,417	-2.7	-7.5	18	3.0
700	30	2,962	-5.5	-11.8	20	3.8
650	30	3,540	-8.9	-15.8	21	4.2
600	30	4,156	-12.5	-19.9	21	4.3
550	30	4,816	-16.4	-25.3	22	5.0
500	30	5,527	-20.9	-29.5	23	6.2
450	30	6,297	-26.0	-34.0	24	7.1
400	30	7,141	-31.5	-39.1	24	9.5
350	30	8,077	-37.6	-42.8	24	12.1
300	30	9,123	-43.7		24	12.2
250	30	10,334	-48.7		24	13.7
200	30	11,789	-51.4		25	11.9
175	30	12,656	-51.7		25	11.1
150	30	13,655	-52.3		25	10.4
125	30	14,830	-53.5		25	9.5
100	30	16,265	-54.1		25	8.1
80	29	17,695	-54.1		26	6.2
70	29	18,551	-54.5		26	5.5
60	29	19,538	-54.7		26	5.7
50	28	20,704	-54.8		27	5.0
40	27	22,135	-54.6		28	4.9
30	24	23,978	-53.8		28	4.9
25	23	25,149	-53.2		28	5.6
20	21	26,596	-51.7		29	5.7
15	21	28,473	-49.4		28	6.5
10	11	31,252	-43.7			
7						

SALEM, ILL. 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	17.4	16.5	15	.4
1000	6	185	16.7	14.5		
950	30	589	18.6	14.8	23	3.2
900	30	1,053	16.7	11.0	25	5.0
850	30	1,539	14.4	7.3	26	5.2
800	30	2,050	12.5	-.5	26	4.9
750	30	2,589	9.8	-4.3	27	5.2
700	30	3,158	6.1	-7.5	26	6.0
650	30	3,761	2.3	-9.8	26	6.5
600	30	4,404	-1.3	-14.0	26	7.3
550	30	5,093	-5.1	-19.1	26	9.2
500	30	5,835	-9.7	-25.0	26	10.1
450	30	6,641	-14.9	-29.9	27	11.4
400	30	7,521	-21.0	-35.1	27	12.6
350	30	8,497	-28.0	-41.7	27	14.7
300	30	9,583	-36.1	-46.3	27	18.6
250	30	10,823	-45.7		27	21.5
200	30	12,275	-56.1		27	24.2
175	30	13,114	-61.1		27	23.5
150	30	14,062	-64.8		27	19.7
125	30	15,167	-67.5		27	15.9
100	30	16,509	-67.2		27	10.6
80	30	17,860	-65.1		26	5.8
70	30	18,680	-62.0		27	3.1
60	30	19,638	-60.0		28	1.2
50	30	20,785	-57.4		10	.5
40	30	22,202	-55.4		09	1.2
30	29	24,051	-52.4		08	1.5
25	27	25,230	-50.7		06	1.7
20	27	26,691	-48.7		07	2.2
15	27	28,593	-46.3		06	1.8
10	21	31,313	-42.8		09	3.0
7						

SALEM, OREG. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	8.8	5.9	18	1.4
1000	30	138	12.1	8.2	18	1.0
950	30	568	12.1	5.6	26	.8
900	30	1,021	10.8	2.1	26	2.0
850	30	1,495	8.3	-2.5	26	3.3
800	30	1,994	5.8	-7.1	26	4.4
750	30	2,519	3.0	-12.8	28	5.0
700	30	3,074	.2	-19.0	28	6.2
650	30	3,665	-3.1	-22.1	28	7.9
600	30	4,294	-6.7	-25.3	28	8.7
550	30	4,968	-10.9	-28.9	29	9.1
500	30	5,693	-15.9	-31.1	29	10.5
450	30	6,479	-21.3	-35.8	29	11.7
400	30	7,337	-27.5	-42.5	30	12.3
350	30	8,287	-34.7	-47.0	30	13.4
300	30	9,343	-42.4	-52.9	30	14.1
250	30	10,555	-50.0		30	13.3
200	29	12,002	-56.0		28	13.5
175	29	12,850	-56.8		28	13.6
150	29	13,823	-58.3		28	14.0
125	29	14,969	-59.2		27	14.0
100	29	16,365	-59.3		28	11.3
80	29	17,768	-57.8		28	9.0
70	29	18,611	-57.5		28	7.1
60	29	19,585	-57.3		28	7.1
50	29	20,741	-55.7		27	5.7
40	29	22,168	-54.1		26	5.2
30	29	24,028	-51.0		26	4.8
25	28	25,214	-50.0		26	4.9
20	27	26,679	-47.5		27	4.4
15	25	28,576	-46.3		26	2.9
10	20	31,291	-43.4		27	2.4
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH
872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	12.4	3.4	15	3.2
1000						
950						
900						
850	30	1,506	14.7	.5	17	3.7
800	30	2,017	12.8	-2.9	21	4.3
750	30	2,556	8.9	-5.8	23	4.8
700	30	3,122	4.8	-8.6	24	7.3
650	30	3,722	.4	-11.1	25	9.4
600	30	4,359	-4.2	-14.4	24	11.1
550	30	5,039	-8.9	-20.9	25	12.7
500	30	5,770	-13.6	-27.8	25	15.0
450	30	6,564	-18.5	-34.0	25	16.9
400	30	7,432	-24.6	-38.7	25	18.0
350	30	8,393	-31.8	-44.4	25	19.4
300	30	9,462	-40.0	-51.4	25	21.2
250	30	10,682	-49.1		25	25.2
200	30	12,122	-55.6		25	28.8
175	30	12,969	-57.9		25	27.4
150	30	13,936	-60.3		25	25.8
125	29	15,064	-62.7		26	20.7
100	29	16,439	-62.5		26	15.5
80	29	17,817	-62.1		26	10.5
70	29	18,647	-59.9		26	6.3
60	29	19,612	-58.6		25	5.1
50	29	20,764	-56.5		25	4.0
40	28	22,191	-54.1		27	2.6
30	27	24,046	-51.5		28	.3
25	27	25,233	-50.3		05	.9
20	25	26,693	-48.7		07	2.0
15	21	28,583	-46.8		06	2.8
10	18	31,302	-43.3		10	2.5
7	9	33,698	-39.4			
5						
4						
3						

SAN DIEGO, CALIF.
999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	124	17.6	15.5	36	.6
1000	9	132	16.7	14.6		
950	30	551	17.4	11.6	31	.4
900	30	1,013	18.2	4.0	16	.6
850	30	1,502	16.7	-.2	17	1.5
800	29	2,018	15.2	-5.4	19	2.7
750	29	2,561	11.8	-6.8	20	3.9
700	29	3,134	8.4	-10.7	20	5.0
650	29	3,742	4.9	-14.3	21	6.6
600	29	4,390	.7	-19.1	21	8.4
550	29	5,082	-4.0	-23.8	22	10.3
500	29	5,827	-8.9	-28.7	22	12.1
450	29	6,634	-14.7	-32.9	22	13.9
400	29	7,514	-21.3	-39.0	23	16.1
350	29	8,489	-28.4	-44.1	23	17.8
300	29	9,573	-36.6	-50.4	23	21.2
250	29	10,812	-45.5		24	24.7
200	27	12,271	-54.4		24	28.0
175	27	13,117	-59.2		25	26.0
150	27	14,073	-63.4		25	22.3
125	27	15,183	-67.0		25	16.2
100	27	16,527	-68.0		25	8.8
80	27	17,875	-66.0		25	4.8
70	27	18,690	-64.1		28	1.6
60	27	19,639	-61.7		05	1.1
50	26	20,777	-58.5		09	2.3
40	25	22,190	-56.0		09	3.9
30	25	24,034	-52.8		09	6.3
25	25	25,216	-51.0		09	6.9
20	24	26,670	-49.4		09	6.9
15	23	28,562	-47.3		08	7.0
10	19	31,267	-44.1		09	8.5
7	[illegible]	33,683	-41.0			

SAN JUAN, P. R.
1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	26.0	21.1	15	1.4
1000	30	132	25.4	22.2	11	2.9
950	30	582	22.5	19.5	10	6.2
900	30	1,052	19.8	15.7	10	6.5
850	30	1,544	16.8	11.7	10	6.3
800	30	2,059	14.3	7.5	10	5.6
750	30	2,602	11.6	1.9	10	5.1
700	30	3,176	8.2	-2.3	10	4.4
650	30	3,785	4.9	-6.8	10	3.7
600	30	4,434	.9	-10.7	10	3.1
550	30	5,128	-3.3	-16.0	11	2.0
500	30	5,876	-7.7	-22.0	13	1.3
450	30	6,687	-12.9	-26.6	18	.8
400	30	7,575	-19.0	-31.1	22	1.0
350	30	8,559	-25.8	-39.7	27	1.8
300	30	9,654	-34.4	-47.0	28	3.7
250	30	10,902	-44.5		29	6.4
200	30	12,360	-55.7		29	12.6
175	30	13,200	-61.6		28	14.6
150	29	14,140	-68.0		29	14.1
125	29	15,224	-72.1		29	9.5
100	28	16,536	-72.1		34	2.1
80	28	17,856	-69.7		08	4.7
70	28	18,658	-67.0		08	8.0
60	27	19,597	-64.3		09	11.6
50	27	20,720	-61.6		09	14.8
40	26	22,109	-59.0		09	17.5
30	24	23,938	-53.9		09	20.5
25	24	25,116	-51.3		09	23.3
20	21	26,575	-48.7		09	25.5
15	20	28,482	-45.3		09	24.8
10	12	31,210	-41.7			

• SAULT STE MARIE, MICH.
990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	9.3	8.2	04	.4
1000						
950	30	564	9.8	5.6	25	.7
900	30	1,012	8.0	2.2	27	4.2
850	30	1,483	6.8	-3.8	27	6.9
800	30	1,980	5.6	-6.1	27	9.9
750	30	2,507	3.8	-8.6	27	12.5
700	30	3,064	.8	-10.6	27	14.1
650	30	3,656	-2.4	-15.9	27	15.6
600	30	4,288	-5.9	-20.0	26	16.0
550	30	4,964	-10.1	-25.0	27	17.8
500	30	5,693	-14.5	-28.5	27	19.8
450	30	6,484	-19.4	-34.0	27	21.0
400	30	7,349	-25.6	-41.0	27	23.0
350	30	8,307	-32.5	-46.1	27	26.5
300	30	9,373	-40.4	-50.2	27	29.6
250	30	10,594	-48.7		27	33.6
200	30	12,036	-55.8		27	35.0
175	29	12,884	-58.2		27	34.2
150	29	13,853	-58.2		27	29.1
125	29	14,998	-59.2		27	23.4
100	29	16,395	-59.0		26	17.5
80	29	17,798	-57.7		27	12.8
70	29	18,644	-56.4		26	10.2
60	29	19,625	-55.6		26	7.7
50	29	20,791	-54.1		26	5.4
40	29	22,229	-52.4		27	3.1
30	28	24,095	-51.1		30	1.3
25	27	25,289	-49.7		34	1.2
20	27	26,755	-48.0		01	1.2
15	23	28,681	-45.4		03	1.1
10	23	31,408	-41.5		01	1.5
7	21	33,845	-39.0		25	1.2
5	15	36,137	-35.3		27	10.3
4	12	37,672	-34.3			
3	6	39,645	-33.1			

• SHEMYA, ALASKA
[illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	38	8.2	6.1	32	1.4
1000	19	121	7.3	5.[illegible]	03	2.8
950	30	491	5.3	4.0	29	2.3
900	30	932	3.2	.8	29	2.6
850	30	1,394	1.1	-2.0	30	1.0
800	30	1,860	-.7	-6.8	28	2.6
750	30	2,394	-3.0	-10.5	27	2.8
700	30	2,938	-5.8	-14.6	26	3.3
650	30	3,516	-8.9	-19.9	27	4.2
600	30	4,132	-12.3	-23.8	26	5.1
550	30	4,792	-16.5	-29.8	26	5.8
500	30	5,502	-21.3	-33.5	25	6.7
450	30	6,271	-26.3	-37.6	25	8.3
400	30	7,113	-32.0	-42.6	25	9.1
350	30	8,047	-38.4	-47.2	25	10.1
300	30	9,088	-45.1		25	11.7
250	30	10,296	-48.6		25	15.3
200	30	11,764	-48.4		27	13.7
175	30	12,641	-49.4		27	11.4
150	30	13,648	-51.3		26	10.8
125	30	14,829	-52.8		26	9.8
100	30	16,264	-54.0		26	7.6
80	29	17,696	-54.1		25	6.5
70	29	18,552	-54.6		25	5.0
60	29	19,540	-54.5		25	3.8
50	29	20,706	-54.9		25	3.5
40	29	22,1[illegible]5	-54.3		26	3.1
30	28	23,965	-53.2		26	2.9
25	27	25,158	-52.3		26	3.4
20	26	26,604	-51.1		27	4.1
15	20	28,483	-49.3		26	4.3
10	17	31,156	-45.0		29	6.1
7	8	33,5[illegible]6	-41.6			

• SHREVEPORT, LA.
1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	21.8	19.9	14	.8
1000	30	140	22.7	20.9	19	1.4
950	30	589	22.3	18.4	20	4.6
900	30	1,059	20.1	14.6	20	4.0
850	30	1,551	17.3	11.3	20	4.0
800	30	2,067	14.5	8.1	21	3.5
750	30	2,611	11.2	4.1	22	2.4
700	30	3,184	7.7	-.5	22	2.0
650	30	3,792	4.5	-4.5	22	2.4
600	30	4,440	1.1	-9.4	25	3.4
550	30	5,135	-2.4	-16.5	26	3.7
500	30	5,886	-6.8	-21.8	27	4.0
450	30	6,700	-12.1	-27.3	27	4.7
400	30	7,590	-18.3	-34.3	26	5.3
350	30	8,577	-25.4	-39.8	26	6.0
300	30	9,673	-34.1	-44.8	26	7.7
250	30	10,924	-44.0		26	8.9
200	29	12,387	-55.2		27	10.7
175	29	13,228	-61.1		27	10.3
150	29	14,173	-66.5		28	9.3
125	28	15,266	-70.9		28	7.3
100	27	16,584	-72.2		30	3.6
80	27	17,908	-68.4		03	1.0
70	27	18,716	-64.4		07	2.2
60	27	19,664	-61.9		09	3.8
50	27	20,801	-59.0		09	4.8
40	25	22,210	-56.2		09	6.3
30	23	24,051	-52.6		08	8.1
25	22	25,229	-51.3		08	8.7
20	18	26,694	-48.8		09	9.6
15	13	28,589	-47.4		08	10.0
10	13	31,294	-43.4		09	12.2
7	11	33,711	-39.6			

SPOKANE, WASH.
931 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	8.2	2.3	19	2.5
1000						
950						
900	30	1,001	10.2	1.1	21	3.9
850	30	1,475	8.1	-1.7	24	4.9
800	30	1,973	4.5	-2.9	24	5.5
750	30	2,495	1.0	-6.2	25	6.5
700	30	3,047	-2.4	-11.7	26	7.5
650	30	3,632	-5.5	-17.8	27	9.3
600	30	4,256	-9.2	-21.7	27	10.7
550	30	4,923	-13.7	-23.9	27	11.3
500	30	5,642	-18.0	-30.9	27	12.6
450	30	6,422	-23.2	-35.8	27	14.0
400	30	7,273	-29.3	-39.8	27	16.2
350	30	8,217	-36.0	-44.5	28	18.2
300	30	9,267	-43.8	-49.5	28	19.8
250	30	10,474	-50.3		28	20.3
200	30	11,914	-54.4		28	20.0
175	30	12,768	-55.4		27	18.4
150	30	13,749	-56.5		27	18.0
125	30	14,905	-57.3		27	16.1
100	30	16,314	-57.3		27	12.9
80	29	17,728	-56.5		27	10.7
70	29	18,576	-56.3		27	8.9
60	29	19,557	-55.8		28	7.5
50	29	20,721	-54.6		27	6.5
40	29	22,154	-53.3		26	5.8
30	29	24,020	-50.3		25	6.0
25	28	25,218	-49.0		26	5.5
20	26	26,695	-47.4		25	4.2
15	23	28,605	-46.0		24	3.7
10	16	31,345	-43.7			

• SWAN ISLAND, W. I.
1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	26.6	23.8	08	2.7
1000	30	107	26.5	23.7	08	3.8
950	30	559	23.2	21.1	08	5.8
900	30	1,031	20.4	16.7	09	6.1
850	30	1,523	17.1	12.6	10	6.6
800	30	2,039	14.6	8.7	10	6.4
750	30	2,583	11.8	4.0	10	6.5
700	30	3,158	8.8	-.9	10	5.6
650	30	3,768	5.5	-5.0	10	5.4
600	30	4,419	1.7	-8.3	09	5.3
550	30	5,115	-2.4	-13.9	09	4.6
500	30	5,865	-7.0	-18.3	08	3.3
450	30	6,680	-12.0	-21.4	08	2.5
400	30	7,572	-17.7	-28.3	06	1.3
350	30	8,561	-24.6	-34.4	32	1.7
300	30	9,662	-32.8	-43.2	29	4.3
250	30	10,918	-43.1		28	7.9
200	29	12,384	-55.0		28	11.2
175	29	13,225	-61.5		28	12.8
150	28	14,163	-68.4		28	11.1
125	27	15,240	-73.9		29	6.2
100	26	16,538	-74.8		03	3.3
80	26	17,847	-71.0		09	6.6
70	26	18,644	-67.7		09	9.1
60	26	19,577	-65.5		09	12.2
50	26	20,695	-62.2		09	14.7
40	24	22,087	-58.9		09	19.5
30	22	23,908	-54.4		09	23.9
25	20	25,083	-51.8		09	24.1
20	19	26,542	-48.3		09	24.4
15	17	28,437	-45.5		09	24.4
10	[illegible]	31,150	-42.7			

TAMPA, FLA.
1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	22.3	20.9	07	1.4
1000	30	153	24.1	21.1	09	3.0
950	30	602	22.2	17.9	11	3.1
900	30	1,071	19.4	13.3	10	2.4
850	30	1,562	16.5	9.2	08	2.5
800	30	2,076	13.7	4.7	08	2.1
750	30	2,618	11.2	-2.1	08	1.7
700	30	3,191	8.1	-5.6	06	1.6
650	30	3,799	5.0	-11.1	06	1.6
600	30	4,448	1.7	-17.2	05	2.7
550	30	5,145	-2.0	-23.1	04	2.8
500	30	5,895	-6.9	-27.3	04	3.5
450	30	6,709	-11.9	-32.1	04	3.9
400	30	7,599	-18.6	-36.0	05	4.6
350	30	8,584	-25.8	-43.0	04	5.0
300	30	9,679	-34.3	-50.3	04	6.2
250	30	10,928	-44.3		05	7.3
200	30	12,387	-55.5		04	7.0
175	30	13,227	-61.2		03	7.7
150	30	14,171	-66.5		03	7.9
125	30	15,263	-70.6		03	7.6
100	30	16,579	-71.9		06	5.0
80	30	17,906	-67.7		07	4.4
70	30	18,715	-64.9		08	5.4
60	30	19,664	-61.6		08	6.7
50	30	20,802	-58.7		09	8.5
40	29	22,213	-56.2		09	9.9
30	27	24,060	-51.8		08	11.2
25	26	25,247	-50.3		09	11.7
20	26	26,710	-48.5		09	12.0
15	23	28,617	-45.4		08	13.6
10	18	31,351	-42.1		09	15.2

TOPEKA, KANS.
985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	16.7	15.5	14	1.2
1000						
950	30	577	17.2	14.0	20	3.3
900	30	1,040	17.2	10.7	23	4.7
850	30	1,528	15.5	5.8	24	5.2
800	30	2,040	13.1	2.4	24	5.6
750	30	2,581	10.0	-1.6	24	5.9
700	30	3,150	6.2	-5.9	25	7.0
650	30	3,754	2.3	-9.0	25	7.8
600	30	4,396	-1.4	-14.6	25	8.5
550	30	5,085	-5.4	-22.2	26	10.1
500	30	5,826	-9.8	-26.7	26	11.8
450	30	6,631	-15.1	-30.4	26	13.4
400	30	7,511	-21.4	-34.8	26	16.0
350	30	8,485	-28.5	-40.6	26	18.2
300	30	9,569	-36.5	-49.3	26	20.2
250	30	10,809	-45.5		26	22.4
200	30	12,262	-56.1		26	25.6
175	30	13,102	-60.4		26	24.3
150	30	14,055	-64.0		26	24.1
125	18	15,154	-66.9		27	20.8
100	11	16,487	-66.2		27	14.2
80	11	17,846	-63.6		26	8.4
70	11	18,673	-60.2		26	7.3
60	11	19,638	-58.3		26	4.3
50	11	20,792	-55.8		25	2.4
40	11	22,217	-53.9		17	1.1
30	11	24,075	-52.0		08	2.3
25	11	25,260	-50.3		07	2.5
20	10	26,726	-48.5			
15	9	28,610	-46.9			
10	8	31,319	-43.0			

TRUK, CAROLINE IS.
◆ 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	28.1	24.9	23	4.0
1000	30	90	27.0	23.3	23	4.4
950	30	543	23.5	21.0	24	5.7
900	30	1,015	20.8	17.8	25	5.8
850	30	1,508	18.0	14.6	25	4.8
800	30	2,027	15.8	11.6	25	3.5
750	30	2,574	13.1	8.7	23	1.6
700	30	3,153	10.2	4.1	17	.8
650	30	3,767	7.0	.6	11	1.4
600	30	4,421	3.3	-3.9	09	2.6
550	30	5,123	-.5	-8.9	09	3.5
500	30	5,879	-4.7	-13.2	09	3.6
450	30	6,702	-9.3	-19.5	09	3.4
400	30	7,604	-14.7	-24.9	09	4.6
350	30	8,605	-21.4	-32.0	10	5.3
300	30	9,720	-29.8	-40.3	09	4.7
250	30	10,993	-40.0	-50.5	09	5.7
200	30	12,475	-52.8		09	7.9
175	30	13,323	-59.8		08	9.7
150	30	14,269	-67.8		08	12.2
125	30	15,344	-75.4		09	13.9
100	30	16,621	-78.6		08	8.5
80	29	17,909	-73.7		09	6.4
70	29	18,694	-71.1		09	8.9
60	29	19,615	-67.9		09	13.4
50	29	20,719	-64.4		09	20.1
40	28	22,095	-60.5		09	26.8
30	27	23,911	-55.1		09	31.4
25	26	25,085	-52.3		09	33.1
20	26	26,540	-48.6		09	35.2
15	26	28,450	-44.6		09	36.1
10	21	31,193	-39.3		09	23.4
7	8	33,674	-35.5			
5						

• TUCSON, ARIZ.
924 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	20.0	10.4	15	2.6
1000						
950						
900	30	1,016	23.2	7.7	15	2.7
850	30	1,512	21.2	5.3	15	2.5
800	30	2,034	17.3	3.6	17	2.3
750	30	2,581	13.2	1.2	19	3.2
700	30	3,157	8.9	-3.1	21	3.4
650	30	3,767	4.9	-8.1	21	3.9
600	30	4,415	.9	-12.6	23	4.8
550	30	5,109	-3.2	-19.4	25	5.9
500	30	5,857	-7.9	-24.1	25	7.1
450	30	6,667	-13.3	-30.3	25	9.3
400	30	7,553	-19.8	-34.1	24	12.0
350	30	8,533	-26.9	-41.6	24	14.7
300	30	9,623	-35.0	-48.4	24	17.1
250	30	10,868	-45.0		24	18.9
200	30	12,326	-55.2		24	21.5
175	30	13,168	-60.3		25	21.9
150	29	14,115	-65.0		25	18.2
125	28	15,219	-69.0		25	15.0
100	26	16,544	-70.1		26	7.7
80	24	17,875	-67.0		27	3.7
70	23	18,686	-64.9		33	1.1
60	23	19,633	-62.1		07	1.9
50	23	20,769	-58.7		09	3.8
40	22	22,175	-56.4		10	4.4
30	21	24,014	-53.2		09	6.5
25	21	25,193	-51.5		09	6.6
20	21	26,649	-49.6		09	6.6
15	19	28,539	-47.1		08	6.3
10	16	31,244	-43.1		09	6.7
7	12	33,653	-40.0			
5	7	35,993	-35.9			

• VANDENBERG AFB, CALIF.
1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	14.1	12.5	05	.5
1000	26	127	14.0	12.2	04	.8
950	30	556	15.1	9.6	02	1.9
900	30	1,017	16.9	3.0	08	1.0
850	30	1,503	15.6	-1.1	16	.9
800	30	2,015	12.9	-2.6	19	1.6
750	30	2,554	9.8	-6.8	20	2.5
700	30	3,123	6.1	-10.0	21	3.3
650	30	3,726	2.7	-15.2	22	4.3
600	30	4,369	-1.4	-19.0	23	6.0
550	30	5,056	-6.2	-22.7	23	6.9
500	30	5,794	-11.2	-27.7	23	8.4
450	30	6,595	-16.8	-32.3	23	10.3
400	30	7,468	-23.3	-37.3	24	12.7
350	30	8,435	-30.3	-42.7	24	15.1
300	30	9,511	-38.1	-48.4	24	18.1
250	30	10,742	-46.9		24	22.0
200	30	12,195	-54.5		24	25.4
175	30	13,043	-57.9		24	26.0
150	30	14,006	-61.9		24	22.0
125	30	15,126	-64.7		25	16.1
100	30	16,485	-65.1		25	10.4
80	30	17,848	-63.9		25	5.0
70	30	18,669	-62.8		26	3.4
60	30	19,624	-60.5		27	1.1
50	30	20,766	-58.3		17	1.0
40	30	22,180	-55.5		11	2.0
30	30	24,026	-52.4		09	3.9
25	29	25,212	-50.8		08	5.0
20	29	26,671	-48.9		08	6.9
15	25	28,564	-47.1		09	7.0
10	21	31,259	-44.3		09	5.1
7	16	33,684	-40.6			

VICTORIA, TEXAS
1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	33	22.5	21.5	03	1.0
1000	30	125	24.9	23.7	13	.8
950	30	576	22.7	20.9	17	4.5
900	30	1,047	20.6	15.8	17	5.4
850	30	1,540	17.9	11.3	16	4.9
800	30	2,057	15.1	7.1	15	3.9
750	30	2,602	12.1	3.4	14	3.1
700	30	3,177	8.7	-1.1	14	2.5
650	30	3,787	5.4	-7.0	13	2.2
600	30	4,437	1.7	-11.6	13	1.9
550	30	5,133	-2.2	-16.9	14	2.1
500	30	5,884	-6.4	-23.5	16	2.1
450	30	6,700	-11.5	-28.4	17	2.2
400	30	7,593	-17.5	-34.7	18	1.7
350	30	8,583	-24.6	-39.7	20	1.4
300	30	9,682	-33.3	-47.8	22	1.0
250	30	10,937	-43.2		27	1.5
200	30	12,402	-55.0		27	2.5
175	30	13,243	-61.1		29	3.3
150	30	14,186	-67.0		29	3.5
125	30	15,274	-71.9		31	2.7
100	29	16,580	-73.4		02	2.0
80	28	17,893	-70.3		07	3.3
70	28	18,694	-66.5		08	5.3
60	28	19,637	-62.9		09	6.0
50	28	20,769	-59.6		09	7.0
40	29	22,172	-57.1		09	9.2
30	26	24,009	-52.8		09	10.7
25	24	25,195	-50.6		09	11.1
20	23	26,651	-48.7		09	11.8
15	22	28,551	-46.4		09	13.0
10	18	31,281	-42.8		09	15.2
7	7	33,744	-39.7			

• WAKE IS., PACIFIC AREA
1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	27.6	24.3	08	4.4
1000	30	105	26.5	23.3	08	5.1
950	30	557	22.9	21.4	09	6.0
900	30	1,028	20.1	17.1	10	5.2
850	30	1,520	17.3	14.1	10	4.7
800	30	2,037	14.8	9.9	10	3.9
750	30	2,582	12.2	5.0	10	3.7
700	30	3,158	9.3	-.3	10	2.8
650	30	3,759	6.0	-5.0	09	2.4
600	30	4,421	2.4	-9.8	07	2.5
550	30	5,119	-1.5	-15.3	06	2.5
500	30	5,872	-5.9	-20.0	05	2.7
450	30	6,690	-10.6	-25.4	04	2.0
400	30	7,586	-16.7	-31.7	35	2.7
350	30	8,579	-23.6	-36.6	31	4.1
300	30	9,684	-32.0	-42.5	30	6.1
250	30	10,946	-41.5	-52.2	29	8.2
200	30	12,422	-53.1		29	9.2
175	30	13,271	-59.5		29	10.2
150	30	14,219	-66.6		30	9.4
125	29	15,305	-73.8		32	5.0
100	29	16,590	-77.6		06	4.8
80	29	17,880	-73.3		08	9.1
70	29	18,670	-69.2		09	10.8
60	29	19,600	-65.5		09	12.5
50	29	20,719	-61.8		09	14.6
40	29	22,110	-59.0		09	17.7
30	28	23,934	-54.5		09	21.9
25	27	25,103	-51.9		09	22.9
20	26	26,563	-48.7		09	24.0
15	25	28,467	-46.7		09	24.3
10	13	31,179	-43.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1972

* WALLOPS IS., VA. NASA
10[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	19.2	16.8	34	1.7
1000	30	152	19.1	15.5	35	2.1
950	30	593	17.7	12.6	01	2.5
900	30	1,054	15.6	9.3	34	2.1
850	30	1,538	13.6	4.5	31	2.9
800	30	2,048	11.5	.8	30	3.2
750	30	2,585	8.7	-3.1	30	3.3
700	30	3,152	5.6	-7.8	29	4.6
650	30	3,755	2.6	-11.4	28	5.2
600	30	4,398	-1.0	-14.8	28	5.8
550	30	5,088	-4.9	-19.5	28	6.8
500	30	5,831	-9.5	-24.1	28	7.6
450	30	6,637	-14.6	-28.2	28	8.9
400	30	7,519	-20.6	-34.1	28	10.3
350	30	8,496	-27.7	-40.0	27	11.5
300	30	9,582	-36.2	-47.6	28	13.1
250	30	10,822	-45.7		28	17.2
200	30	12,274	-56.2		28	17.1
175	30	13,113	-61.5		28	17.7
150	30	14,059	-65.2		29	14.1
125	30	15,163	-67.6		29	10.4
100	30	16,504	-68.2		28	7.4
80	30	17,853	-65.2		29	3.5
70	30	18,671	-62.9		31	1.9
60	30	19,627	-60.3		02	1.0
50	30	20,771	-57.7		07	1.7
40	29	22,189	-54.9		05	1.9
30	29	24,042	-51.8		07	2.3
25	29	25,229	-50.1		07	2.8
20	27	26,695	-47.5		10	2.9
15	27	28,602	-46.1		10	2.3
10	25	31,321	-42.3		08	3.0
7	15	33,746	-38.9		09	3.2

WASHINGTON DULLES INT. AP
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	85	15.0	13.2	32	.6
1000	29	164	16.9	14.4	34	1.1
950	30	599	17.4	12.0	33	2.0
900	30	1,060	15.5	10.3	32	2.9
850	30	1,544	13.2	5.9	30	3.5
800	30	2,052	11.1	.2	29	4.0
750	30	2,569	8.7	-4.2	28	4.6
700	30	3,157	5.7	-8.6	27	5.1
650	30	3,760	2.5	-11.1	28	6.2
600	30	4,403	-.8	-14.9	28	7.1
550	30	5,094	-4.5	-19.2	28	7.9
500	30	5,837	-9.5	-23.2	28	8.8
450	30	6,644	-14.7	-29.1	28	9.9
400	30	7,525	-20.7	-33.5	28	12.2
350	30	8,502	-27.8	-40.2	27	13.5
300	30	9,588	-36.2	-48.7	27	16.3
250	30	10,828	-45.6		28	18.5
200	30	12,282	-55.5		29	20.7
175	30	13,124	-60.1		28	20.8
150	30	14,077	-63.8		28	16.7
125	30	15,186	-66.8		28	13.2
100	29	16,533	-66.8		27	9.0
80	28	17,887	-64.4		29	5.5
70	28	18,706	-62.1		29	3.4
60	29	19,666	-59.9		32	1.6
50	29	20,812	-57.4		01	1.1
40	27	22,232	-55.0		05	1.0
30	26	24,084	-51.4		06	1.1
25	26	25,272	-50.1		06	1.3
20	26	26,738	-47.6		05	1.4
15	24	28,653	-45.7		11	1.1
10	19	31,379	-42.3		03	1.2
7	7	33,782	-38.9			

WAYCROSS, GA.
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	44	19.5	18.5	34	.5
1000	30	153	22.1	19.4	33	.5
950	30	600	21.7	15.2	26	.7
900	30	1,068	19.0	11.6	34	.7
850	30	1,557	15.8	8.1	36	1.2
800	30	2,070	13.2	2.0	02	1.8
750	30	2,611	10.3	-1.1	02	1.6
700	30	3,182	7.2	-5.2	01	1.3
650	30	3,789	4.8	-13.0	34	1.6
600	30	4,438	1.3	-17.2	33	1.9
550	30	5,133	-2.5	-23.4	33	2.4
500	30	5,883	-7.1	-27.9	32	2.9
450	30	6,696	-12.3	-33.2	32	3.2
400	30	7,585	-18.4	-38.7	32	4.5
350	30	8,570	-25.8	-43.6	32	5.7
300	30	9,665	-34.4	-51.2	33	5.9
250	30	10,913	-44.4		34	6.0
200	30	12,371	-55.7		35	5.9
175	30	13,211	-61.3		34	7.0
150	30	14,156	-66.2		35	6.2
125	30	15,249	-70.3		35	5.7
100	29	16,567	-71.4		04	2.6
80	29	17,897	-67.5		06	2.6
70	29	18,709	-64.0		06	3.8
60	29	19,660	-61.2		08	4.4
50	29	20,801	-58.0		08	5.7
40	29	22,216	-55.4		09	6.7
30	29	24,066	-52.2		08	7.7
25	29	25,251	-50.4		09	8.8
20	29	26,715	-48.1		09	9.3
15	26	28,623	-45.9		08	9.1
10	26	31,347	-41.9		08	9.6
7	7	33,811	-40.7			

WINNEMUCCA, NEV.
871 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,312	6.8	-1.0	19	.4
850	30	1,515	12.8	-.1	10	.3
800	30	2,022	10.8	-2.4	25	1.8
750	30	2,557	7.0	-4.8	25	3.9
700	30	3,120	3.1	-8.8	25	5.6
650	30	3,716	-.9	-12.3	25	7.1
600	30	4,350	-5.3	-16.6	25	8.4
550	30	5,027	-10.1	-20.8	25	9.2
500	30	5,756	-14.5	-26.7	25	10.5
450	30	6,546	-19.8	-31.9	25	10.8
400	30	7,409	-26.1	-38.0	25	11.8
350	30	8,364	-33.4	-45.3	25	12.6
300	30	9,425	-41.8	-52.1	25	14.2
250	30	10,638	-50.0		24	18.8
200	29	12,076	-55.9		24	21.4
175	29	12,922	-57.7		24	20.9
150	29	13,891	-59.4		25	20.7
125	29	15,027	-61.4		25	17.8
100	27	16,412	-62.1		26	12.5
80	26	17,800	-61.0		26	8.8
70	26	18,631	-60.6		26	6.5
60	26	19,596	-58.7		26	5.8
50	26	20,747	-56.7		27	3.7
40	26	22,169	-54.5		27	2.4
30	26	24,023	-51.8		28	1.4
25	26	25,208	-50.5		25	.1
20	26	26,669	-49.2		06	1.1
15	22	28,563	-47.2		07	1.2
10	11	31,283	-43.8			

WINSLOW, ARIZ.
853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,487	14.0	5.9	19	1.3
850	26	1,524	15.6	5.3	19	1.4
800	30	2,034	16.2	3.4	23	3.6
750	30	2,579	12.6	1.0	23	5.1
700	30	3,154	8.2	-2.3	22	5.7
650	30	3,761	3.9	-6.7	23	5.6
600	30	4,407	-.6	-12.4	23	6.4
550	30	5,097	-4.9	-20.1	24	7.6
500	30	5,840	-9.6	-26.2	25	10.0
450	30	6,645	-15.1	-29.0	25	12.1
400	30	7,525	-21.3	-33.5	25	13.9
350	30	8,498	-28.6	-40.0	24	17.2
300	30	9,582	-36.8	-48.0	24	20.6
250	30	10,820	-45.9		24	23.9
200	30	12,274	-55.3		25	25.4
175	30	13,118	-59.8		25	25.0
150	29	14,072	-64.1		25	21.3
125	29	15,180	-67.2		25	16.6
100	29	16,521	-68.0		25	9.8
80	29	17,867	-65.7		26	5.7
70	28	18,682	-63.9		26	3.1
60	28	19,633	-61.3		28	.9
50	27	20,773	-58.6		06	.2
40	27	22,184	-56.1		08	2.3
30	27	24,026	-53.1		09	3.8
25	27	25,206	-51.5		10	4.2
20	26	26,673	-49.2		09	4.9
15	24	28,566	-47.6		09	5.3
10	19	31,273	-44.2		10	7.2

YAKUTAT, ALASKA
1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	12	6.1	5.0	11	.8
1000	27	130	8.7	3.4	12	1.3
950	29	540	6.5	1.9	14	2.1
900	29	982	3.7	-.3	14	1.5
850	29	1,444	.7	-3.1	18	1.1
800	29	1,929	-1.8	-7.4	22	1.6
750	29	2,441	-4.1	-12.0	25	3.6
700	29	2,983	-6.9	-14.1	25	4.6
650	29	3,558	-9.8	-20.2	26	5.5
600	29	4,172	-13.3	-23.2	26	6.5
550	29	4,829	-17.4	-27.5	26	7.6
500	29	5,537	-22.2	-32.7	27	10.5
450	29	6,303	-27.6	-37.0	27	11.5
400	29	7,141	-33.6	-40.0	28	13.0
350	29	8,067	-40.2	-42.9	28	15.3
300	29	9,101	-46.9		28	17.6
250	29	10,298	-50.5		29	22.9
200	29	11,745	-52.5		30	22.3
175	29	12,606	-53.0		30	19.9
150	29	13,600	-53.2		30	17.4
125	29	14,774	-53.3		29	14.8
100	29	16,211	-53.2		30	13.0
80	28	17,644	-53.7		30	10.3
70	28	18,502	-54.1		30	9.0
60	28	19,490	-54.7		30	8.6
50	28	20,656	-54.7		30	7.4
40	27	22,082	-54.6		31	5.9
30	26	23,916	-54.4		30	6.0
25	24	25,085	-53.3		30	5.8
20	22	26,551	-51.4		30	4.6
15	17	28,420	-49.0		28	5.7
10	7	31,073	-45.3			
7						

+ YAP, CAROLINE IS.
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	28.1	24.7	26	2.2
1000	30	84	26.7	24.2	27	2.6
950	30	538	23.6	21.7	27	4.8
900	30	1,010	20.7	18.6	27	4.3
850	30	1,503	17.7	15.1	28	3.2
800	30	2,021	15.3	12.6	29	2.5
750	30	2,567	12.6	9.2	29	1.9
700	30	3,145	9.8	5.1	30	1.8
650	30	3,758	6.5	.7	30	1.9
600	30	4,412	2.9	-3.5	33	1.3
550	30	5,112	-1.0	-7.1	06	.9
500	30	5,868	-5.0	-12.9	09	1.8
450	30	6,690	-9.5	-20.4	10	1.8
400	30	7,591	-15.0	-26.5	10	2.6
350	29	8,590	-21.9	-33.2	09	3.3
300	29	9,703	-30.1	-41.2	08	5.3
250	29	10,973	-40.4	-49.3	07	5.9
200	29	12,454	-53.1		08	7.8
175	29	13,301	-60.2		08	9.3
150	29	14,244	-68.2		09	12.8
125	29	15,318	-75.4		09	13.2
100	29	16,597	-78.9		06	8.2
80	29	17,879	-74.5		09	8.5
70	29	18,663	-71.0		09	11.3
60	29	19,523	-68.0		09	15.2
50	29	20,689	-64.3		09	20.2
40	29	22,060	-60.7		09	24.9
30	29	23,874	-56.5		09	30.5
25	29	25,040	-53.3		09	31.9
20	26	26,492	-49.6		09	34.1
15	22	28,394	-45.8		09	35.7
10	21	31,119	-41.5		09	28.5
7	10	33,569	-35.4			

YUCCA FLAT, NEV.
881 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,198	12.3	.3	22	.7
850	28	1,498	18.3	.5	21	1.6
800	28	2,015	15.2	-1.7	20	3.9
750	28	2,557	11.1	-4.2	20	4.5
700	28	3,128	6.5	-7.3	21	5.0
650	28	3,732	2.6	-11.8	22	6.0
600	28	4,374	-1.9	-15.7	22	7.7
550	28	5,060	-6.5	-21.5	23	9.2
500	28	5,798	-11.2	-27.4	23	12.1
450	28	6,599	-16.6	-31.6	23	14.6
400	28	7,473	-23.2	-37.4	23	16.1
350	28	8,440	-30.1	-43.3	24	19.0
300	28	9,516	-38.3	-48.2	24	21.3
250	28	10,748	-46.8		24	25.3
200	27	12,205	-54.3		25	27.2
175	25	13,056	-57.8		25	24.0
150	25	14,020	-61.4		24	21.8
125	25	15,144	-64.1		25	17.9
100	25	16,507	-65.4		25	10.5
80	24	17,877	-64.0		25	5.9
70	23	18,699	-62.1		27	3.8
60	23	19,657	-60.1		24	2.3
50	23	20,802	-57.8		23	1.5
40	21	22,213	-55.3		13	1.0
30	21	24,064	-52.0		08	1.5
25	21	25,248	-50.8		10	2.8
20	21	26,708	-49.2		10	2.8
15	20	28,606	-46.6		09	4.0
10	13	31,355	-43.2			

Note: All observations are scheduled at [illegible] G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

SEPTEMBER 1972

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Sep.									
2-----	0.63	0.72	0.86	----	----	----	----	----	----
3-----	----	----	----	----	----	1.12	1.00	----	0.78
4-----	.78	.91	1.03	1.18	1.32	(1.16)	----	----	----
5-----	----	----	----	----	1.31	----	.96	----	----
7-----	----	----	----	----	1.31	----	----	----	----
8-----	----	.84	----	----	----	----	----	----	----
10----	----	----	----	1.10	----	----	----	----	----
11----	----	----	----	----	(1.29)	----	----	----	----
12----	----	----	----	1.09	1.30	----	----	----	----
14----	----	.80	----	----	----	----	----	----	----
16----	.87	.97	1.06	1.20	1.37	1.17	1.03	.90	.78
17----	----	1.03	1.14	1.25	1.38	1.20	1.02	.87	----
18----	.70	.81	.92	1.09	1.24	1.06	----	.81	.65
19----	.83	----	----	----	----	----	----	----	----
20----	.93	1.01	1.12	1.27	1.40	1.25	1.09	1.02	.94
21----	.91	1.00	----	----	1.39	1.23	1.07	.95	.85
22----	.91	1.00	1.10	1.24	1.35	----	----	----	----
23----	.75	.90	1.02	.96	1.28	.96	.89	.74	.64
24----	.83	.93	1.06	1.20	1.33	----	----	----	----
25----	.89	1.02	1.10	1.27	1.40	1.26	1.12	1.01	.90
26----	.97	1.04	1.14	1.24	1.38	1.19	.94	.74	.66
27----	.83	.94	1.03	----	----	----	----	----	----
28----	----	----	----	----	1.37	1.22	1.00	----	----
29----	.98	1.06	1.17	1.28	1.36	----	1.07	.93	.82
30----	1.02	1.10	1.20	1.32	(1.38)	----	----	----	----
Aver-ages	0.86	0.95	1.07	1.19	1.34	1.17	1.02	0.89	0.78
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Sep.									
16----	----	----	----	----	----	HS1.21	HS1.05	HS0.99	HS0.86
17----	----	----	----	----	----	HS1.18	HS1.02	HS .90	HS .72
18----	HM0.66	HM0.83	----	----	1.28	----	.93	HS .76	----
21----	----	HS1.03	1.15	1.32	----	----	HS1.19	----	----
22----	.96	HS1.05	1.17	----	1.43	----	----	----	----
23----	----	HM .86	HS1.06	HS1.22	----	----	----	----	----
26----	----	----	----	----	----	HS1.20	HS1.04	----	----
30----	----	----	----	----	1.37	----	----	HS1.04	HS .90
Aver-ages	0.81	0.94	1.12	1.27	1.36	1.20	1.05	0.92	0.83

Date	Sun's zenith distance								
	A M.				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Sep.									
1-----	----	0.77	0.89	1.06	1.31	----	----	----	----
3-----	----	----	----	----	1.31	1.14	0.97	----	0.70
4-----	0.75	.85	.98	1.14	1.37	----	----	----	.66
5-----	.60	----	.84	.98	----	----	----	----	----
6-----	.76	.89	1.01	1.15	----	1.17	.99	.89	.80
8-----	----	----	1.04	1.18	1.38	----	.97	.84	----
9-----	.77	.89	1.03	1.17	1.37	----	----	----	----
10----	.85	----	1.07	1.20	1.38	1.13	----	----	.80
11----	.80	.89	1.02	1.17	1.39	1.23	1.06	.95	.85
12----	----	.99	1.11	1.25	1.41	1.17	1.02	.86	.76
13----	.79	.89	1.02	1.19	1.39	----	----	.88	----
14----	----	----	----	----	1.34	----	.89	----	----
15----	----	.78	.40	1.06	1.27	1.02	.78	.66	.59
16----	.64	.74	.88	1.07	1.25	----	----	----	----
17----	.58	.71	.85	1.04	1.20	----	----	----	----
18----	.63	.73	.85	.99	1.21	----	----	----	----
19----	----	----	----	1.15	1.42	1.27	1.11	.98	.88
20----	.91	1.00	1.11	1.27	1.47	1.29	1.09	.94	.82
21----	.88	.98	1.11	1.26	1.43	1.15	.98	.83	.72
22----	.77	----	1.02	----	----	----	----	----	----
23----	----	.87	.99	1.19	1.41	1.23	1.07	.94	.82
25----	.97	1.07	1.17	1.32	1.47	1.32	1.17	1.07	.97
26----	.92	1.01	1.11	1.26	1.42	1.20	1.04	.91	.82
27----	----	----	----	1.26	1.39	----	1.13	----	----
28----	.97	1.07	1.15	1.30	1.45	1.26	1.12	.98	.88
29----	.93	1.02	1.13	1.24	1.43	1.25	----	1.03	.92
30----	.93	1.03	1.14	1.29	1.44	1.22	H .99	H .83	H .72
Aver-ages	0.80	0.90	1.02	1.17	1.37	1.20	1.02	0.91	0.79
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Sep.									
3-----	S 0.82	S 0.96	S 1.04	----	----	----	----	----	----
9-----	----	M .77	M .90	1.10	----	----	----	----	----
14----	----	----	----	S 1.16	----	----	----	----	----
15----	M .69	M .78	M .93	M 1.09	1.20	----	----	----	----
21----	----	----	----	----	----	S 1.28	S 1.08	----	----
22----	S .90	S 1.02	S 1.13	S 1.31	1.42	1.50	1.14	----	----
27----	M .77	----	----	----	----	----	----	----	----
29----	S .89	S .99	S 1.10	----	----	----	----	----	----
30----	S .85	S .96	S 1.06	S 1.21	----	----	----	----	----
Aver-ages	0.82	0.91	1.03	1.17	1.31	1.39	1.11	----	----

( )	Clouds Present
*	**Values corresponding to true solar noon**
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at

SEPTEMBER 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	31	20	170	116	55	163	94	80	14	84	74	- 16	75	25	- 22	25	29	18	32	7	24	30	9	36	43	0	48	20	5	9		43

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	13.53	14.26	5.72	12.19	14.74	7.43	11.09	15.23	14.14	4.75	4.99	9.26	12.31	13.28	13.65	12.92	10.84	11.94	11.94	8.28	13.53	13.16	8.89	7.55	5.60	11.09	10.84	3.16	5.36	10.72		10.41

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder.

This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ S Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

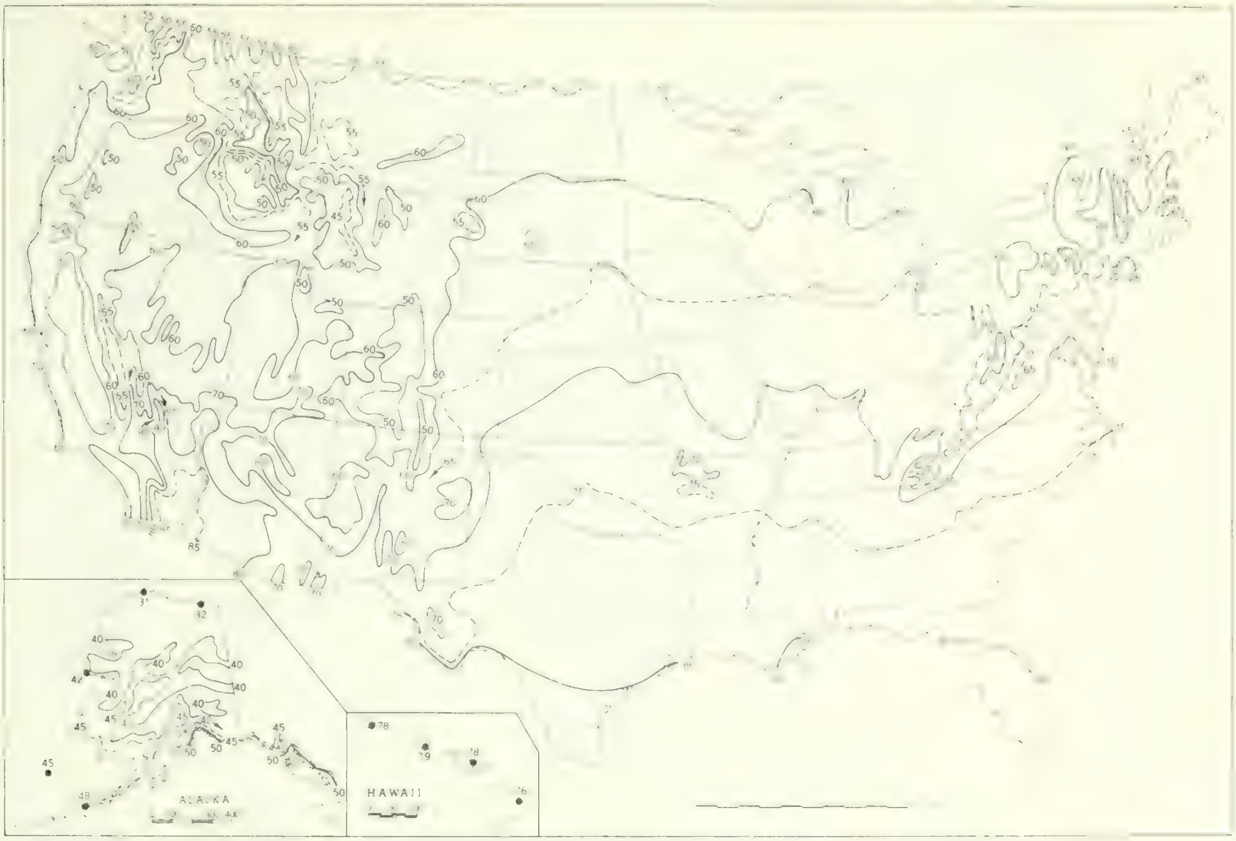
Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

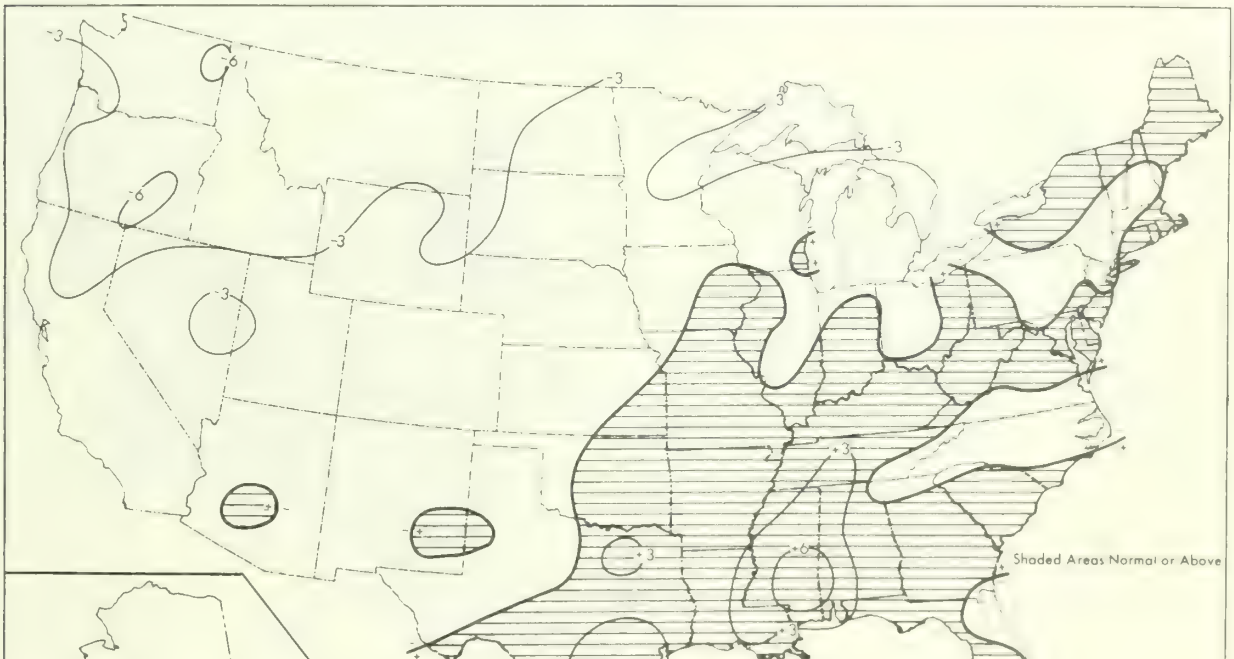
Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick The code λ S designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), September.



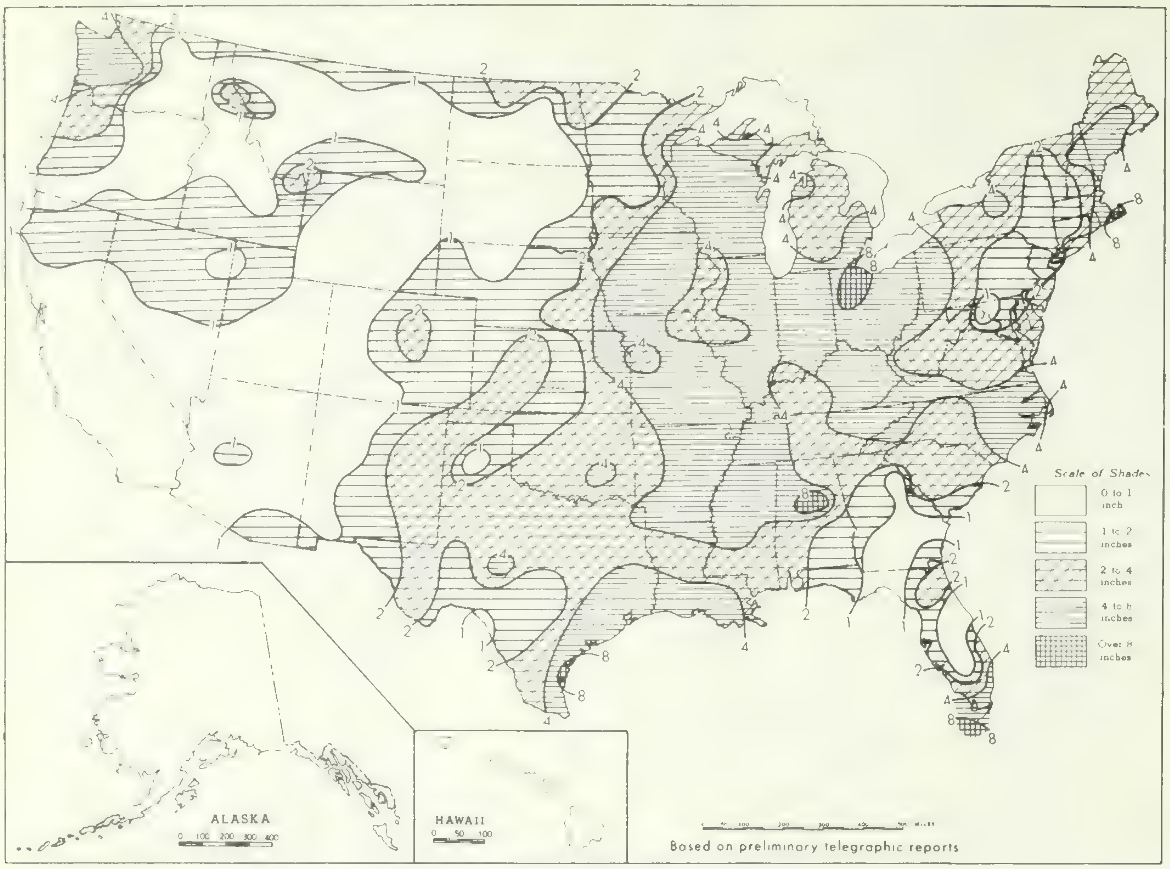
B. Temperature Departure from 30 - Year Mean (°F 1931-60), September 1972



Shaded Areas Normal or Above

Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), September 1972



B. Percentage of Normal Precipitation, September 1972

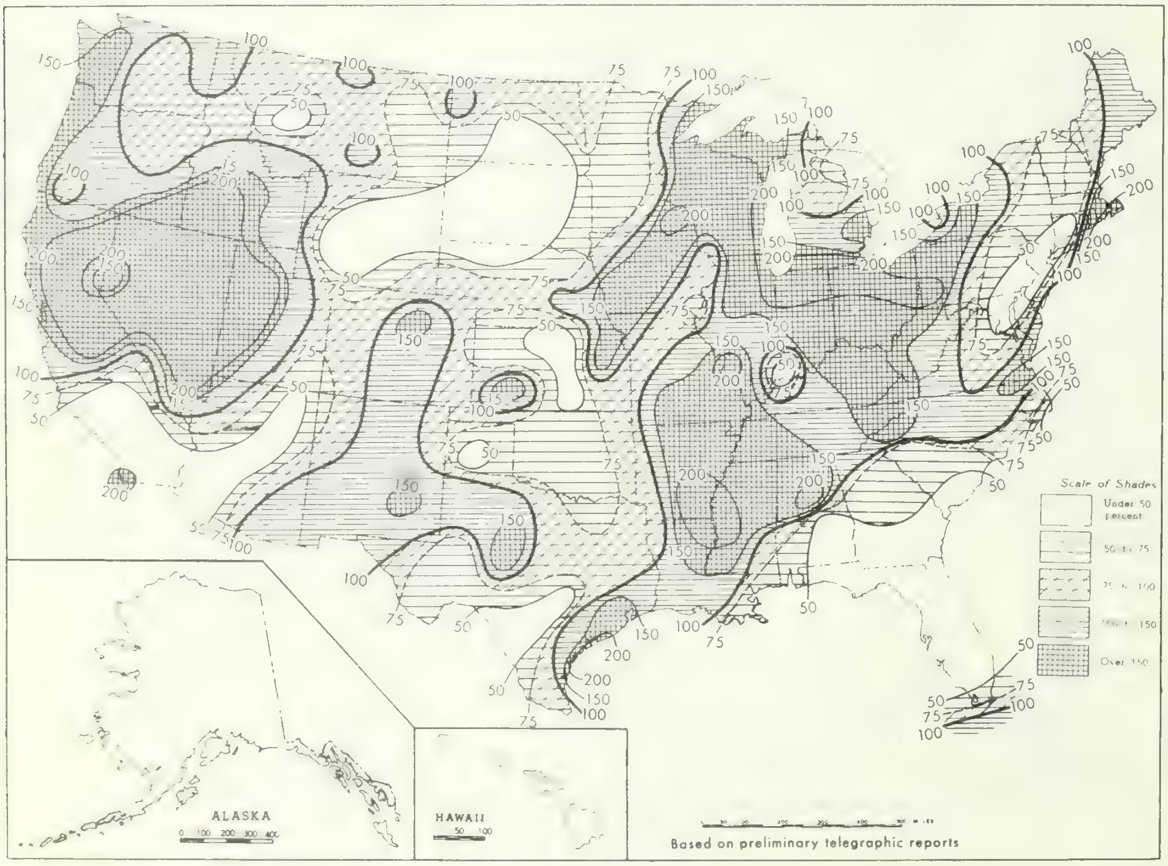
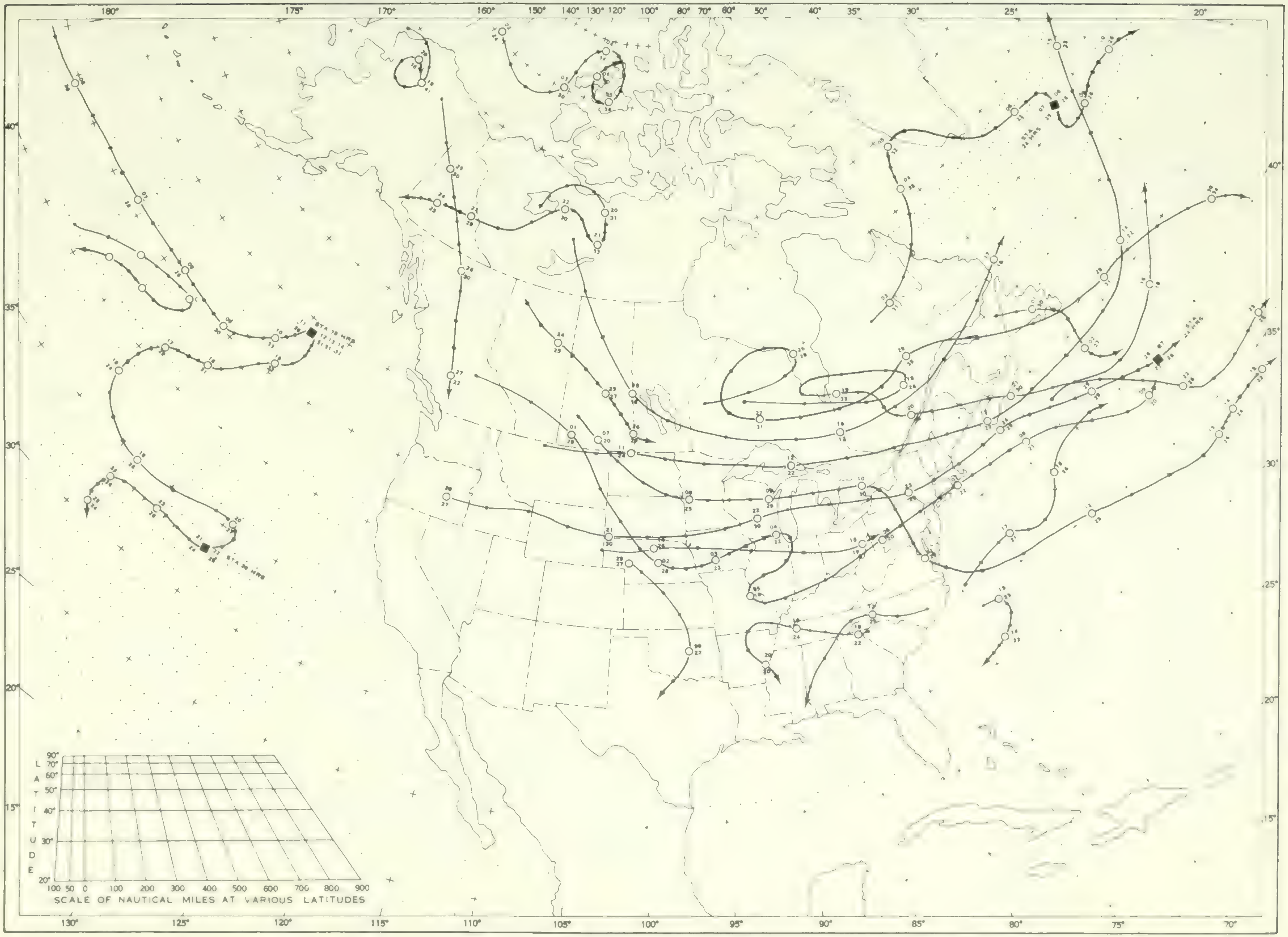
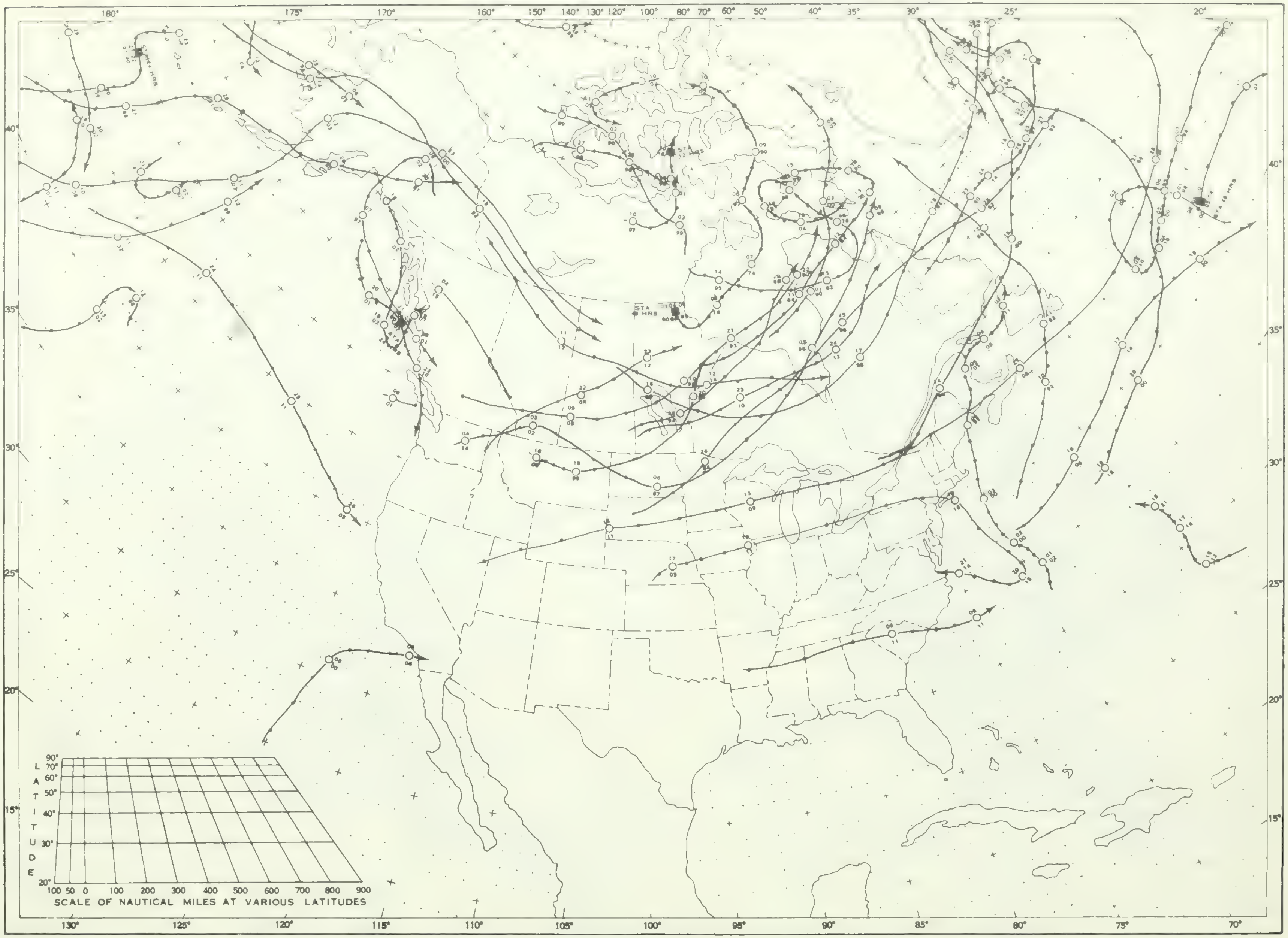


Chart III. Tracks of Centers of Anticyclones at Sea Level, September 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, September 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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CLIMATOLOGICAL DATA

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: $5.50 a year including annual summary; $1.00 additional for foreign mailing; 40¢ single copy; $1.00 annual summary. Make checks payable to Department of Commerce, NOAA; send payments and orders to: National Climatic Center, Federal Building, Asheville, N. C. 28801. Attn: Publications.

I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

NOTICE

Effective with the July 1972 issue of this publication, the Climatological Data tables in English Units are discontinued.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$$°F. = \frac{9}{5} \times °C + 32$$

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

Snowfall, sunshine, solar radiation, and pressure surface maps are also discontinued. See the explanatory page "Description of Charts," which appears in the July 1972 issue, and will be carried subsequently in the January and July issues.

Effective with the September 1972 issue, the Solar Radiation Totals Table is discontinued.

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

OCTOBER 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

Lucius W. Dye, Climatologist

Highlights:

1. Most of the United States had below normal temperatures.

2. Relatively heavy rain occurred over much of the Southwest and portions of the Southern Great Plains.

TEMPERATURE -- October temperatures averaged cooler than normal over most of the Nation. The main exceptions included an area from east-central Arizona to the western Gulf Coast and from eastern Louisiana to southern Georgia, including the Florida Peninsula. A large area from the northern and central Great Plains to the northern and middle Atlantic Coast averaged 3° to 7° cooler than normal. Most of the Nation was relatively cool through the entire month. The Great Basin was mild in the first week. A large area from Idaho to Arizona and eastward to Alabama was warmer than normal in the second week of October and the Atlantic coastal states averaged warmer than normal in the last week.

Some quick temperature changes occurred in October due to several cold fronts that crossed the Great Plains. One of these fronts dropped temperatures sharply shortly after midmonth. Southerly winds preceding the front warmed the central Great Plains. The mercury at Wichita Falls, Texas, climbed to 102° on the 17th when Oklahoma City, Okla., warmed to 96°. Neither city had ever seen such high temperatures so late in the season. Northwesterly winds following the frontal passage dropped the temperatures in Oklahoma to the thirties and forties by the 19th. The freezing line in the East pushed southward across eastern Tennessee and western North Carolina.

Floridians basked in summer weather during the entire month. In contrast, the mercury at West Yellowstone, Montana, tumbled to -5° on the 29th.

PRECIPITATION -- Rainfall in October was very unevenly distributed over the Nation. Hurricane Joanne, about 500 miles south of San Diego, Calif., became Tropical Storm Joanne, and moved across northern Mexico. It became an extra-tropical Low and produced heavy rains over portions of the Desert Southwest. About 3 inches of rain fell in the Prescott-Flagstaff, Ariz., area in 24 hours on the 6th and 7th. The 4-day total (the 3d to the 7th) at Phoenix of 1.93 inches is more than four times the October normal for Phoenix for the entire month. The heavy rains filled reservoirs but damaged cotton. Another storm off the coast of North Carolina intensified. Onshore winds brought moisture to the hill country of the middle Atlantic States. Almost 11 inches of rain fell at Amelia, Va. Three-day totals over interior Virginia for the 5th - 7th ranged from 6 to 12 inches, with slightly lesser amounts in western Maryland and in North Carolina. The intense rains caused serious flooding at Richmond, Va., on the James River and the worst flooding in the 20th century at Petersburg on the Appomattox River. Weak thunderstorms spattered the central Great Plains in the second week of October. Amounts of rain were mostly light and wide areas in the southern Great Plains received no rain or only light sprinkles. Heavy rains caused flash floods in eastern Arizona and central Oklahoma in the third week of October. Snow fell in the Rocky Mountains and in the lee of the Great Lakes. The heaviest rains in the last week in October fell in east Texas, southern Oklahoma, northern Louisiana, and western Arkansas where some weekly totals ranged from 6 to 13 inches.

Monthly totals in October ranged widely from less than an inch along the western edge of the northern and central Great Plains to 4 to 6 inches or more in southeastern Arizona and from northeastern Texas across southern Missouri, Arkansas, and Louisiana to Tennessee.

October rains exceeded the October normals over the Far Southwest, over the southern Great Plains, and over portions of the northern Great Plains. The heavy rains in the Desert Southwest shortly after midmonth were several times the normals for the entire month. In the Far Northwest, October precipitation was less than 25 percent of normal.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

OCTOBER 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	7 Stations	92	18+	2 Stations	28	21	Talladega	6.85	Claiborne	.91
Alaska	Kitoi Bay	62	12	Chandalar Lake	-27	30	Little Port Walter	32.19	Dot Lake	.47
Arizona	Sacaton	108	2	Sunrise Mountain	- 5	31	Junipine	14.74	Willow Beach	.50
Arkansas	Forrest City	97	13	Evening Shade 1 NE	22	20	Mena	14.10	Osceola	3.16
California	Indio 1 S Date Garden	108	1	White Mountain 2	-10	31	Vollmers	9.29	2 Stations	.00
Colorado	La Junta FAA AP	92	10	2 Stations	-12	31	Wolf Creek Pass 1 E	14.45	Otis 11 NE	D .13
Connecticut	Hartford WSO AP	80	24	2 Stations	14	21	Round Pond	7.05	4 Stations	3.64
Delaware	2 Stations	76	17	Georgetown 5 SW	23	21	Dover	6.14	Wilmgton Porter Resvr	3.65
Florida	8 Stations	94	29+	Mayo	40	21	Quincy 3 SSW	7.17	Okeechobee	.36
Georgia	2 Stations	93	18+	3 Stations	27	21	Cornelia	6.80	Fort Stewart	.40
Hawaii	Lualualei 804, Oahu	96	5	2 Stations	33	29+	Mount Waialeale 1047, Kauai	27.79	2 Stations	.00
Idaho	Payette	87	2	Tetonia Exp Station	- 8	30	Henry	3.10	Gibbonsville	.16
Illinois	2 Stations	86	11+	Peru 2 W	16	19	Cairo WSO CI	7.05	Greenville 1 E	1.20
Indiana	2 Stations	81	3+	Culver Experiment Farm	17	20	2 Stations	3.76	Bedford 4 SW	.90
Iowa	3 Stations	85	3+	Hawarden	8	19	Hampton 3 NNE	5.33	Lamoni	1.04
Kansas	Ashland	97	11	Sabetha Lake	14	19	Mound Valley 2 WSW	7.42	Tribune 1 W	.06
Kentucky	Princeton 1 SE	88	5	Falmouth [illegible] WNW	17	20	Hickman 1 E	6.84	Lloyd Greenup Dam	1.43
Louisiana	Oberlin Fire Tower	94	16	Ashland 2 S	37	26	Elizabeth	10.83	New Iberia 5 NW	1.50
Maine	Bridgton 3 NNW	74	7	3 Stations	10	21+	Ellsworth	5.65	Upper Dam	2.11
Maryland	Pocomoke City	80	17	Oakland 1 SE	12	20	Beltsville	5.50	Chewsville Bridgeport	1.67
Massachusetts	Fitchburg 2 S	77	5	Chester 2	8	21	Chester 2	5.14	Norwood	2.12
Michigan	3 Stations	78	4	Stambaugh 1 S	9	19	[illegible] 1 W	5.29	De Tour 1 N	.90
Minnesota	2 Stations	82	2+	2 Stations	1	19	Preston	4.72	Argyle 4 E	.51
Mississippi	2 Stations	94	17+	6 Stations	30	27	McComb FAA AP	5.70	Newton Exp Station	1.49
Missouri	Lakeside	88	12	Tarkio	13	19	Poplar Bluff R S	7.69	Lucerne	.54
Montana	2 Stations	84	3	Denton 1 NNE	-18	30	Gallatin Gateway 9 SSW	3.41	2 Stations	T
Nebraska	Beaver City	91	1	Harrison	4	31	Sterling	5.45	Mullen	.18
Nevada	3 Stations	93	2+	Mountain City RS	- 6	31	Mina	4.38	Kings River Valley	.19
New Hampshire	2 Stations	75	4	Mount Washington	1	20	Mount Washington	8.38	Bethlehem	1.79
New Jersey	3 Stations	76	18+	Newton	17	21	Toms River	8.14	Bass River St Forest	2.25
New Mexico	Jal	97	14	Lake Maloya	9	31	Chama	7.49	Clayton WSO AP	.58
New York	Canton 4 SE	77	5	Old Forge	4	20	Holbrook	8.05	Watkins Glen 2 NW	1.73
North Carolina	4 Stations	89	18+	2 Stations	16	20	Arcola	9.85	Southport 5 N	.40
North Dakota	Hettinger	84	1	Upham 3 N	- 2	19+	Watauga S Dak 8 N	D 2.68	Fortuna 1 SSE	.09
Ohio	2 Stations	79	4	Athens 5 NW	12	20	Willoughby-Eastlake	4.21	Chillicothe-Mound CI	.45
Oklahoma	Healdton 2 N	101	17	Kenton	23	31	Hee Mountain Tower	17.30	Supply 1 E	.64
Oregon	2 Stations	92	7	Seneca	- 1	30	Crater Lake NP HQ	5.27	Arlington	.17
Pennsylvania	2 Stations	79	4+	Philipsburg FAA AP	8	20	Neshaminy Falls	6.04	Jamestown 2 NW	1.21
Puerto Rico & VI	Alex Hamilton Fld FAA,V.I.	98	1	Adjuntas Substation, P.R.	55	10	Maricao 2 SSW, P.R.	24.84	Caneel Bay Plantation,V.I.	2.10
Rhode Island	Providence WSO AP	73	24	Providence WSO AP	23	21	Kingston	5.14	Block Island WSO AP	2.16
South Carolina	3 Stations	91	18+	Caesars Head 1 NE	24	21	Caesars Head 1 NE	6.57	Brookgreen Gardens	.09
South Dakota	Stephan 1 ENE	89	1	Belle Fourche 29 NNW	- 3	31	La Delle 7 NE	4.10	Kyle	.24
Tennessee	Selmer	86	13	Mountain City No 2	15	20	Centerville Water Pl	9.53	Celina	3.02
Texas	3 Stations	102	18+	Vega	23	31	Port Lavaca No 2	12.24	Encinal 3 NW	.00
Utah	Saint George	93	3+	Woodruff	-16	31	Cedar Point	8.28	Ibapah	.20
Vermont	3 Stations	76	5+	Morrisville 2	5	21+	Mount Mansfield	D [illegible].31	Mc Indoe Falls	2.24
Virginia	Urbanna	87	6	2 Stations	15	31+	Amelia Court House	15.22	Staffordsville 3 ENE	1.92
Washington	4 Stations	83	8+	3 Stations	11	30	Tolt South Fork Resvr	3.48	Ellensburg	.00
West Virginia	Ripley	81	3	Canaan Valley	7	20	Mathias	8.21	Berkeley Springs	.68
Wisconsin	6 Stations	78	4+	Gordon	4	19	Mauston 1 SE	4.92	Madeline Island	1.26
Wyoming	LaGrange	86	2	Bondurant 3 NW	-14	31	Alta 1 NNW	D 3.56	Basin	.32
ALASKA AUG 1972	Sourdough 1 N	88	3	Clear Water	20	30	Little Port Walter	23.94	Cape Sarichef	.00
HAWAII AUG 1972	2 Stations	94	19	Mauna Loa Slope Obs, Hawaii	33	11	Honomu Mauka 138, Hawaii	21.78	2 Stations	.00

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
ALABAMA	M	Mb	Mb	C	C	C	C.	C.		C				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	997.0	1019.6	22.4	10.6	16.5	- 2.2	29.4	14	1.7	26	0	0	11.1	75	85	10	37	5	2	0	0	1.3	6	13.0	E	27	4	13	14	6.5	55
HUNTSVILLE	190	996.6	1019.9	20.7	9.2	14.9	- 2.4	27.2	14	0.6	20	0	0	10.0	75	56	- 13	13	11	3	0	0	1.3	9	14.3	33	14	6	12	13	6.3	
MOBILE	64	1010.2	1018.0	27.8	15.4	21.7	0.6	32.2	17+	7.2	26+	2	0	15.6	72	32	- 45	27	4	0	0	0	1.3	5	9.8	14	22	12	12	7	5.0	
MONTGOMERY	56	1011.9	1019.0	25.8	12.2	19.1	- 0.2	32.2	14	5.6	25+	1	0	12.8	72	40	- 18	31	4	0	0	0	1.1	3	8.9	SE	27	12	10	9	4.9	58
ALASKA												a																				
ANCHORAGE	35	1007.5	1012.4	2.5	- 2.9	- 0.2	- 2.3	11.1	15	- 7.8	8	0	26	- 2.8	82	73	26	26	11	0	84	51	0.8	36	11.6	15	15	3	4	24	8.4	32
ANNETTE	34	1014.9	1019.0	9.8	3.5	6.7	- 1.5	16.1	13	- 2.2	29	0	3	3.3	80	342	- 87	103	19	0	0	0	1.3	15	17.4	13	30	5	5	21	7.7	
BARROW	9	1007.5	1008.0	- 2.9	- 9.2	- 6.1	2.5	2.2	9	-18.9	3	0	31	- 7.2	90	36	23	11	15	0	381	203	2.2	16	16.5	8	15	0	6	25	9.1	
BARTER ISLAND	12	1008.5	1010.4	- 3.4	- 9.2	- 6.3	1.9	3.3	10	-17.8	31	0	31	- 7.8	89	18	- 4	10	7	0	191	279	2.5	23	24.6	11	15	2	6	23	8.4	
BETHEL	38	1002.4	1008.1	4.4	- 1.3	1.6	1.9	11.1	15+	- 7.8	5	0	21	- 0.6	87	64	25	19	20	0	69	51	2.1	16	17.0	14	16	0	6	25	9.2	
BETTLES	196	987.8	1012.9	- 2.8	- 9.3	- 6.1		5.0	16	-22.8	31	0	31	- 7.2	88	97		34	16	0	719	457	0.7	35	9.4	14	28	1	5	25	8.7	
BIG DELTA	386			1.5	- 6.4	- 2.4		13.3	17	-15.0	4	0	26			22			7	0	404											
COLD BAY	29	1004.4	1008.2	7.3	1.3	4.3	- 0.2	11.7	14	- 2.2	26+	0	13	2.2	86	99	- 17	26	20	0	T	T	2.9	19	21.0	17	15	2	5	24	8.3	
FAIRBANKS	133	995.3	1012.7	0.4	- 6.3	- 2.9	0.3	11.1	15	-13.9	4	0	29	- 7.2	72	22	T	8	14	0	175	178	0.7	34	10.3	26	26	1	3	27	9.0	
GULKANA	479			1.4	- 7.1	- 2.8		11.1	16+	-18.3	8	0	27			30		7	10	0	292	127			13.0	19	15+	2	5	24	8.5	
HOMER	20	1008.1	1011.8	6.7	- 0.4	3.2		12.2	14	- 5.0	27	0	21	0.0	78	81	- 8	24	13	0	T	0	0.3	6	14.3	9	4	3	9	19	7.7	
JUNEAU	4	1016.3	1016.9	7.3	0.1	3.7	- 1.6	12.2	6	- 5.6	28+	0	15	1.1	85	216	4	58	19	0	56	25	2.3	11	18.3	12	2	5	2	24	8.1	28
KING SALMON	15	1007.1	1009.1	5.7	- 1.3	2.2	0.2	14.4	14	- 8.9	1	0	20	0.6	85	65	11	18	14	0	20	T	1.7	13	19.7	16	15	4	5	22	7.8	
KOTZEBUE	3	1006.8	1007.1	0.7	- 3.9	- 1.6	2.5	5.0	9	-11.7	6	0	27	- 3.9	86	25	10	6	18	0	282	102	3.0	12	17.0	24	26	3	3	25	8.5	
MC GRATH	105	998.3	1011.1	2.4	- 3.3	- 0.4	2.5	12.2	15	-15.0	6	0	21	- 5.0	71	51	18	15	14	0	191	102	0.6	17	7.2	19	25+	1	1	29	9.3	
NOME	4	1005.1	1005.8	2.6	- 2.3	0.2	1.4	6.7	16+	- 9.4	29+	0	23	- 1.7	84	98	54	22	19	0	124	25	1.2	13	16.5	28	26	3	5	23	8.3	27
ST. PAUL ISLAND	7	1005.1	1005.9	5.5	0.9	3.2	0.3	7.2	13+	- 3.3	3+	0	11	1.7	89	89	9	19	18	0	46	T	1.9	28	19.7	36	14	2	5	24	8.5	
SHEMYA	37	1006.4	1010.0	6.7	3.6	5.1	0.8	8.9	5+	1.1	31	0	0	1.7	79	77	7	21	21	0	T	0	2.7	29	25.0	31	29	2	6	23	8.4	
SUMMIT	732	924.8	1014.6	- 1.9	- 8.8	- 5.3		6.1	16	-18.3	4	0	29	- 7.8	81	58		25	15	0	645	457	2.3	4	10.3	24	15+	1	7	23	8.4	
TALKEETNA	105			2.4	- 6.2	- 1.9	- 2.5	6.7	16	-17.2	30	0	27			102	29	24	16	0	721	330			7.6	36	2					
UNALAKLEET	5			3.1	- 1.8	0.7		11.1	16+	-13.3	5	0	17			47		19	15	0	25	T			16.1	26	26	2	5	24	8.5	
YAKUTAT	9	1013.5	1014.6	7.9	- 0.2	3.9	- 1.6	11.7	12	- 6.1	9	0	17	1.7	88	436	- 61	121	21	0	180	76	1.7	11	17.9	12	2	6	3	22	7.8	
ARIZONA																																
FLAGSTAFF	2135	787.7	1015.8	14.1	1.4	7.7	- 0.6	26.1	1	-10.0	26	0	13	- 1.1	57	250	212	69	15	7	300	203	1.0	20	10.7	NE	31	4	11	16	7.0	51
PHOENIX	340	973.6	1012.3	27.3	17.1	22.2	0.7	39.4	1	7.2	31	9	0	12.2	57	112	100	58	9	3	0	0	0.8	14	13.4Y	SSE	6	13	5	13	5.6	65
TUCSON	788	925.2	1012.5	25.1	13.3	19.2	- 1.9	36.1	1	3.3	31	5	0	10.0	62	115	98	47	8	6	0	0	1.1	18	14.3	SW	6	15	7	9	4.9	66
WINSLOW	1492	851.7	1014.9	20.4	8.4	14.4	0.3	33.9	1	- 2.8	31	1	2	7.8	73	142	126	51	15	2	152	102	0.7	22	13.0	24	15	7	8	16	6.5	
YUMA	59	1005.1	1012.3	27.4	16.7	22.1	- 1.6	40.0	1	8.3	31	4	0	11.1	55	63	54	56	6	1	0	0	0.8	34	12.1	N	30	9	11	11	5.5	68
ARKANSAS																																
FORT SMITH	136	1001.7	1018.5	21.4	10.6	16.0	- 1.7	31.7	16	2.2	26	0	0	11.1	77	163	76	74	11	6	0	0	1.5	6	17.0	SW	22	5	5	21	7.7	45
LITTLE ROCK	78	1009.1	1018.9	22.8	11.2	17.0	- 0.3	31.7	14+	1.7	26	0	0	11.7	74	194	121	66	11	4	0	0	0.7	4	11.6	NE	27+	8	8	15	6.6	65
CALIFORNIA																																
BAKERSFIELD	145	997.3	1014.7	24.6	13.0	18.8	- 0.6	33.3	7	3.3	31+	1	0	10.0	60	14	6	13	2	1	0	0	1.1	1	10.7	35	7	15	8	8	4.4	
BISHOP	1252	873.4		20.4	3.8	12.1	- 2.0	26.7	3	- 3.9	30	0	5			23	12	8	6		0	0						16	10	5	3.8	
BLUE CANYON	1609			14.0	5.3	9.7	- 2.4	25.0	3	- 3.9	30	0	3			120	34	43	12		0	0			9.4	6	24	12	8	11	5.3	
EUREKA U	13			15.6	9.1	12.3	- 0.1	22.2	6	2.2	30	0	0			50	- 31	25	9		0	0			14.3	N	26	6	7	10	7.0	47
FRESNO	100	1003.1	1014.9	23.8	10.2	17.0	- 1.1	32.2	7	- 2.8	30	1	2	9.4	67	6	- 5	5	4	0	0	0	0.2	20	10.7	NW	28	12	11	8	4.6	64
LONG BEACH	8	1013.5	1015.0	24.4	13.4	18.9	- 0.2	35.6	6	3.9	31	2	0	11.1	65	1	- 4	1	2	2	0	0	0.9	26	8.9	36	30+	9	9	13	5.8	
LOS ANGELES	30	1010.8	1014.3	22.8	15.4	19.1	0.8	35.0	6	8.9	31	1	0	12.2	71	45	36	45	3	3	0	0	1.5	26	14.8Y	N	29	8	10	13	5.8	
LOS ANGELES U	82			24.4	14.7	19.6	- 0.1	35.6	6+	8.9	31	2	0			7	- 3	7	2		0	0			14.8	N	30	12	8	11	5.4	57
MT SHASTA R	1080	893.0	1017.5	16.7	3.3	10.0	- 1.1	26.1	3	- 6.7	30	0	6			67	5	24	11		T	T										
OAKLAND	2	1015.2	1015.4	19.7	13.7	16.7	0.6	31.7	6	7.2	31	0	0	11.7	77	99	79	36	9	1	0	0	0.8	25	10.3	14	14	8	10	13	5.8	
RED BLUFF	104	1002.4	1015.0	23.2	10.4	16.8	- 1.8	36.1	2	1.7	31	3	0	8.3	67	70	35	26	8	5	0	0	1.0	34	13.4	N	29	13	7	11	4.7	76
SACRAMENTO	5	1013.9	1014.9	22.5	10.8	16.7	- 0.8	32.2	6	2.8	31	1	0	11.1	76	44	25	23	8	2	0	0	0.9	25	13.4	N	29	11	11	9	4.9	67
SANDBERG R	1377	861.8		15.8	6.2	11.0	- 3.8	22.8	6	- 2.2	30	0	3			1	- 11	1	2		0	0			14.3	30	30	7	10	14	6.3	
SAN DIEGO	4	1013.5	1014.5	22.2	15.1	18.7	- 0.3	30.6	5	8.3	31	0	0	12.8	71	15	2	8	8	0	0	0	1.8	31	10.7	N	30	9	5	17	6.2	58
SAN FRANCISCO	2	1014.9	1015.5	19.9	12.3	16.1	0.3	31.1	6	5.0	31	0	0	11.1	76	133	114	54	9	1	0	0	1.0	23	13.0	19	7	9	10	12	5.8	
SAN FRANCISCO U	16			19.3	13.7	16.5	0.2	30.6	6	10.6	31+	0	0			137	115	44	9		0	0			11.6	W	3					51
SANTA MARIA	72			21.5	10.1	15.8	0.0	33.9	6	0.0	31	1	1			15	0	14	3		0	0						10	9	12	5.4	
STOCKTON	7	1014.6	1015.5	23.3	10.7	17.0	- 0.8	31.1	7+	0.6	31	0	0	8.9	64	19	3	7	8	1	0	0	1.2	29	13.9	33	29	11	13	7	4.8	
COLORADO																																
ALAMOSA	2297	773.1		15.8	0.4	8.1	1.2	24.4	3	- 7.8	31	0	14			55	40	17	14		363	279						4	8	19	7.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M	Mb.	Mb.	C	C	C	C	C		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm	M p.s.		M p.s							%
COLORADO																																
COLORADO SPRINGS	1873	812.7	1017.6	15.8	3.6	9.7	- 0.5	26.7	10	- 8.3	31+	0	6	0.6	60	34	17	22	12	0	366	279	1.1	4	17.0	36	14	5	5	21	7.5	
DENVER	1610	837.5	1015.6	18.8	3.5	11.2	0.4	28.3	10+	- 9.4	31	0	5	- 0.6	51	21	- 5	13	7	1	246	229	0.5	4	12.5	N	22	5	4	22	7.5	42
GRAND JUNCTION	1476	852.7	1015.2	17.3	7.1	12.2	- 0.6	28.9	3	- 7.2	30	0	3	6.1	71	88	69	16	20	6	145	102	1.5	11	13.4	NE	22	4	8	19	7.5	40
PUEBLO	1428	856.8	1015.9	19.7	4.6	12.1	- 0.6	30.6	10	- 5.6	31	0	3	2.8	60	27	2	20	9	0	320	229	0.8	6	19.2	N	14	4	9	18	7.2	54
CONNECTICUT																																
BRIDGEPORT	2	1020.0	1020.7	15.7	5.6	10.7	- 2.3	21.7	6+	- 3.3	20	0	2	6.1	71	162	76	109	8	0	T	T	2.2	32	14.3	23	16+	9	11	11	5.7	
HARTFORD	52	1013.5	1020.2	15.7	3.0	9.4	- 2.3	26.7	24	- 7.2	21	0	10	3.3	69	107	26	81	10	0	10	T	1.2	30	17.4	NW	15	11	8	12	6.0	63
DELAWARE																																
WILMINGTON	23	1018.6	1021.5	17.6	6.3	11.9	- 1.7	23.9	17+	- 2.2	20	0	2	5.6	68	107	33	56	8	0	T	T	[illegible]	34	13.4	34	15	12	4	15	5.9	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1009.5	1021.4	17.8	3.8	10.8		25.0	8	- 6.7	20	0	7	6.7	78	87		41	7	0	T	0	0.8	35	10.3	19	16	12	3	16	6.0	
WASHINGTON NATIONAL	3	1018.6	1021.2	18.5	8.2	13.3	- 1.7	26.1	17	- 0.6	20	0	2	6.7	66	90	12	52	8	0	T	0	1.3	35	12.1	N	15	11	4	16	5.8	53
FLORIDA																																
APALACHICOLA	4			26.4	17.8	22.1	0.3	31.1	19	10.6	26	0	0			74	12	41	5	4	0	0			11.2	SE	27	12	11	8	4.8	87
DAYTONA BEACH	9	1016.3	1017.6	28.6	19.2	23.9	0.9	31.7	2	13.9	9	0	0	17.8	72	78	- 64	41	7	4	0	0	1.3	3	11.6	6	11	8	12	11	5.9	
FORT MYERS	5	1016.3	1016.4	31.2	20.3	25.7	1.2	33.9	2	16.7	30	5	0	19.4	74	56	- 48	46	5	3	0	0	1.6	5	12.5	12	2	14	11	6	4.4	
JACKSONVILLE	8	1017.3	1018.2	27.7	16.4	22.1	0.4	31.7	18	9.4	21	0	0	17.2	79	113	- 18	65	8	2	0	0	1.4	2	13.4	NE	19	8	11	12	5.9	66
KEY WEST	1	1014.6	1015.3	29.8	24.9	27.4	1.3	31.7	2	23.9	26+	0	0	21.7	73	19	-129	8	9	2	0	0	3.5	7	11.2	E	21	13	9	9	4.8	84
LAKELAND	65			28.8	19.2	24.0	0.4	31.7	2	15.6	30	0	0			110	36	51	5		0	0						14	11	6	4.3	64
MIAMI	2	1015.6	1015.8	28.9	22.1	25.5	0.1	31.1	6	18.9	9	0	0	20.6	77	73	-136	21	15	0	0	0	2.3	6	11.6	9	1	7	16	8	5.7	
ORLANDO	33	1012.9	1017.3	29.6	20.2	24.9	1.6	32.2	2	16.1	9	1	0	18.3	72	59	- 41	30	6	3	0	0	1.2	3	10.3	7	11	12	8	11	5.3	
PENSACOLA	34	1013.9	1018.0	27.1	16.9	22.0	0.7	31.7	17	10.0	26	0	0	15.0	67	113	37	98	3	2	0	0	1.3	5	9.4	19	27	10	12	9	5.0	
TALLAHASSEE	17	1015.9	1018.1	28.4	14.0	21.2	0.3	32.2	18+	6.1	10+	3	0	15.0	73	44	- 17	30	4	2	0	0	1.7	4	10.3	8	2	12	9	10	5.3	
TAMPA	6	1016.9	1017.3	30.0	18.9	24.5	0.8	32.8	2	14.4	9	1	0	18.9	75	84	13	39	5	3	0	0	1.6	5	11.2	9	2	14	7	10	4.9	69
WEST PALM BEACH	5	1015.2	1016.0	31.3	22.4	26.9	1.2	33.3	1	17.2	9+	9	0	19.4	65	30	-172	10	5	4	0	0	2.6	7	13.0	32	1	6	13	12	5.9	
GEORGIA																																
ATHENS	244	990.9	1019.9	23.3	10.3	16.8	- 0.4	28.9	17	0.6	20	0	0	10.0	70	62	- 11	37	5	1	0	0	1.3	3	8.0	6	19+	11	11	9	5.3	
ATLANTA	308	982.7	1019.6	21.7	10.6	16.2	- 0.7	27.8	17	1.1	20	0	0	10.0	71	77	15	53	7	0	0	0	1.7	5	12.5	E	27	8	10	13	5.9	58
AUGUSTA	41	1013.9	1019.2	24.7	10.2	17.5	- 0.9	31.7	17	1.1	21+	0	0	10.0	68	22	- 29	11	6	1	0	0	1.3	1	9.4	25	17+	11	9	11	5.4	
COLUMBUS	117	1005.1		25.1	13.1	19.1	0.6	30.6	18	5.0	21	0	0			59	14	33	5	1	0	0	1.8	4	10.7	6	20	11	12	8	5.1	
MACON	108	1006.1	1019.2	26.3	11.3	18.8	- 0.2	31.7	17	3.9	21	0	0	12.2	72	23	- 28	15	5	1	0	0	1.3	2	10.7	SE	27	11	11	9	5.4	65
ROME	194			21.9	9.1	15.5	- 0.7	28.3	13	- 1.1	20	0	1			58	- 16	19	12		0	0										
SAVANNAH	14	1017.3	1019.0	26.3	13.8	20.1	0.5	32.2	17	4.4	20	1	0	13.9	72	14	- 52	12	2	0	0	0	1.5	3	11.2	NE	19	8	14	9	5.6	66
HAWAII																																
HILO	8	1013.5	1014.7	28.8	23.0	24.4	0.5	32.8	13	17.8	29	1	0	20.6	83	242	- 33	84	26	1	0	0	0.8	18	10.7	SE	13	2	15	14	7.0	30
HONOLULU	2	1013.9	1014.2	30.1	22.5	26.3	0.6	31.7	16+	20.0	29+	0	0	19.4	67	61	14	28	8	1	0	0	3.6	6	13.4	SE	30	10	13	8	5.6	67
KAHULUI	15	1011.5	1013.7	31.0	20.2	25.6	0.4	33.3	31	16.7	2	7	0	20.0	74	25	3	17	6	1	0	0	3.5	6	11.6	N	29+	14	11	6	4.4	76
LIHUE	31	1010.2	1015.4	28.3	23.0	25.7	0.7	30.0	9	20.0	30	0	0	21.7	81	154	52	64	16	1	0	0	2.2	6	9.4	NE	4	5	12	14	6.5	53
IDAHO																																
BOISE	865	916.4	1016.9	17.2	4.7	10.9	0.1	25.6	1	- 8.3	30	0	6	2.2	58	16	- 5	7	5	2	T	0	0.2	17	13.0	SW	9	14	9	8	4.5	70
LEWISTON	431			16.9	4.4	10.7	- 0.4	25.6	3+	- 2.2	31+	0	4			30	T	24	5		0	0			18.3+		25	11	7	13	5.6	
POCATELLO	1358	863.9	1017.2	15.6	1.9	8.8	- 0.7	25.6	3	- 9.4	30	0	10	- 0.6	57	35	13	12	10	2	13	T	0.9	22	16.5	SE	14	10	8	13	5.6	58
ILLINOIS																																
CAIRO	96			19.2	10.5	14.8	- 1.8	26.7	12+	1.1	19	0	0			179	106	53	13		0	0			11.2	SW	11	9	8	14	6.4	44
CHICAGO O HARE	201	994.9	1019.7	14.2	5.0	9.6	- 2.1	25.6	2	- 3.9	20	0	5	5.0	76	74	4	30	13	1	T	T	1.0	25	13.0	23	16	6	6	19	7.2	
CHICAGO MIDWAY	185	997.3	1020.2	14.5	5.7	10.1	- 2.7	25.0	2	- 3.3	20	0	4	5.0	74	92	21	37	11	1	20	25	0.9	21	10.7	SW	16+	7	5	19	7.0	47
MOLINE	177	997.6	1019.6	15.2	5.0	10.1	- 2.6	27.2	2	- 6.1	19	0	5	4.4	69	61	- 2	25	9	1	51	25	0.5	24	11.6	SW	23+	8	4	19	6.9	42
PEORIA	199	995.9	1020.1	14.8	5.2	10.0	- 2.9	25.6	2	- 7.2	19	0	5	5.6	77	64	- 1	31	11	3	8	T	0.7	17	11.6	SW	23	6	4	21	7.3	36
ROCKFORD	221	992.6	1019.8	13.9	4.9	9.4	- 2.0	23.9	2	- 6.1	19	0	6	5.0	76	109	40	37	13	1	T	T	0.6	21	12.5	28	16	6	7	18	6.8	
SPRINGFIELD	179	997.6	1020.2	16.6	6.6	11.6	- 2.1	27.2	11+	- 6.1	19	0	5	7.2	78	36	- 38	14	10	1	0	0	0.5	18	15.6	SW	11	8	3	20	7.1	41
INDIANA																																
EVANSVILLE	116	1006.4	1020.6	17.9	5.8	11.9	- 3.2	25.6	4	- 4.4	20	0	4	7.2	75	78	12	49	8	1	0	0	0.2	9	7.6	SE	22+	8	6	17	6.7	50

See footnotes at end of table.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind						No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)						
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
INDIANA	M	Mb	Mb	C.	C	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s.							%
FORT WAYNE	241	990.2	1020.7	14.2	4.7	9.4	- 2.2	23.9	3	- 4.4	20	0	5	5.0	77	84	11	24	14	1	13	25	0.9	23	14.3	SW	23	6	6	19	7.3	47
INDIANAPOLIS	241	991.2	1020.9	15.8	5.8	10.8	- 2.2	23.9	3+	- 5.0	20	0	4	5.6	75	57	- 9	18	12	2	T	T	0.3	14	10.7	NW	17	6	6	19	7.2	40
SOUTH BEND	236	991.5	1019.7	14.3	5.3	9.8	- 2.1	23.9	2	- 3.9	20+	0	4	5.6	78	96	15	31	14	1	38	T	1.0	21	13.0	25	16	7	5	19	7.4	
IOWA																																
BURLINGTON	211			15.6	5.2	10.4	- 2.6	26.7	11+	- 7.8	19	0	5	5.0	73	72	3	35	8	0	T	0	0.5	23	11.2	20	22+	8	4	19	6.9	
DES MOINES	286	984.8	1020.0	14.4	3.3	8.9	- 3.4	26.1	2	-10.0	19	0	9	4.4	77	60	8	27	10	1	T	T	0.2	11	13.0	NW	16	10	4	17	6.4	51
DUBUQUE	322	980.0		12.5	3.0	7.8	- 2.6	22.2	2+	- 7.8	19	0	8			94	24	49	12		13	T						7	5	19	7.4	
SIOUX CITY	334	979.0	1019.4	15.4	3.3	9.4	- 2.8	27.2	1	-10.6	19	0	9	2.8	66	43	7	18	10	0	5	T	0.4	10	13.4	NW	16	6	10	15	6.9	53
WATERLOO	265	987.5	1019.6	13.5	2.5	8.0	- 2.9	24.4	2	-10.0	19	0	12	2.8	73	96	42	28	11	2	8	T	0.2	16	10.7	35	23+	8	6	17	6.6	
KANSAS																																
CONCORDIA	448	965.1	1018.3	16.6	5.1	10.9	- 3.4	30.6	1	- 8.3	19	0	4	6.1	75	54	11	26	7	5	0	0	1.0	13	13.4	NE	14	4	5	22	8.0	37
DODGE CITY	787	926.2	1017.2	18.6	6.3	12.4	- 2.2	33.3	10	- 3.9	19	1	5	3.3	60	18	- 18	6	8	1	T	T	1.1	15	15.2	N	5	1	7	23	8.6	40
GOODLAND	1114	889.6	1017.2	17.2	3.1	10.2	- 1.6	29.4	1	- 5.6	31+	0	9	3.3	69	21	2	12	7	0	160	102	0.5	14	13.4	33	6	3	8	20	7.9	
TOPEKA	267	987.1	1019.2	18.5	6.6	12.6	- 2.0	32.2	11	- 6.7	19	1	3	6.7	69	54	- 6	31	9	6	0	0	0.4	12	13.0	S	10	5	5	21	7.5	39
WICHITA	403	969.9	1017.8	18.7	7.4	13.1	- 2.4	32.2	11	- 2.8	19	1	2	7.2	73	51	- 10	12	9	2	0	0	0.8	13	14.3	N	6	2	6	23	8.2	40
KENTUCKY																																
COVINGTON	265	988.8	1020.8	15.6	6.3	10.9	- 2.4	23.9	3	- 3.9	20	0	2	6.7	77	65	7	29	11	1	T	0	0.2	20	10.3	25	23	5	9	17	7.1	
LEXINGTON	294	985.1	1021.0	16.7	6.6	11.7	- 2.8	22.8	3+	- 3.9	20	0	3	7.8	79	69	11	31	10	1	5	T	0.6	14	7.6	20	23	7	4	20	7.1	
LOUISVILLE	145	1002.7	1020.4	18.0	7.8	12.9	- 1.4	25.0	3	- 1.1	20	0	1	7.8	72	65	8	28	10	3	0	0	0.1	10	11.2	W	23	4	11	16	7.0	43
LOUISIANA																																
ALEXANDRIA	28	1013.9	1018.4	25.4	13.3	19.4	- 0.1	32.8	18	6.7	26+	3	0			182	92	135	7	2	0	0	0.7	5	10.3	1	26	10	7	14	6.0	
BATON ROUGE	20	1015.2	1017.9	28.3	16.4	22.3	1.7	33.3	15	8.9	1	8	0	15.6	70	94	31	47	3	1	0	0	1.1	7	9.4	24	27+	10	11	10	5.6	
LAKE CHARLES	3	1016.3	1017.5	26.0	15.1	20.6	- 0.8	31.1	15+	8.3	25	0	0	16.7	83	164	86	104	4	2	0	0	1.5	7	9.8	9	26	10	7	14	5.6	
NEW ORLEANS	1	1016.6	1017.6	26.9	15.7	21.3	0.0	31.1	5+	8.9	29	0	0	17.8	83	118	46	82	5	1	0	0	1.7	6	13.0	16	26	14	9	8	4.6	
SHREVEPORT	77	1008.8	1017.9	25.3	13.8	19.6	- 0.6	33.9	17	6.1	1	6	0	13.9	74	161	89	69	5	3	0	0	0.5	9	8.0	18	31+	10	7	14	5.9	61
MAINE																																
CARIBOU	190	994.2		8.2	- 1.2	3.5	- 2.6	20.6	5	-10.0	19	0	18			102	17	31	13		43	25						2	13	16	7.4	
PORTLAND	13	1017.3	1019.6	12.2	2.4	7.3	- 1.9	20.0	24	- 7.2	21	0	13	2.8	74	100	18	50	8	1	T	0	1.5	28	13.4	NW	15	11	8	12	5.7	56
MARYLAND																																
BALTIMORE	45	1015.6	1021.3	17.4	6.5	11.9	- 1.9	24.4	8	- 2.2	21+	0	4	5.6	67	89	■	49	6	0	T	0	1.4	32	14.3	NW	15	11	5	15	5.8	54
MASSACHUSETTS																																
BLUE HILL OBS R	192			13.5	4.1	8.8	- 2.7	22.2	4	- 4.4	20	0	7			101	6	45	12		25	T			22.4	NW	15					55
BOSTON	5	1018.6	1019.7	15.0	6.9	11.0	- 1.8	22.2	24	0.0	20	0	1	3.9	65	76	- 4	40	10	0	T	T	1.7	29	13.9	NW	15	11	7	13	5.9	53
WORCESTER	301	982.7	1020.2	12.0	2.1	7.1	- 3.2	21.1	4	- 6.1	20	0	13	1.7	70	125	37	89	8	0	T	T	2.1	29	12.5	30	15	8	10	13	6.4	
MICHIGAN																																
ALPENA	210	993.9	1019.6	10.9	0.6	5.8	- 2.2	20.6	4	- 7.2	25+	0	16	1.1	74	52	- 10	34	10	0	5	T	0.9	27	13.9	W	8	2	10	19	7.8	39
DETROIT	189			13.8	5.2	9.5	- 2.6	23.3	3	- 4.4	19	0	4	3.9	71	62	- 5	34	6	0	T		1.5	25	10.7	33	14					
DETROIT METRO	193	995.6	1020.1	13.6	3.3	8.5	- 2.7	23.3	3	- 7.2	20	0	10	3.9	76	57	- 8	33	10	0	T	T	1.1	26	12.5	NW	8	5	6	20	7.3	41
FLINT	235	991.5	1019.8	12.4	3.3	7.9	- 2.9	21.7	3+	- 6.7	19	0	8	3.3	73	95	35	52	9	0	T	T	1.4	25	13.4	26	16	5	6	20	7.6	
GRAND RAPIDS	239	990.5	1020.2	13.1	2.6	7.8	- 2.8	25.0	2	- 6.7	19	0	9	3.9	77	74	8	42	12	0	23	T	1.1	21	16.1	SW	16	4	8	19	7.6	35
HOUGHTON LAKE	350	977.0	1019.8	10.1	0.7	5.4	- 2.9	21.7	4+	- 7.8	18	0	14	2.2	79	64	- 12	39	10	0	15	T	1.0	26	10.7	28	16	2	11	18	7.9	
LANSING	256	987.8	1020.1	12.6	1.7	7.2	- 3.6	22.8	3+	- 8.9	19	0	12	3.3	79	84	20	54	12	0	T	T	1.3	23	15.6	SW	16	4	7	20	7.4	38
MARQUETTE U	206			10.4	2.5	6.4	- 2.4	20.6	4	- 4.4	18	0	8			50	- 9	16	11		56	51			16.1	SW	10	3	5	23	8.0	28
MUSKEGON	191	997.0	1020.2	13.0	4.4	8.7	- 2.7	23.3	2	- 5.6	19	0	5	4.4	74	88	23	42	13	0	117	76	1.0	23	13.0	34	16+	3	9	19	7.7	
SAULT STE MARIE	220	991.2	1018.2	9.3	1.1	5.2	- 2.7	21.1	4	- 5.6	19	0	16	2.2	82	45	- 26	12	15	0	257	152	0.7	31	17.0	NW	16	2	8	21	8.2	32
MINNESOTA																																
DULUTH	435	966.5	1018.8	8.2	- 0.6	3.8	- 3.2	19.4	7	-11.1	19	0	17	- 0.6	77	21	- 34	10	9	1	13	T	1.3	25	20.1	NW	16	3	11	17	7.5	39
INTERNATIONAL FALLS	359	974.3	1018.2	9.5	- 0.7	4.4	- 1.4	22.2	4	-11.1	19	0	19	- 1.7	66	41	- 4	11	10	1	58	25	1.3	25	21.0	30	7	2	9	20	7.7	
MINNEAPOLIS	254	988.8	1019.7	11.4	1.6	6.5	- 2.9	22.8	2	- 9.4	19	0	14	1.7	71	45	5	16	8	2	T	T	0.3	31	14.8	NW	16	4	11	16	6.9	45
ROCHESTER	395	971.2	1019.8	11.9	0.6	6.3	- 3.7	24.4	2	-10.6	19	0	16	1.7	75	77	34	30	11	1	28	25	0.9	25	14.3	29	16	4	10	17	7.1	
ST CLOUD	313	981.7	1019.9	11.1	- 0.4	5.3	- 3.2	22.8	4+	-12.8	19	0	17			65	23	17	9		T	T						6	10	15	6.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max 32.2 °C or above	Min. 0 C or lower						25 mm. or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
MISSISSIPPI	M	Mb	Mb	C.	C.	C	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
JACKSON	94	1006.8	1018.7	26.4	13.6	20.0	0.6	32.8	14	3.9	20	2	0	15.0	78	53	1	39	5	1	0	0	0.9	8	14.8	SE	27	9	12	10	5.4	65
MERIDIAN	88	1008.1	1019.0	25.7	12.2	18.9	0.3	32.2	14	3.9	20	1	0	12.2	68	72	16	41	3	0	0	0	1.3	4	8.0	11	22	8	8	15	6.3	
MISSOURI																																
COLUMBIA REGIONAL	270	987.5	1020.0	17.3	7.5	12.4	- 2.1	29.4	11	- 5.6	19	0	3	7.8	77	68	- 12	39	9	1	0	0	0.6	14	10.7	W	23+	6	4	21	7.6	39
KANSAS CITY	309			17.1	7.2	12.2	- 2.2	28.9	11	- 6.1	19	0	2			58	- 24	13	11	4	0	0	0.9	14	14.3	NE	18	9	2	20	7.0	57
ST JOSEPH	247			17.4	4.9	11.2	- 2.9	28.3	1	- 7.8	19	0	5	7.2	80	36	- 20		8				0.3	10	9.4	1	18	9	3	19	7.0	
ST LOUIS	163	999.3	1019.9	17.6	7.7	12.7	- 2.0	28.3	11	- 3.9	19	0	3	8.9	79	37	- 35	18	8	0	0	0	0.4	16	12.5	SE	22	6	6	19	7.2	43
SPRINGFIELD	386	973.6	1019.2	18.9	8.4	13.7	- 1.7	28.9	11	- 1.7	19	0	2	8.9	75	151	56	47	11	4	0	0	1.7	15	10.7	SE	30+	4	9	18	7.4	42
MONTANA																																
BILLINGS	1087	893.7	1019.4	12.5	0.3	6.4	- 3.3	24.4	3+	-11.7	30	0	17	0.0	69	57	29	19	14	0	81	25	1.7	25	14.3	SW	25	11	8	12	5.6	60
GLASGOW	696	936.0	1019.3	12.6	- 1.4	5.6	- 1.8	25.6	9+	-15.0	30	0	20	- 3.9	58	6	- 11	2	4	0	56	25	1.1	6	12.5	35	29+	7	9	15	6.5	
GREAT FALLS	1116	890.6	1019.9	13.2	- 0.8	6.2	- 2.4	25.6	3	-19.4	30	0	18	- 2.2	61	30	11	21	9	1	241	152	2.9	24	16.5	SW	25	11	6	14	5.7	66
HAVRE	788	925.8	1019.4	12.9	- 3.0	4.9	- 2.7	26.7	9+	-16.1	30	0	23	- 3.9	59	7	- 13	3	5	0	117	51	0.9	26	13.4	SW	25	11	5	15	5.8	68
HELENA	1167	883.8	1021.6	11.3	- 3.6	3.9	- 3.7	23.3	3	-19.4	30	0	25	- 3.3	67	14	- 2	8	8	0	119	76	1.2	29	11.6	W	26	9	9	13	5.8	59
KALISPELL	904	915.3	1021.8	10.3	- 2.3	4.1	- 2.6	21.7	3+	-12.8	30	0	22	- 1.1	72	21	- 10	9	9	1	269	76	0.9	1	12.5	1	10	6	6	19	7.3	
MILES CITY	801	924.5	1018.7	13.2	- 0.2	6.5	- 2.9	26.1	9	-12.8	30	0	16	- 1.1	65	17	- 5		5	0	84		0.4	35								
MISSOULA	972	907.9	1021.5	11.6	0.1	5.8	- 0.8	22.8	3	- 6.7	30	0	15	0.6	75	20	- 5	8	7	2	30	T	0.2	9	12.5	NW	23	4	9	18	7.4	42
NEBRASKA																																
GRAND ISLAND	561	952.3	1018.9	15.2	3.6	9.4	- 2.5	27.2	1	- 8.9	19	0	6	2.8	68	26	2	13	9	1	5	T	0.2	6	13.0	35	6	6	7	18	7.4	
LINCOLN	360	976.0	1019.1	16.0	2.9	9.4	- 3.2	27.8	2	-11.1	19	0	6	3.3	70	82	43	31	11	1	T	T	0.4	7	11.6	NW	14+	6	5	20	7.5	43
NORFOLK	471			14.7	2.2	8.4	- 3.2	28.9	1	-10.6	19	0	9			20	- 10	12	4		0	0						5	9	17	7.1	
NORTH PLATTE	846	920.1	1019.1	15.8	0.2	8.0	- 2.6	31.1	2	- 9.4	19	0	15	1.1	67	16	- 7	6	7	0	20	T	0.8	5	13.9	NW	5	3	9	19	7.6	47
OMAHA	298	983.4	1019.1	15.8	3.1	9.5	- 3.7	28.9	2	-10.6	19	0	6	5.0	76	82	38	40	12	1	T	T	0.4	13	11.6	N	6	6	8	17	6.8	49
SCOTTSBLUFF	1206	881.1	1017.9	16.8	1.8	9.3	- 0.9	27.2	10+	- 9.4	31+	0	12	- 1.1	55	20	3	15	7	2	135	127	0.7	3	13.0	33	5	2	10	19	7.7	
VALENTINE	789			14.4	0.6	7.6	- 2.1	28.9	1	- 7.8	31	0	14			16	- 6	6	5	2	66	76			17.9	S	9	7	6	18	6.8	49
NEVADA																																
ELKO	1539	844.9	1016.5	15.2	0.7	7.9	- 0.3	26.1	3+	-11.1	31	0	12	- 1.1	58	49	30	17	7	2	25	25	0.2	28	13.0	25	28	10	12	9	5.1	
ELY	1906	808.7	1015.2	14.5	0.4	7.4	- 0.3	24.4	2	-11.1	31	0	13	0.0	65	26	7	11	10	4	T	T	1.1	20	14.8	S	14	9	9	13	5.9	60
LAS VEGAS	659	938.0	1014.4	23.1	11.9	17.5	- 1.7	31.1	2	3.9	31	0	0	4.4	47	28	23	17	6	3	0	0	0.7	25	15.6	NW	24	11	10	10	5.6	55
RENO	1342	866.2	1016.3	17.7	0.6	9.2	- 0.4	25.6	3	-10.6	30	0	13	0.6	61	33	20	14	9	6	T	T	0.2	22	18.8	SW	10	11	12	8	4.5	80
WINNEMUCCA	1311	869.3	1017.2	17.2	0.4	8.8	0.1	30.0	3	-12.8	31	0	14	1.7	68	39	18	21	7	1	T	T	0.7	3	11.2	SW	28+	12	8	11	4.8	62
NEW HAMPSHIRE																																
CONCORD	104	1007.1	1020.0	12.4	- 1.0	5.7	- 3.6	22.2	4	-12.2	21	0	18	1.7	78	57	- 11	36	8	0	0	0	1.0	29	10.3	W	9	5	14	12	6.5	53
MT WASHINGTON OBS	1909			0.5	- 6.9	- 3.2	- 2.6	9.4	5	-17.2	20	0	27			213	56	87	15	1	318	51			48.7Y	W	9	6	6	19	7.2	39
NEW JERSEY																																
ATLANTIC CITY	20	1018.0	1020.5	16.6	5.2	10.9	- 3.1	23.9	17	- 3.3	21	0	3	6.7	77	130	49	70	7	0	T	0	1.3	33	11.2	28	17+	10	4	17	5.9	49
ATLANTIC CITY J	3			15.9	8.8	12.4	- 2.4	23.3	17	1.1	21	0	0			113	26	68	6						18.3	NW	7					
NEWARK	2	1019.6	1020.5	16.4	7.3	11.8	- 1.8	22.2	24+	- 0.6	20	0	1	5.0	64	123	44	76	9	0	T	0	1.7	31	13.0	32	15	10	8	13	5.7	
TRENTON J	17			15.7	6.6	11.2	- 2.6	21.7	3	- 1.1	20	0	2			129	57	69	9		64	25			12.5	NW	9	12	6	13	5.6	57
NEW MEXICO																																
ALBUQUERQUE	1619	[illegible]38.8	1014.8	20.2	8.3	14.2	- 0.2	30.6	2	- 1.7	31	0	1	5.6	63	78	59	24	17	9	T	T	1.5	12	20.1	E	14	6	9	16	6.5	54
CLAYTON	1515			18.6	4.9	11.7	- 1.2	30.0	2	- 5.6	31	0	7			15	- 11	11	5		25	25						4	9	18	7.3	
ROSWELL	1101			22.9	7.2	15.1	0.1	33.9	10	- 3.3	31	1	1			32	5	11	6		15	25			9.8	NW	26+					
NEW YORK																																
ALBANY	84	1010.2	1020.9	13.8	1.4	7.6	- 2.8	23.3	6+	- 8.3	21	0	13	2.2	73	91	21	68	8	0	T	0	0.9	26	13.9	NW	9	3	12	16	7.1	45
BINGHAMTON	485	961.1	1020.9	10.6	1.5	6.1	- 3.8	20.0	4+	- 6.7	20	0	11	2.2	78	55	- 23	21	13	1	66	25	1.5	25	13.9	W	8	1	9	21	7.9	37
BUFFALO	215	994.2	1020.3	12.3	3.5	7.9	- 2.6	22.2	3	- 5.0	20	0	8	3.9	78	75	- 1	20	15	0	79	51	1.9	24	15.2	SW	16	1	4	26	8.7	33
NEW YORK J	40	1017.3	1020.6	16.2	7.7	11.9	- 2.7	23.3	24	0.0	20	0	1	5.0	65	159	80	110	9	0	T	0	1.3	33	12.1	NW	15+					54
NEW YORK KENNEDY	4	1020.0	1020.8	16.6	8.4	12.5	- 1.7	24.4	6	0.6	21	0	0	5.6	63	127	45	87	8	0	0	0	1.8	33	13.4	32	15	9	12	10	5.7	
NEW YORK LA GUARDIA	3	1019.6	1020.8	14.8	7.7	11.2	- 3.6	21.1	24+	0.0	20	0	1	4.4	64	125	39	91	9	0	T	0	1.8	32	14.8	NW	15+	9	10	12	5.8	
ROCHESTER	167	1000.3	1020.7	14.1	3.3	8.7	- 2.3	24.4	3	- 6.7	20	0	8	3.9	76	57	- 8	16	15	1	5	T	1.7	24	13.4	W	8	1	11	19	8.3	39
SYRACUSE	125	1005.4	1020.4	13.0	3.1	8.1	- 2.9	22.8	4+	- 4.4	20	0	7	2.2	69	111	30	33	16	1	8	T	1.1	24	14.8	W	8	1	9	21	8.2	35

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	No of days: Partly cloudy, 4-7	No of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
NORTH CAROLINA	M	Mb	Mb	C	C	C	C	C		C				C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s							%
ASHEVILLE	652	944.5	1021.2	19.1	6.4	12.8	- 0.4	25.6	17	- 3.9	20	0	4	8.9	83	113	33	50	9	2	0	0	1.2	34	15.6	33	19	10	7	14	5.8	75
CAPE HATTERAS R	2	1018.6	1019.2	21.6	14.9	18.2	- 0.3	26.1	24+	6.1	16	0	0	13.9	77	184	77	74	9	5	0	0	3.1	4	14.3	12	6+	4	8	19	7.2	52
CHARLOTTE	224	992.9	1020.3	20.7	9.3	15.0	- 1.9	28.9	17	- 1.1	20	0	2	8.3	66	35	- 40	25	8	1	0	0	1.7	2	10.3	NE	20	11	8	12	5.5	68
GREENSBORO	273	989.2	1021.0	18.5	6.7	12.6	- 2.6	26.7	17	- 3.9	20	0	3	8.3	77	46	- 23	20	7	0	0	0	1.2	36	11.2	NW	7	11	5	15	6.2	53
RALEIGH	132	1004.4	1020.4	19.9	8.2	14.1	- 1.7	27.8	17	- 2.2	21+	0	2	8.9	74	101	32	55	8	4	0	0	1.4	2	9.8	1	19+	10	8	13	5.9	58
WILMINGTON	9	1018.0	1019.2	24.2	11.7	17.9	- 0.6	31.1	17	1.7	21+	0	0	13.3	79	18	- 59	7	6	2	0	0	1.7	2	12.1	N	19	7	11	13	6.1	56
NORTH DAKOTA																																
BISMARCK	502	958.7	1019.5	11.9	- 1.6	5.2	- 2.9	25.0	1	-12.2	18	0	21	- 1.7	63	41	19	28	3	0	147	102	0.8	35	13.9	NW	16	5	12	14	6.7	45
FARGO	273	985.8	1019.3	11.7	- 0.2	5.8	- 2.3	25.6	4	-12.2	18	0	15	0.0	68	32	4	9	5	1	97	76	0.9	31	16.1	SE	9	7	9	15	6.5	48
WILLISTON	579	949.9	1019.8	10.9	- 2.7	4.1	- 3.4	22.8	1	-16.1	31	0	19	- 2.8	65	11	- 8	9	6	0	99	102	0.9	32	11.2	NW	13	7	5	19	6.8	50
OHIO																																
AKRON	368	976.0	1021.0	14.5	5.0	9.8	- 1.8	23.3	3	- 2.8	20	0	4	3.9	67	39	- 24	12	12	2	13	T	1.1	23	10.3	13	6	5	6	20	7.3	
CINCINNATI ABBE OB	232			16.3	7.1	11.7	- 2.7	25.0	3+	- 2.2	20	0	2			71	14	29	11		0	0			7.6	W	23					36
CLEVELAND	237	991.5	1021.1	13.8	5.2	9.5	- 2.4	23.3	3	- 2.8	20	0	4	5.0	75	42	- 20	15	15	0	140	51	1.5	21	11.6	SW	16	6	3	22	7.7	41
COLUMBUS	247	990.9	1021.2	14.4	5.1	9.8	- 2.6	22.2	3	- 4.4	20	0	2	3.9	68	44	- 9	15	10	1	T	T	0.3	16	12.5	NW	14	7	7	17	6.8	39
DAYTON	305	984.4	1020.9	15.4	5.0	10.2	- 2.9	25.6	3	- 3.9	20	0	5	5.0	73	56	T	26	13	2	T	0	0.7	20	11.6	SW	23	6	8	17	6.9	49
MANSFIELD	395			14.6	5.0	9.8	- 2.8	24.4	3	- 5.6	20	0	3	5.0	75	39	- 19	12	12	2	T	0	1.5	23	11.2	24	16	7	5	19	7.1	
TOLEDO	204	994.9	1020.5	13.9	2.9	8.4	- 2.7	24.4	3	- 7.8	20	0	11	3.3	71	37	- 24	17	15	1	5	0	0.9	25	12.5	NW	8	7	4	20	7.3	41
YOUNGSTOWN	359	977.7	1020.9	12.5	3.1	7.8	- 3.2	21.7	3	- 5.6	20	0	11	4.4	80	21	- 48	7	11	0	10	T	1.1	22	10.3	23	16	5	6	20	7.7	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1017.6	22.1	10.2	16.2	- 1.0	35.6	17	0.0	19	2	1	8.9	68	182	118	94	7	5	0	0	1.3	12	14.3	NE	18	7	6	18	6.7	52
TULSA	198	993.9	1018.2	21.0	11.1	16.1	- 1.1	31.1	11	1.1	19	0	0	11.1	76	193	108	92	8	1	0	0	1.1	14	13.0	N	18	3	7	21	7.9	44
OREGON																																
ASTORIA	2	1019.0	1019.8	16.6	5.9	11.3	- 0.3	25.6	7	- 1.7	30	0	2	8.3	86	50	-148	16	12	0	0	0	0.6	5	10.3	26	27	9	7	15	5.8	
BURNS U	1265	874.4	1018.1	16.9	1.2	9.1	- 0.1	25.6	3+	- 9.4	31	0	9	- 1.1	55	8	- 14	3	4		8	T	1.8	31				12	12	7	4.4	
EUGENE	109	1005.1	1018.8	17.3	3.9	10.6	- 1.2	27.2	7	- 0.6	30+	0	4	6.7	82	33	- 64	14	9	0	0	0	0.5	33	9.4	1	4+	4	15	12	6.3	
MEACHAM	1234	879.1	1019.6	11.6	0.6	6.1	- 1.9	20.6	8+	- 8.3	30	0	13			31	- 41	16	9		112	127			7.6	27	25	13	7	11	5.1	
MEDFORD	396	970.2	1018.2	19.8	2.8	11.3	- 0.3	30.0	7	- 3.9	30+	0	8	5.0	74	31	- 19	17	4	1	0	0	0.2	31	8.0	33	28	10	12	9	5.4	
PENDLETON	452	965.5	1019.4	16.8	4.4	10.6	- 1.4	26.1	1	- 3.9	31	0	3	1.1	57	15	- 15	11	5	0	T	0	0.9	23	13.0	28	25	12	8	11	5.2	
PORTLAND	6	1018.3	1019.5	17.8	5.5	11.7	- 0.7	25.6	7+	- 1.1	29	0	2	6.7	76	22	- 70	7	7	0	0	0	0.6	32	13.4	E	12	9	10	12	5.7	51
SALEM	60	1011.5	1018.9	17.5	2.6	10.1	- 2.2	26.7	7	- 3.3	30	0	6	4.4	75	18	- 82	7	8	0	0	0	0.5	35	11.2	30	27	10	10	11	5.7	
SEXTON SUMMIT R	1169	884.9	1017.2	14.1	5.1	9.6	- 0.8	23.3	7	- 2.2	29	0	5			62	- 24	29	5		183	25			14.3	33	3	14	9	8	4.6	
PACIFIC AREA																																
GUAM TAGUAC R	110	996.3	1008.9	30.0	22.4	26.2	- 0.1	31.1	29+	19.4	16	0	0	23.3	87	180	-153	41	21	2	0	0	0.6	3	10.3	W	9	2	10	19	8.0	42
JOHNSTON	2	1011.9	1012.2	28.8	25.0	26.9	- 0.3	30.0	11	21.1	6	0	0	22.2	77	83	0	33	12	0	0	0	5.1	8	16.1	SE	7	6	13	12	6.2	72
KOROR R	29	1006.4	1010.1	31.6	24.5	28.1	0.7	32.8	25+	22.2	12	14	0	23.9	82	250	- 82	109	19	4	0	0	1.8	29	8.9	W	7	0	17	14	7.5	66
KWAJALEIN	2	1007.5	1008.3	30.2	25.2	27.7	0.0	32.2	27	23.3	10+	1	0	24.4	83	298	22	123	25	1	0	0	2.5	26	16.1	23	6	0	3	28	9.4	
MAJURO	3	1009.1	1009.5	29.4	24.8	27.2	0.2	31.1	17	22.8	2	0	0	23.9	83	357	- 28	111	23	0	0	0	2.2	26	14.8	NW	9	1	4	26	9.1	34
PAGO PAGO	4	1011.9	1011.9	28.8	24.7	26.8		30.0	26+	22.8	2	0	0	22.8	80	265		73	24	2	0	0	6.1	10	12.5	E	23	0	7	24	8.7	35
PONAPE R	37	1003.4	1008.7	30.8	22.6	26.7	0.2	32.2	23+	21.1	23+	3	0	23.9	85	203	-203	41	22	0	0	0	2.0	23	12.5	SW	7	2	8	21	8.0	57
TRUK MOEN ISLAND	2	1009.1	1009.5	30.3	24.8	27.6	0.6	31.1	30+	23.3	4+	0	0	24.4	84	106	-236	20	22	2	0	0	3.1	25	17.0	W	7	0	4	27	9.1	59
WAKE	3	1010.8	1011.2	30.7	24.9	27.8	0.2	32.2	1	23.3	23+	1	0	22.8	76	85	- 49	16	22	0	0	0	7.6	8	17.9	E	25	4	15	12	6.9	
YAP R	13			30.8	23.9	27.4	- 0.2	31.7	25	22.8	31+	0	0			143	-192	30	22	2	0	0			8.0	W	10+	1	18	12	6.8	79
PENNSYLVANIA																																
ALLENTOWN	118	1007.1	1021.2	14.9	3.1	9.0	- 3.1	22.2	4	- 5.0	21	0	10	2.8	68	91	16	38	10	0	36	25	1.4	32	14.3	32	7	11	5	15	6.0	
ERIE	223	993.2	1020.6	12.2	4.7	8.4	- 2.3	22.2	3	- 3.3	19	0	6	3.9	76	44	- 40	13	12	1	15	T	1.4	22	10.3	30	17	1	7	23	8.5	
HARRISBURG	103	1008.5	1021.3	16.3	6.0	11.2	- 2.0	24.4	8+	- 1.7	21+	0	4			52	- 24	23	11	0	30	T	0.9	32	10.3	W	17+	10	6	15	6.2	55
PHILADELPHIA	2	1020.0	1021.0	16.6	6.4	11.5	- 1.7	22.8	17+	- 1.7	20	0	2	6.1	72	96	25	44	8	0	T	0	1.4	34	13.0	NW	7	11	5	15	5.7	54
PITTSBURGH	347	976.6	1021.2	14.0	4.2	9.1	- 2.6	22.8	3	- 6.7	20	0	6	3.9	72	55	- 9	21	10	1	46	0	0.8	28	10.3	30	17+	6	6	19	7.4	38
SCRANTON	283	986.1	1020.9	12.6	2.1	7.4	- 3.2	22.2	4	- 7.2	20	0	12	2.2	72	84	- 5	40	12	0	20	T	0.8	28	12.1	S	16	7	6	18	6.9	46
WILLIAMSPORT	160	1002.0	1021.5	13.3	2.9	8.1	- 3.6	20.6	5	- 6.7	20	0	10	3.3	75	55	- 29	18	14	0	8	T	0.8	31	9.4	27	17+	3	9	19	7.6	
RHODE ISLAND																																
BLOCK ISLAND	34			14.3	7.4	10.9	- 2.0	19.4	7+	0.6	20	0	0			55	- 22	24	8		0	0										
PROVIDENCE	16	1018.0	1020.2	15.4	4.1	9.8	- 2.0	22.8	24	- 5.0	21	0	7	3.9	67	111	32	53	9	0	18	T	1.2	31	12.5	34	15	10	9	12	5.7	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No of days: Max 32.2 °C or above	No of days: Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M	Mb	Mb	C	C.	C	C	C		C				C	%	Mm.	Mm	Mm.			Mm	Mm	M.p.s.		M.p.s							%
SOUTH CAROLINA																																
CHARLESTON	12	1017.3	1019.2	26.2	13.0	19.6	0.6	32.8	17	2.8	20	1	0	13.3	72	6	- 66	5	3	0	0	0	1.8	2	17.9Y	NE	19	8	15	8	5.4	55
CHARLESTON U	3			24.3	15.7	20.0	- 0.1	30.6	17	4.4	20	0	0			9	- 60	5	4		0	0			16.5	N	20					
COLUMBIA	65	1011.9	1019.9	24.2	9.9	17.1	- 1.1	32.2	17	1.1	20	1	0	11.1	73	29	- 31	15	4	1	0	0	1.4	2	9.4	4	19	10	6	15	5.7	59
GRNVLLE-SPRTNBRG	292	985.8	1020.4	21.3	8.8	15.1	- 1.8	29.4	17	- 1.7	20	0	2	9.4	74	87	2	28	8	1	0	0	1.5	2	9.4	N	19+	11	11	9	5.0	66
SOUTH DAKOTA																																
ABERDEEN	395	971.6	1019.2	13.9	- 0.4	6.8	- 2.2	26.7	7	-11.1	19	0	17	0.6	70	32	2	23	3	0	33	T	0.4	1	13.4	17	9	8	8	15	6.2	
HURON	390	971.6	1018.9	13.5	0.7	7.1	- 2.2	27.8	1	- 9.4	28	0	15	0.6	68	68	38	31	8	2	33	25	0.3	5	13.9	SE	9	7	5	19	7.0	50
RAPID CITY	964	906.5	1018.8	13.9	- 0.8	6.6	- 3.4	26.7	9	-12.2	31	0	14	- 1.7	63	20	- 1	18	2	0	18	25	1.7	34	17.9	N	10	10	4	17	6.2	53
SIOUX FALLS	432	967.2	1019.5	13.3	0.4	6.9	- 3.3	26.7	1	-12.8	19	0	11	1.7	72	45	13	19	9	0	5	T	0.2	33	13.4	29	16	8	7	16	6.6	
TENNESSEE																																
BRISTOL	459	966.5	1020.8	19.7	6.8	13.3	- 1.2	25.6	3	- 3.3	20	0	2	8.3	77	116	61	55	10	1	0	0	0.5	1	7.2	25	17+	8	8	15	6.5	
CHATTANOOGA	203	995.3	1020.0	20.1	7.5	13.8	- 2.9	26.1	14+	- 1.1	21	0	2	9.4	77	122	45	52	10	2	0	0	0.5	1	9.8	[illegible]	19	7	8	16	6.5	46
KNOXVILLE	299	985.8	1021.1	19.1	8.4	13.8	- 2.3	24.4	14	0.0	20	0	1	9.4	80	152	86	52	12	4	0	0	1.2	1	10.7	SW	16	7	7	17	[illegible]	52
MEMPHIS	79	1009.1	1019.2	21.6	11.0	16.3	- 0.9	28.9	16	0.0	26	0	1	10.6	72	100	30	36	10	2	0	0	0.9	10	10.7	[illegible]	18	8	9	14	[illegible]	56
NASHVILLE	180	998.3	1019.9	21.3	9.9	15.7	- 0.7	28.3	12	1.1	20	0	0	11.1	77	103	44	60	10	2	0	0	0.4	15	13.0	[illegible]	22	6	6	19	7.1	47
OAK RIDGE R	276			19.7	8.4	14.1	- 1.4	25.0	14+	0.0	20	0	1			177	109	54	11		0	0			12.1Y		20	8	5	18	6.8	
TEXAS																																
ABILENE	544	954.3	1016.7	23.7	11.5	17.6	- 1.4	34.4	14	2.8	31	5	0	10.6	68	114	42	50	8	5	0	0	1.6	18	11.6	S	30	10	7	14	6.0	54
AMARILLO	1098	892.3	1015.5	21.3	7.4	14.4	- 1.4	31.7	16+	- 3.3	31	0	4	5.6	64	42	- 3	21	6	2	10	T	1.7	20	13.9	N	6	9	8	14	5.8	63
AUSTIN	182	994.9	1016.6	27.2	16.0	21.6	0.1	33.3	18+	10.0	25+	7	0	14.4	69	75	3	59	6	2	0	0	0.7	11	12.5	W	21	13	6	12	5.6	58
BROWNSVILLE	6	1014.6	1015.0	30.3	20.3	25.3	0.9	32.2	31+	12.2	27	4	0	20.0	76	85	- 5	44	8	1	0	0	2.0	12	13.4	S	31	10	14	7	5.0	74
CORPUS CHRISTI	12	1014.2	1015.8	29.9	19.4	24.7	1.1	33.3	29+	7.8	27	11	0	20.0	78	12	- 58	5	5	0	0	0	2.8	9	16.5	SE	31	15	8	8	4.5	66
DALLAS	147	1000.0	1017.1	25.3	14.4	19.9	0.0	35.0	17	6.7	25	8	0	13.3	70	145	77	55	8	2	0	0	1.6	13	18.3	[illegible]	26	10	8	13	5.9	55
DEL RIO	313	979.3	1015.3	28.1	16.2	22.2	0.3	33.9	14	9.4	27	8	0	15.0	68	10	- 41	6	4	1	0	0	2.6	12	12.5	32	31	9	9	13	6.1	
EL PASO	1194	882.5	1013.3	25.9	11.5	18.7	0.7	33.3	11	4.4	31	4	0	8.3	56	32	10	12	8	4	0	0	0.4	15	14.3	SW	21	17	4	10	4.1	77
FORT WORTH	164	997.0	1017.3	25.4	14.1	19.7	- 0.2	35.0	17	7.2	25	8	0	13.9	72	175	109	61	8	4	0	0	1.1	14	12.5	6	26	9	8	14	6.2	
GALVESTON U	2			25.9	20.1	23.0	- 0.1	30.0	13+	11.1	25	0	0			77	4	30	6		0	0			13.9	NE	26					61
HOUSTON INTERCON	29	1013.5	1017.2	27.4	14.6	21.0	- 0.1	33.3	18+	8.3	25+	4	0	16.7	82	85	- 10	51	4	2	0	0	1.1	8	10.7	9	26	10	9	12	5.6	63
LUBBOCK	992	905.2	1015.8	21.9	8.7	15.3	- 0.9	31.7	17+	0.0	31	0	1	8.9	72	44	- 6	18	7	1	T	0	1.1	15	11.6	2	14	12	8	11	5.5	
MIDLAND	869	917.4	1015.3	23.6	10.3	16.9	- 1.9	33.3	17+	2.2	31	3	0	10.6	72	57	15	30	7	5	0	0	1.7	13	13.0	3	14	10	9	12	5.9	
PORT ARTHUR	5	1016.9		26.4	15.3	20.9	- 0.4	31.7	6	7.8	25	0	0	17.2	85	73	0	44	5	2	0	0	1.5	8	11.2	E	26	13	6	12	5.3	67
SAN ANGELO	580	949.5	1015.8	25.6	12.3	19.0	- 1.2	33.9	17+	5.6	27	6	0	13.3	75	82	35	46	7	3	0	0	1.3	18	9.4	5	18	9	6	16	[illegible]	
SAN ANTONIO	240	988.8	1016.5	28.6	15.8	22.2	0.7	33.3	6	7.8	27	7	0	16.1	71	51	- 13	40	5	2	0	0	1.1	10	10.3Y	S	31	10	9	12	5.7	53
VICTORIA	32	1012.2	1016.2	28.9	17.1	23.1	0.5	33.3	18+	8.9	27	7	0	17.8	77	87	- 1	72	5	1	0	0	1.8	9	17.4Y	S	31	12	10	9	5.1	
WACO	153	999.0	1017.0	25.6	14.1	19.8	- 0.9	33.3	17+	7.2	24	5	0	13.9	73	168	103	108	7	4	0	0	1.2	14	14.3	26	21	12	6	13	5.8	
WICHITA FALLS	303	980.0	1016.6	24.4	10.4	17.4	- 1.7	38.9	17	2.8	25+	11	0	11.1	71	200	127	87	5	3	0	0	1.2	13	15.6	2	14	8	7	16	6.2	
UTAH																																
MILFORD	1533	846.6		16.0	3.5	9.8	- 0.6	25.0	2	- 9.4	31	0	6			66	47	19	9		132	25			17.9	NE	24	6	7	18	6.8	45
SALT LAKE CITY	1286	872.0	1015.8	17.5	6.4	12.0	1.1	26.1	3	- 4.4	31	0	4	3.3	61	70	40	17	12	6	152	102	1.2	16	15.6	S	14	7	8	16	6.6	56
WENDOVER	1291	871.3	1016.6	16.3	6.7	11.5	- 0.3	24.4	14	- 4.4	31	0	4	2.8	59	61	50	23	12		T	T						11	10	10	5.1	
VERMONT																																
BURLINGTON	101	1007.1	1019.8	10.8	0.8	5.8	- 2.9	22.8	6+	- 9.4	20	0	16	1.1	74	66	- 9	27	13	1	T	0	0.8	23	16.5	S	11	4	11	16	7.3	38
VIRGINIA																																
LYNCHBURG	279			18.2	7.2	12.7	- 1.9	25.0	17	- 3.9	20	0	3			170	103	86	11		0	0			10.3	SW	23	11	5	15	5.7	50
NORFOLK	7	1019.0	1020.1	19.0	11.2	15.1	- 1.6	27.2	17	5.6	27+	0	0	10.0	74	104	30	38	8	0	0	0	2.5	2	16.5	E	6	6	10	15	6.3	53
RICHMOND	50	1014.2	1020.6	19.1	7.4	13.2	- 1.6	27.2	17	- 1.7	21+	0	2	8.3	76	200	124	92	8	1	T	0	1.0	2	10.3	N	15+	10	4	17	6.3	49
ROANOKE	350	978.7	1021.1	17.2	5.2	11.2	- 3.3	24.4	14	- 5.6	20	0	5	6.1	71	81	- 1	39	10	0	0	0	1.1	32	11.2	32	15	11	5	15	5.8	
WALLOPS ISLAND	3			17.9	9.8	13.9		26.1	17	0.6	20	0	0			91		42	8		0	0			20.1Y	NNW	15					
WASHINGTON																																
OLYMPIA	59	1012.5	1020.0	14.9	1.2	8.1	- 2.7	23.9	8	- 6.1	30	0	15	5.0	83	22	-113	13	8	0	0	0	0.3	10	9.8	26	25	10	7	14	6.0	
QUILLAYUTE	55	1012.5	1020.1	15.2	2.9	9.1	- 1.7	21.1	16+	- 4.4	30	0	7	4.4	79	58	-209	31	10	1	T	0	0.7	3	9.4	SW	27+	9	10	12	5.7	52
SEATTLE-TACOMA	122	1003.1	1019.8	13.8	6.3	10.1	- 1.3	20.6	8	1.1	30	0	0	5.6	76	18	- 84	9	7	0	0	0	1.1	2	11.2	NE	14	10	7	14	6.1	43
SPOKANE	718	934.3	1018.7	15.1	1.8	8.4	- 1.1	23.3	8	- 6.1	31	0	10	0.6	65	5	- 35	2	5	0	20	T	0.4	11	11.2	SW	26	15	7	9	4.6	76
STAMPEDE PASS R	1206	881.5		9.2	2.7	5.9	0.2	18.9	8	- 4.4	30	0	9			46	-178	19	9		325	127						10	3	18	6.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
WASHINGTON	M	Mb.	Mb	C.	C	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s		M.p.s							%
WALLA WALLA U	289			17.1	6.0	11.6	- 1.3	26.1	1	- 2.2	31	0	2			15	- 24	12	6		0	0			7.6	NW	28	13	7	11	5.2	77
YAKIMA	321	980.7	1019.7	19.1	- 0.1	9.5	- 0.8	27.2	1	- 8.9	30	0	16	- 0.6	58	3	- 12	3	3	0	0	0	1.7	30	12.5	31	25	13	9	9	4.8	
WEST INDIES																																
SAN JUAN P.R.	4	1011.2	1013.8	31.3	24.9	28.1	1.4	34.4	8	23.3	22+	4	0	22.2	73	139	- 9	19	20	10	0	0	2.5	13	19.7	NE	21	1	18	12	6.5	33
WEST VIRGINIA																																
BECKLEY	763	931.9	1021.0	14.7	4.7	9.7	- 2.3	21.1	11	- 7.8	20	0	4	5.6	79	72	6	21	15	0	5	T	0.7	19	11.6	25	16	7	5	19	6.8	
CHARLESTON	286	986.5	1020.9	17.1	5.7	11.4	- 2.7	25.0	3	- 4.4	20	0	5	6.7	75	63	- 3	22	12	1	23	T	0.3	27	7.6	31	17	8	3	20	7.2	
ELKINS	594	949.9		15.9	2.4	9.2	- 2.0	23.9	3	- 6.7	20+	0	10			118	41	62	12		56	T						7	5	19	7.1	
HUNTINGTON	252	990.5	1021.1	15.5	5.6	10.6	- 3.5	23.9	3	- 3.9	20	0	3	7.2	82	51	4	15	11	1	5	T	0.4	19	7.2	18	23+	8	3	20	7.2	
PARKERSBURG U	187			16.2	6.4	11.3	- 2.6	25.0	3	- 3.3	20	0	2			43	- 9	26	10		T	0			9.4	N	19					42
WISCONSIN																																
GREEN BAY	208	993.2	1019.3	12.5	2.2	7.4	- 2.3	22.8	2	- 6.7	19	0	11	2.8	74	47	- 2	31	7	0	T	T	1.1	26	15.6	W	16	4	9	18	7.2	49
LA CROSSE	198	995.3	1020.2	12.7	2.7	7.7	- 2.9	24.4	1	- 9.4	19	0	10	3.3	76	102	46		11	1	T		0.3	23								
MADISON	262	987.5	1019.6	13.2	2.1	7.7	- 2.3	24.4	2	- 9.4	19	0	11	3.3	76	61	5	31	9	2	T	T	0.8	25	11.2	W	16	6	7	18	7.0	46
MILWAUKEE	205	993.9	1019.6	12.6	4.6	8.6	- 1.4	22.2	11	- 4.4	19	0	6	3.9	73	83	30	43	11	1	T	T	1.5	26	14.3	SW	16	5	7	19	7.2	48
WYOMING																																
CASPER	1627	838.8	1018.0	14.0	- 0.6	6.7	- 2.3	24.4	3+	-16.7	31	0	14	- 0.6	68	52	30	23	10	0	249	102	1.7	24	14.8	21	26	7	7	17	6.8	
CHEYENNE	1867	813.1	1017.4	13.7	1.2	7.5	- 1.1	25.0	12	-11.7	30	0	13	- 2.2	58	11	- 10	5	5	1	127	127	2.3	29	15.2	N	5	3	9	19	7.7	43
LANDER	1696	830.3	1018.1	12.8	0.4	6.6	- 1.8	23.9	3	-16.7	31	0	10	- 1.7	62	60	29	15	11	0	485	203	0.6	24	14.3	SW	16	5	12	14	6.5	48
SHERIDAN	1208	880.8	1019.3	14.8	- 1.1	6.9	- 1.9	25.0	3+	-12.8	31	0	15	- 1.1	63	26	- 3	9	10	0	66	T	1.7	32	13.9	NW	29	9	10	12	5.7	57

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month of the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earliest date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure " table of the annual issue of this publication.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	135	144	99
HUNTSVILLE	195	205	139
MOBILE	33	33	32
MONTGOMERY	67	69	68
ALASKA			
ANCHORAGE	1025	2072	1908
ANNETTE	644	1419	1344
BARROW	1350	3790	4178
BARTER ISLAND	1365	3911	3979
BETHEL	929	2082	2367
BETTLES	1354	2553	
BIG DELTA	1153	2246	
COLD BAY	774	2236	2196
FAIRBANKS	1177	2162	2348
GULKANA	1176	2372	
HOMER	841	2134	
JUNEAU	810	1845	1847
KING SALMON	888	2061	2056
KOTZEBUE	1104	2310	2799
MC GRATH	1040	2045	2361
NOME	1006	2348	2764
ST. PAUL ISLAND	840	2741	2618
SHEMYA	732	2290	2337
SUMMIT	1314	2860	
TALKEETNA	1124	2187	2098
UNALAKLEET	978	2083	
YAKUTAT	800	1958	1875
ARIZONA			
FLAGSTAFF	584	925	873
PHOENIX	38	38	22
TUCSON	96	96	25
WINSLOW	243	253	251
YUMA	13	13	0
ARKANSAS			
FORT SMITH	176	191	139
LITTLE ROCK	142	150	136
CALIFORNIA			
BAKERSFIELD	59	59	37
BISHOP	343	380	290
BLUE CANYON	476	757	551
EUREKA U	328	1018	1114
FRESNO	108	110	78
LONG BEACH	31	31	52
LOS ANGELES	15	15	133
LOS ANGELES U	14	14	37
MT SHASTA R	456	775	588
OAKLAND	101	206	275
RED BLUFF	131	142	53
SACRAMENTO	115	121	93
SANDBERG R	401	530	232
SAN DIEGO	29	29	58
SAN FRANCISCO	131	312	362
SAN FRANCISCO U	115	508	586
SANTA MARIA	146	346	434
STOCKTON	112	112	77
COLORADO			
ALAMOSA	561	980	1082
COLORADO SPRINGS	476	687	622
DENVER	397	561	560
GRAND JUNCTION	335	366	343
PUEBLO	340	416	380
CONNECTICUT			
BRIDGEPORT	418	470	373
HARTFORD	494	591	477
DIST.OF COLUMBIA			
WASHINGTON DULLES	414	457	
WASHINGTON NATIONAL	278	286	250
DELAWARE			
WILMINGTON	356	376	321
FLORIDA			
APALACHICOLA U	11	11	16
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	10	10	12
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	24	24	19
TALLAHASSEE	13	13	28
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	113	116	127
ATLANTA	136	139	145
AUGUSTA	82	82	78
COLUMBUS	56	57	87
MACON	50	51	71
ROME	171	177	185
SAVANNAH	25	25	47
IDAHO			
BOISE	406	639	547
LEWISTON	419	611	[illegible]
POCATELLO	527	847	[illegible]
ILLINOIS			
CAIRO U	219	236	200
CHICAGO O'HARE	481	615	510
CHICAGO MIDWAY	454	574	407
MOLINE	459	554	443
PEORIA	461	[illegible]	419
ROCKFORD	491	653	[illegible]
SPRINGFIELD	375	447	[illegible]
INDIANA			
EVANSVILLE	356	387	286
FORT WAYNE	490	608	492
INDIANAPOLIS	413	461	406
SOUTH BEND	468	639	489
IOWA			
BURLINGTON	443	543	415
DES MOINES	523	652	471
DUBUQUE	582	763	649
SIOUX CITY	493	620	486
WATERLOO	571	780	597
KANSAS			
CONCORDIA	422	497	333
DODGE CITY	345	421	284
GOODLAND	454	623	468
TOPEKA	337	406	327
WICHITA	319	367	262
KENTUCKY			
LEXINGTON	366	397	293
LOUISVILLE	298	314	302
LOUISIANA			
ALEXANDRIA	88	93	56
BATON ROUGE	19	19	31
LAKE CHARLES	56	57	19
NEW ORLEANS	28	28	19
SHREVEPORT	92	98	47
MAINE			
CARIBOU	818	1344	1211
PORTLAND	607	877	768
MARYLAND			
BALTIMORE	357	375	312
MASSACHUSETTS			
BLUE HILL OBS R	522	679	511
BOSTON	405	463	385
WORCESTER	622	850	637
MICHIGAN			
ALPENA	694	1166	1026
DETROIT	486	616	447
DETROIT METRO	539	704	527
FLINT	574	787	593
GRAND RAPIDS	577	772	605
HOUGHTON LAKE	716	1127	940
LANSING	616	901	597
MARQUETTE U	653	1182	907
MUSKEGON	529	732	560
SAULT STE MARIE	722	1297	1060
MINNESOTA			
DULUTH	802	1522	1142
INTERNATIONAL FALLS	769	1327	1247
MINNEAPOLIS	651	955	747
ROCHESTER	667	996	719
ST CLOUD	717	1138	849
MISSISSIPPI			
JACKSON	71	75	59
MERIDIAN	79	84	81
MISSOURI			
COLUMBIA REGIONAL	336	[illegible]	[illegible]
KANSAS CITY	355	393	[illegible]
ST JOSEPH	399	463	351
ST LOUIS	317	348	311
SPRINGFIELD	266	315	268
MONTANA			
BILLINGS	660	1082	694
GLASGOW	[illegible]	1123	956
GREAT FALLS	668	1131	882
HAVRE	741	1184	982
HELENA	798	1401	[illegible]
KALISPELL	792	1344	1124
MILES CITY	653	995	688
MISSOULA	688	1208	1062
NEBRASKA			
GRAND ISLAND	494	625	[illegible]
LINCOLN	492	[illegible]	472
NORFOLK	[illegible]	722	517
NORTH PLATTE	[illegible]	775	[illegible]
OMAHA	488	607	422
SCOTTSBLUFF	495	696	597
VALENTINE	596	[illegible]	679
NEVADA			
ELKO	573	935	829
ELY	599	1021	897
LAS VEGAS	108	[illegible]	78
RENO	503	786	824
WINNEMUCCA	525	787	780
NEW HAMPSHIRE			
CONCORD	695	1027	[illegible]
MT WASHINGTON OBS	1196	2924	2806
NEW JERSEY			
ATLANTIC CITY	[illegible]	451	[illegible]
ATLANTIC CITY U	[illegible]	353	259
NEWARK	356	378	315
TRENTON U	391	429	[illegible]
NEW MEXICO			
ALBUQUERQUE	[illegible]	261	241
CLAYTON	376	506	382
ROSWELL	216	[illegible]	[illegible]
NEW YORK			
ALBANY	590	798	597
BINGHAMTON	680	928	[illegible]
BUFFALO	574	736	637
NEW YORK U	355	382	263
NEW YORK KENNEDY	321	342	284
NEW YORK LA GUARDIA	389	430	250
ROCHESTER	534	657	[illegible]
SYRACUSE	567	697	[illegible]
NORTH CAROLINA			
ASHEVILLE	304	315	[illegible]
CAPE HATTERAS R	61	61	78
CHARLOTTE	[illegible]	198	[illegible]
GREENSBORO	314	324	225
RALEIGH	[illegible]	247	185
WILMINGTON	81	81	74
NORTH DAKOTA			
BISMARCK	[illegible]	1060	861
FARGO	[illegible]	1022	858
WILLISTON	[illegible]	[illegible]	936
OHIO			
AKRON	470	[illegible]	[illegible]
CINCINNATI ABBE OBS	361	400	302
CLEVELAND	485	639	481
COLUMBUS	[illegible]	590	[illegible]
DAYTON	443	527	394
MANSFIELD	471	[illegible]	401
TOLEDO	543	741	539
YOUNGSTOWN	580	824	[illegible]
OKLAHOMA			
OKLAHOMA CITY	225	[illegible]	[illegible]
TULSA	183	202	[illegible]
OREGON			
ASTORIA	588	782	861
BURNS U	513	995	774
EUGENE	424	676	563
MEACHAM	679	1338	1076
MEDFORD	385	576	450
PENDLETON	422	596	461
PORTLAND	[illegible]	532	502
SALEM	454	769	517
SEXTON SUMMIT R	479	918	776
PENNSYLVANIA			
ALLENTOWN	513	[illegible]	443
ERIE	546	792	626
HARRISBURG	395	421	361
PHILADELPHIA	378	[illegible]	[illegible]
PITTSBURGH	508	602	489
SCRANTON	603	769	585
WILLIAMSPORT	[illegible]	687	495
RHODE ISLAND			
BLOCK ISLAND	409	470	401
PROVIDENCE	473	555	484
SOUTH CAROLINA			
CHARLESTON	33	33	59
CHARLESTON U	30	30	[illegible]
COLUMBIA	98	98	84
GRNVLLE-SPRTNBRG	189	[illegible]	[illegible]
SOUTH DAKOTA			
ABERDEEN	638	868	[illegible]
HURON	621	856	694
RAPID CITY	649	959	680
SIOUX FALLS	631	[illegible]	[illegible]
TENNESSEE			
BRISTOL	281	[illegible]	287
CHATTANOOGA	253	263	161
KNOXVILLE	251	260	201
MEMPHIS	[illegible]	184	148
NASHVILLE	168	178	188
OAK RIDGE R	241	251	[illegible]
TEXAS			
ABILENE	[illegible]	[illegible]	99
AMARILLO	274	337	223
AUSTIN	[illegible]	[illegible]	31
BROWNSVILLE	[illegible]	0	
CORPUS CHRISTI	8	8	0
DALLAS	109	112	62
DEL RIO	21	21	31
EL PASO	87	90	[illegible]
FORT WORTH	96	99	[illegible]
GALVESTON U	23	23	
HOUSTON INTERCON	50	52	[illegible]
LUBBOCK	220	245	192
MIDLAND	158	177	87
PORT ARTHUR	57	57	22
SAN ANGELO	97	100	[illegible]
SAN ANTONIO	29	29	31
VICTORIA	14	14	[illegible]
WACO	89	93	43
WICHITA FALLS	[illegible]	201	99
UTAH			
MILFORD	[illegible]	608	542
SALT LAKE CITY	347	457	[illegible]
WENDOVER	375	508	420
VERMONT			
BURLINGTON	694	1001	[illegible]
VIRGINIA			
LYNCHBURG	310	[illegible]	274
NORFOLK	197	201	[illegible]
RICHMOND	285	302	250
ROANOKE	391	435	[illegible]
WALLOPS ISLAND	256	264	
WASHINGTON			
OLYMPIA	570	1019	[illegible]
QUILLAYUTE	508	[illegible]	990
SEATTLE-TACOMA	[illegible]	830	671
SPOKANE	545	891	695
STAMPEDE PASS R	682	1719	1658
WALLA WALLA	369	530	[illegible]
YAKIMA	486	781	606
WEST VIRGINIA			
BECKLEY	475	594	513
CHARLESTON	378	410	317
ELKINS	[illegible]	623	569
HUNTINGTON	[illegible]	453	320
PARKERSBURG U	[illegible]	[illegible]	324
WISCONSIN			
GREEN BAY	606	877	736
LA CROSSE	[illegible]	786	[illegible]
MADISON	587	861	713
MILWAUKEE	[illegible]	739	735
WYOMING			
CASPER	641	1001	738
CHEYENNE	599	[illegible]	803
LANDER	[illegible]	992	[illegible]
SHERIDAN	633	1059	814

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

OCTOBER 1972

State and station	Current season		Normals January through this month
	This month	Period January through this month	
ALABAMA			
BIRMINGHAM	40	166	
HUNTSVILLE	15	1448	
MOBILE	224	2879	
MONTGOMERY	115	2271	
ALASKA			
ANCHORAGE	0	5	
ANNETTE	0	16	
BARROW		0	
BARTER ISLAND	0	0	
BETHEL	0	18	
BETTLES	0	89	
BIG DELTA	0	57	
COLD BAY		0	
FAIRBANKS	0	95	
GULKANA	0	5	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	15	
MC GRATH	0	24	
NOME	0	26	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA		19	
UNALAKLEET	0	35	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	100	
PHOENIX	259	4090	
TUCSON	150	2712	
WINSLOW	30	1210	
YUMA	226	4110	
ARKANSAS			
FORT SMITH	55	1802	
LITTLE ROCK	76	2108	
CALIFORNIA			
BAKERSFIELD	90	2410	
BISHOP	0	1079	
BLUE CANYON	0	475	
EUREKA U	0	1	
FRESNO	42	1850	
LONG BEACH	72	1166	
LOS ANGELES	65	753	
LOS ANGELES U	89	1524	
MT SHASTA R	0	378	
OAKLAND	18	147	
RED BLUFF	54	1969	
SACRAMENTO	30	1262	
SANDBERG R	0	816	
SAN DIEGO	53	752	
SAN FRANCISCO	14	109	
SAN FRANCISCO U	20	63	
SANTA MARIA	10	83	
STOCKTON	43	1509	
COLORADO			
ALAMOSA	0	55	
COLORADO SPRINGS	0	407	
DENVER	1	562	
GRAND JUNCTION	3	1367	
PUEBLO	3	1013	
CONNECTICUT			
BRIDGEPORT	1	729	
HARTFORD	1	676	
DELAWARE			
WILMINGTON	8	1063	
DIST.OF COLUMBIA			
WASHINGTON DULLES	4	909	
WASHINGTON NATIONAL	8	1184	
FLORIDA			
APALACHICOLA U	230	2743	
DAYTONA BEACH	317	2832	
FORT MYERS	419	3788	
JACKSONVILLE	222	2444	
KEY WEST	511	4502	
LAKELAND U	322	3136	
MIAMI	428	3692	
ORLANDO	374	3543	
PENSACOLA	236	2812	
TALLAHASSEE	181	2481	
TAMPA	352	3210	
WEST PALM BEACH	486	3891	
GEORGIA			
ATHENS	37	1554	
ATLANTA	25	1446	
AUGUSTA	39	1800	
COLUMBUS	105	2176	
MACON	80	1991	
ROME	18	1489	
SAVANNAH	125	2234	
HAWAII			
HILO	348	2815	
HONOLULU	450	3625	
KAHULUI	410	3120	
LIHUE	417	3350	
IDAHO			
BOISE	0	817	
LEWISTON	0	810	
POCATELLO	0	341	
ILLINOIS			
CAIRO U	31	1696	
CHICAGO O HARE	0	820	
CHICAGO MIDWAY	0	888	
MOLINE	6	1020	
PEORIA	3	902	
ROCKFORD	0	711	
SPRINGFIELD	10	1145	
INDIANA			
EVANSVILLE	2	1156	
FORT WAYNE	0	718	
INDIANAPOLIS	0	979	
SOUTH BEND	0	582	
IOWA			
BURLINGTON	7	955	
DES MOINES	0	909	
DUBUQUE	0	689	
SIOUX CITY	1	979	
WATERLOO	0	664	
KANSAS			
CONCORDIA	12	1186	
DODGE CITY	26	1234	
GOODLAND	4	789	
TOPEKA	20	1204	
WICHITA	34	1548	
KENTUCKY			
COVINGTON	0	912	
LEXINGTON	0	896	
LOUISVILLE	2	1283	
LOUISIANA			
ALEXANDRIA	153	2363	
BATON ROUGE	250	2920	
LAKE CHARLES	184	2666	
NEW ORLEANS	200	2655	
SHREVEPORT	167	2594	
MAINE			
CARIBOU	0	127	
PORTLAND	0	196	
MARYLAND			
BALTIMORE	7	1058	
MASSACHUSETTS			
BLUE HILL OBS R	0	414	
BOSTON	0	671	
WORCESTER	0	394	
MICHIGAN			
ALPENA	0	165	
DETROIT	1	684	
DETROIT METRO	0	550	
FLINT	0	427	
GRAND RAPIDS	0	503	
HOUGHTON LAKE	0	245	
LANSING	1	373	
MARQUETTE U	0	189	
MUSKEGON	1	419	
SAULT STE MARIE	0	79	
MINNESOTA			
DULUTH	0	113	
INTERNATIONAL FALLS	0	262	
MINNEAPOLIS	0	572	
ROCHESTER	0	507	
ST CLOUD	0	400	
MISSISSIPPI			
JACKSON	169	2582	
MERIDIAN	121	2297	
MISSOURI			
COLUMBIA REGIONAL	10	1344	
KANSAS CITY	16	1575	
ST JOSEPH	6	1298	
ST LOUIS	9	1417	
SPRINGFIELD	16	1426	
MONTANA			
BILLINGS	0	453	
GLASGOW	0	378	
GREAT FALLS	0	394	
HAVRE	0	489	
HELENA	0	163	
KALISPELL	0	187	
MILES CITY	0	592	
MISSOULA	0	228	
NEBRASKA			
GRAND ISLAND	0	984	
LINCOLN	2	936	
NORFOLK	0	901	
NORTH PLATTE	0	645	
OMAHA	1	1045	
SCOTTSBLUFF	0	583	
VALENTINE	0	684	
NEVADA			
ELKO	0	242	
ELY	0	191	
LAS VEGAS	69	3071	
RENO	0	385	
WINNEMUCCA	1	731	
NEW HAMPSHIRE			
CONCORD	0	301	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	4	853	
ATLANTIC CITY U	2	626	
NEWARK	3	1121	
TRENTON U	1	965	
NEW MEXICO			
ALBUQUERQUE	23	1182	
CLAYTON	15	655	
ROSWELL	42	1616	
NEW YORK			
ALBANY	0	421	
BINGHAMTON	0	400	
BUFFALO	0	450	
NEW YORK U	3	1064	
NEW YORK KENNEDY	4	968	
NEW YORK LA GUARDIA	0	801	
ROCHESTER	0	637	
SYRACUSE	0	570	
NORTH CAROLINA			
ASHEVILLE	0	721	
CAPE HATTERAS R	63	1475	
CHARLOTTE	17	1311	
GREENSBORO	2	1064	
RALEIGH	6	1149	
WILMINGTON	66	1707	
NORTH DAKOTA			
BISMARCK	0	462	
FARGO	0	574	
WILLISTON	0	342	
OHIO			
AKRON	0	545	
CINCINNATI ABBE OB	0	996	
CLEVELAND	0	529	
COLUMBUS	0	591	
DAYTON	0	831	
MANSFIELD	0	723	
TOLEDO	0	528	
YOUNGSTOWN	0	394	
OKLAHOMA			
OKLAHOMA CITY	109	2085	
TULSA	64	2120	
OREGON			
ASTORIA	0	59	
BURNS U	0	333	
EUGENE	0	358	
MEACHAM	0	207	
MEDFORD	0	735	
PENDLETON	0	911	
PORTLAND	0	531	
SALEM	0	307	
SEXTON SUMMIT R	0	376	
PACIFIC AREA			
GUAM TAGUAC R	448	4138	
JOHNSTON	484		
KOROR R	551	5154	
KWAJALEIN	530	5211	
MAJURO	500	4949	
PAGO PAGO	480	4594	
PONAPE R	477	4736	
TRUK MOEN ISLAND	521	4971	
WAKE	535	4411	
YAP R	509	4972	
PENNSYLVANIA			
ALLENTOWN	0	719	
ERIE	0	322	
HARRISBURG	3	950	
PHILADELPHIA	3	1074	
PITTSBURGH	0	589	
SCRANTON	0	514	
WILLIAMSPORT	0	551	
RHODE ISLAND			
BLOCK ISLAND	0	428	
PROVIDENCE	1	583	
SOUTH CAROLINA			
CHARLESTON	110	1970	
CHARLESTON U	133	2141	
COLUMBIA	35	1735	
GRNVLLE-SPRTNBRG	15	1298	
SOUTH DAKOTA			
ABERDEEN	0	639	
HURON	0	605	
RAPID CITY	0	401	
SIOUX FALLS	0	619	
TENNESSEE			
BRISTOL	3	862	
CHATTANOOGA	8	1114	
KNOXVILLE	4	1203	
MEMPHIS	66	1985	
NASHVILLE	24	1567	
OAK RIDGE R	5	1135	
TEXAS			
ABILENE	128	2295	
AMARILLO	60	1212	
AUSTIN	239	3088	
BROWNSVILLE	395	3706	
CORPUS CHRISTI	368	3712	
DALLAS	202	3054	
DEL RIO	241	3130	
EL PASO	120	1963	
FORT WORTH	183	2855	
GALVESTON U	294	3216	
HOUSTON INTERCON	206	2727	
LUBBOCK	63	1552	
MIDLAND	88	1945	
PORT ARTHUR	209	2555	
SAN ANGELO	140	2584	
SAN ANTONIO	249	2985	
VICTORIA	285	3358	
WACO	178	2933	
WICHITA FALLS	147	2505	
UTAH			
MILFORD	0	659	
SALT LAKE CITY	0	1058	
WENDOVER	0	1149	
VERMONT			
BURLINGTON	0	358	
VIRGINIA			
LYNCHBURG	2	946	
NORFOLK	22	1231	
RICHMOND	9	1163	
ROANOKE	0	842	
WALLOPS ISLAND	15	971	
WASHINGTON			
OLYMPIA	0	88	
QUILLAYUTE	0	74	
SEATTLE-TACOMA	0	212	
SPOKANE	0	430	
STAMPEDE PASS R	0	59	
WALLA WALLA U	1	914	
YAKIMA	0	549	
WEST INDIES			
SAN JUAN P.R.	554	5026	
WEST VIRGINIA			
BECKLEY	0	379	
CHARLESTON	0	827	
ELKINS	0	317	
HUNTINGTON	0	838	
PARKERSBURG U	0	887	
WISCONSIN			
GREEN BAY	0	495	
LA CROSSE	0	685	
MADISON	0	465	
MILWAUKEE	0	417	
WYOMING			
CASPER	0	304	
CHEYENNE	0	151	
LANDER	0	297	
SHERIDAN	0	294	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

OCTOBER 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS
Alabama	1	1			5						1	4																	
Alaska												4																	
Arizona	2	2			4																					8		7	7
Arkansas*																													
California	3	2						3																		1		6	5
Colorado																												6	
Connecticut*																													
Delaware*																													
Florida	11	2		3	5							5			1														
Georgia	4	1										5																	
Hawaii*																													
Idaho																4													
Illinois																4													
Indiana								3	3			4																	
Iowa	1	1			4			4	4																				
Kansas																								4					
Kentucky*																													
Louisiana												4																5	
Maine												4																4	
Maryland																												3	
Massachusetts										4	1	5																4	
Michigan										2		3	?																
Minnesota										1		4				4													
Mississippi												3																	
Missouri																										2		6	
Montana												3																	
Nebraska*																													
Nevada																												4	
New Hampshire												4																4	
New Jersey*																													
New Mexico																										1		6°	C
New York												4																5	
North Carolina	1	1			5																							5	5
North Dakota																													C
Ohio*																													
Oklahoma	2	1		1	5					1	1	4				4												5	?
Oregon*																													
Pacific Area																										3		5	
Pennsylvania*																													
Puerto Rico																3												4	
Rhode Island*																													
South Carolina*																													
South Dakota*																													
Tennessee												5				4													3
Texas	9	3		8	6							5		1										5					
Utah*																													
Vermont											2	3																4	
U.S. Virgin Is.*																													
Virginia																										6		7	C
Washington*																													
West Virginia*																													
Wisconsin								5				6			1	4													6
Wyoming*																													

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

OCTOBER 1972

Elmer R. Nelson, Office of Hydrology

The most damaging floods during October occurred in southeastern Arizona. The damages were estimated at $22.1 million. Eight deaths resulted from the floods.

Major flooding occurred on several small streams in the southeast quarter of Oklahoma from October 31 to November 2. The area of greatest damage was along the tributaries of the Little River. Damages were estimated at $12 million.

Serious flooding occurred in Virginia for the second time in less than four months. This was the most serious flood of record on the Appomattox River at Petersburg, Va. The damages in the James Basin were estimated at $2.8 million. Six deaths resulted from the floods in Virginia.

Only flood events resulting in loss of life and/or flood damages during the month are summarized. They are listed by drainage basins below:

Date (Oct.)	Flood Event	Lives Lost	Damage (thousands of dollars)
	ATLANTIC SLOPE DRAINAGE		
5-9	Serious flooding occurred in Virginia in the James Basin east of the Bent Tree gaging station and in the lower Shenandoah Basin. Crests in the James Basin ranged from 3 feet above flood stage at Scottsville, Va., to 15 feet above flood stage at Richmond, Va., City Locks gage. The river remained within its banks in the upper reaches of the James. This was the second time in less than four months that serious flooding occurred along the James; the previous flood being Agnes, the flood of record at Richmond. This was the most serious flood ever on the Appomattox River at Petersburg, Va. Upstream at the Mattoax, Va., gaging station, this flood was number four in order of magnitude. This was the third time within the past 12 months that the flood of record, August 18, 1940 (35.3 feet), has been approached. The average rainfall for the whole James River Basin was 5.35 inches during the period from the 4th to the 7th. Rainfall amounts in excess of 10 inches were reported in the Appomattox River basin, east of Farmville, Va., (around Amelia, Va.)	6	2,750
7-11	Moderate flooding occurred on many streams in eastern North Carolina and near-record flooding on the Meherrin and Nottaway Rivers in southeastern Virginia. Rainfall totals in eastern North Carolina ranged from 0.5 to 4 inches, with locally 8 to 9 inches in the Arcola and Littleton areas. In southeastern Virginia, rainfall averaged from 1.5 to 4 inches, except more than 9 inches during the 24-hour period ending at 7 a.m. on the 5th at Camp Pickett, Va. This was the greatest amount of rain falling at Camp Pickett at one time since 1940. The mayor of Emporia, Va., was swept away and drowned by the raging waters of the Meherrin River while looking for children	1	NA

Date (Oct.)	Flood Event	Lives Lost	Damage (thousands of dollars)
	ATLANTIC SLOPE DRAINAGE - Continued		
	he had thought had fallen into the river. The streams receded within their banks by the 11th except the Roanoke River at Williamston, N.C., which continued slightly out of its banks through November 6.		
	MISSISSIPPI SYSTEM		
	Upper Mississippi Basin		
6-10	The Wapsipinicon River at DeWitt, Iowa, crested 0.5 feet above flood stage on the 8th. The upper reaches overflowed briefly.	0	NA
	Ohio Basin		
18-21	Light to excessively heavy rains on the 17th-19th caused flooding on the Duck River in Tennessee. The total rainfall averaged 5 to 6 inches with a few locations receiving 8 inches or more. Lowlands and a few fields were flooded. Water was reported in a few streets at Columbia, Tenn.	0	NA
	Arkansas Basin		
22-24	Heavy rains in eastern Oklahoma on the 22d caused flooding on Bird Creek with crests ranging from 0.7 to 3.5 feet above flood stage. Flooding was confined to lowland areas. Some roads and streets were covered with water for a brief period.	0	NA
	Red Basin		
31-Nov.1	Heavy rains on the 30th-31st caused a 2.5 feet overflow of Beaver Creek at Electra, Tex. Some flash flooding occurred on creeks in the vicinity of Lawton and Purcell, Okla.	0	NA
31-Nov.2	Major flooding occurred on several small streams in the southeast quarter of Oklahoma. The area of greatest damage was along the tributaries of the Little River, mainly Glover River in McCurtain County. Upwards to 13 inches of rain fell in northern McCurtain County at the headwaters of Glover River in an 18-hour period on the night of the 30th and 31st.	0	12,000
	WEST GULF OF MEXICO DRAINAGE		
23-24 26-28 29-Nov 2	Five to 8 inches of rain over the Calcasieu Basin on the 22d-23d caused minor flooding in the Lake Charles, La., area, mostly northwest	0	Minor

Date (Oct.)	Flood Event	Lives Lost	Damage (thousands of dollars)
	WEST GULF OF MEXICO DRAINAGE-Continued		
	of the city. Some fish camps and mobile homes were isolated for a short time due to water over the roads.		
	GULF OF CALIFORNIA DRAINAGE		
	Colorado Basin		
4 6-7 18-22	Major flooding occurred in Arizona on three different occasions during October. The most damaging floods occurred in southeastern Arizona on the 18th-22d. The near-record floods that occurred on the San Francisco and Gila Rivers had their inception from the heavy rains on the 3d-8th, caused by the remnants of Hurricane Joanne. The precipitation that resulted was greater than the previous highest total for the entire month of October since records began. As "Joanne" moved northeastward across the Navajo Indian Reservation, heavy rains caused Moenkopi Wash near Tuba City to crest at the highest stage since the gage was relocated in 1964. The near-record floods on the Gila and San Francisco Rivers on the 19th-22d caused damages in excess of $18 million and 8 deaths. Elsewhere in the State during this period flood damages were estimated at $4.1 million. Graham and Greenlee Counties were declared disaster areas by the President on the 25th. This declaration was extended to include Apache, Coconino, Gila, and Navajo Counties on November 16.	8	22,100
17-20	Heavy rains on the 17th-20th caused flooding along most dry washes and the normally low water courses in western New Mexico, southwestern Colorado, and southeastern Utah. Minor flooding occurred on the Animas and San Juan Rivers in the Durango, Colo., and Pagosa Springs, Colo., areas. One life was lost in the Cliff, N. Mex., area of the Gila. An oil spill from a pipeline break caused alarm in northwestern New Mexico and southeastern Utah to Lake Powell. The high water on the San Juan added to this problem.	1	NA
	Alaska		
5	Moderate to heavy rains, beginning on the 5th in southeastern Alaska, caused flooding in some low lying areas and landslides. The turbine generators of the Sitka powerplant were under water as a result of Sawmill Creek overflowing. Twenty-four-hour rainfall amounts ranged from 2.25 inches at Juneau to a record of 6.01 inches at Snettisham.	0	120

Date (Oct.)	Flood Event	Lives Lost	Damage (thousands of dollars)
	Alaska - Continued		
	Total damage was estimated at $100,000 at Sitka and $20,000 at Juneau.		
13-18	A glacier-dammed lake, Summit Lake, was reported to be releasing water through the Salmon River, 60 miles northeast of Ketchikan on the 13th and had been dropping since the 10th. By the 16th, the lake had fallen 30 feet. By the 17th, the river at Hyder had risen 5 feet, and was flowing at an extremely rapid rate with house-sized ice cakes floating downstream. The river crested just over 27 feet late the night of the 17th. A previous breakout in 1970 crested at 28 feet and caused ten times the damage.	0	20

FLOOD STAGE DATA

(All dates in October unless otherwise specified)

OCTOBER 1972

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			Ft.	
ATLANTIC SLOPE DRAINAGE					
South Branch Potomac:					
Petersburg, W. Va.	12	5	6	13.2	6
Springfield, W. Va.	15	7	8	20.8	7
Shenandoah:					
Front Royal, Va.	12	6	7	21.3	7
Riverton, Va.	22	6	7	27.5	7
Milleville, Va.	13	6	7	19.9	7
Potomac:					
Point of Rocks, Md.	16	7	8	18.3	8
Rivanna:					
Palmyra, Va.	17	5	7	31.1	6
Appomattox:					
Farmville, Va.	16	6	7	19.1	6
Mattoax, Va.	21	6	12	31.1	6
Matoaca, Va.	U	U	U	18.4	7
Petersburg, Va.	U	U	U	18.75	7
James:					
Scottsville, Va.	20	5	6	23.2	6
Bremo Bluff, Va.	19	5	8	29.8	6
Columbia, Va.	18	5	8	#33.6	6
Cartersville, Va.	20	5	8	27.1	6
State Farm, Va.	12	6	8	E23.0	7
Richmond (Westham), Va.	12	6	9	21.75	7
Richmond (City Locks), Va.	9	6	9	24.2	7
Roanoke:					
Williamston, N.C.	10	13	Nov. 6	10.6	30
Fishing Creek:					
Enfield, N.C.	14	8	10	17.2	9
Neuse:					
Neuse, N.C.	14	7	10	15.8	9
Smithfield, N.C.	13	7	11	16.6	8
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Trempealeau:					
Dodge, Wis.	7	Sept. 26	2	10.0	Sept. 28
Root:					
Hokah, Minn.	47	Sept. 29	1	48.4	Sept. 30
Kickapoo:					
Steuben, Wis.	8	Sept. 28	3	8.4	Sept. 30
Wisconsin:					
Portage, Wis.	17	Sept. 28	3	18.35	Sept. 30
Wapsipinicon:					
DeWitt, Iowa	10	6	10	10.5	8
Illinois:					
LaSalle, Ill.	20	Sept. 30	3	20.5	1
MISSISSIPPI SYSTEM - Cont'd					
Ohio Basin					
Wabash:					
Lafayette, Ind.	11	Sept. 28	2	14.0	1
Covington, Ind.	16	Sept. 30	2	17.7	2
Montezuma, Ind.	14	Sept. 28	3	16.6	1
Terre Haute, Ind.	14	Sept. 28E	3	14.4	2
Duck:					
Shelbyville, Tenn.	722	18	19	723.7	19
Columbia, Tenn.	32	19	21	34.8	20
Arkansas Basin					
Bird Creek:					
Avant, Okla.	16	22	22	19.5	22
Sperry, Okla.	21	22	23	23.1	23
Owasso, Okla.	24.5	22	24	25.15	23
Red Basin					
Beaver Creek:					
Electra, Tex.	24	31	Nov. 2	28.8	Nov. 1
Blue:					
Blue, Okla.	21	31	Nov. 2	29.5	31
Clear Boggy:					
Caney, Okla.	19	31	Nov. 1	E 23.0	31
Kiamichi:					
Belzoni, Okla.	28	31	31	29.0	31
Glover:					
Glover, Okla.	16	31	Nov. 1	U	31
Sulphur:					
Hagansport, Tex.	44	31	Nov. 1	47.0	31
WEST GULF OF MEXICO DRAINAGE					
Calcasieu:					
Lake Charles, La.	3	4	6	3.0	4-5
		11	15	3.2	13
		23	24	3.6	23
		26	28	3.75	30
		29	Nov. 4	3.6	Nov. 1
Nueces:					
Callallen, Tex.	7	Sept. 30	1	7.6	1

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* Provisional

U Unknown

E Estimated

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	86	4.3	2.1	29	.8
1000	26	202	4.3	.6	22	1.0
950	31	594	4.4	-.8	28	3.6
900	31	1,033	2.2	-2.6	29	5.9
850	31	1,493	.9	-6.5	29	5.7
800	31	1,980	-.1	-11.7	29	7.5
750	31	2,496	-1.2	-13.3	28	9.1
700	31	3,044	-3.2	-15.3	28	10.9
650	31	3,629	-5.2	-20.0	28	13.1
600	31	4,254	-8.5	-23.7	28	14.8
550	31	4,924	-12.6	-25.9	28	16.9
500	31	5,645	-17.1	-30.1	28	18.9
450	31	6,428	-22.2	-35.4	27	21.0
400	31	7,283	-28.1	-41.8	27	22.2
350	31	8,231	-35.3	-46.1	27	25.2
300	31	9,284	-42.9	-46.9	27	27.3
250	31	10,493	-50.6		27	30.4
200	31	11,927	-56.5		27	26.0
175	31	12,772	-57.6		27	23.6
150	31	13,745	-57.7		27	22.4
125	31	14,892	-59.1		27	19.5
100	31	16,286	-60.4		27	15.9
80	30	17,681	-59.3		26	13.0
70	29	18,518	-58.4		27	10.9
60	29	19,490	-57.4		26	8.8
50	29	20,642	-57.0		26	7.5
40	28	22,061	-55.0		26	8.2
30	28	23,911	-52.3		25	6.5
25	27	25,094	-51.4		26	7.0
20	27	26,548	-50.2		26	5.3
15	26	28,439	-48.8		27	6.6
10	14	31,119	-45.3			
7						

ALBUQUERQUE, N. MEX.
839 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	1,619	9.8	4.2	08	1.9
1000						
950						
900						
850						
800	31	2,016	10.7	2.4	15	.8
750	31	2,552	7.8	.3	23	3.8
700	31	3,117	4.1	-2.5	24	6.5
650	31	3,717	.7	-7.7	24	8.5
600	31	4,356	-3.1	-13.6	24	10.1
550	31	5,040	-7.2	-19.9	24	11.8
500	31	5,776	-11.8	-26.3	24	14.2
450	31	6,575	-17.2	-30.9	24	16.2
400	31	7,447	-23.4	-35.8	24	17.8
350	31	8,413	-30.7	-42.7	24	21.1
300	31	9,487	-38.5	-47.8	24	24.7
250	31	10,719	-46.4		24	30.4
200	30	12,169	-54.7		25	34.1
175	30	13,014	-59.3		25	33.3
150	30	13,970	-63.2		26	28.2
125	28	15,082	-66.8		25	23.1
100	27	16,422	-69.0		26	14.9
80	26	17,753	-67.7		26	8.7
70	26	18,562	-65.5		28	5.0
60	26	19,504	-63.5		26	3.0
50	26	20,630	-61.1		28	3.2
40	26	22,025	-58.6		26	3.1
30	26	23,849	-55.2		26	4.3
25	26	25,018	-53.5		27	4.0
20	24	26,468	-51.8		27	5.0
15	22	28,345	-50.0		27	5.1
10	13	31,069	-47.4		26	4.5
7						

AMARILLO, TEXAS
893 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	1,095	10.0	5.5	22	1.3
1000						
950						
900						
850	30	1,564	12.0	4.7	26	4.3
800	30	2,012	11.9	2.2	25	5.9
750	30	2,551	9.5	-1.4	24	6.8
700	30	3,120	6.3	-6.4	24	7.6
650	30	3,724	2.6	-9.9	24	7.7
600	30	4,367	-1.3	-16.6	24	9.3
550	30	5,056	-5.5	-21.3	25	11.2
500	30	5,796	-10.8	-26.8	25	13.3
450	30	6,597	-16.4	-31.8	25	16.2
400	30	7,472	-22.7	-36.1	25	17.6
350	30	8,441	-29.7	-40.0	25	19.5
300	30	9,520	-37.7	-47.9	25	23.2
250	30	10,754	-46.7		25	27.9
200	30	12,204	-55.9		26	31.2
175	30	13,045	-60.1		26	31.7
150	30	13,997	-64.2		26	29.0
125	28	15,102	-67.7		26	24.9
100	27	16,432	-70.3		26	20.7
80	26	17,761	-68.8		27	12.1
70	26	18,565	-66.7		27	8.2
60	26	19,502	-64.1		27	6.5
50	26	20,627	-61.1		26	3.2
40	26	22,021	-58.7		26	3.0
30	26	23,844	-55.3		26	6.4
25	24	25,021	-53.6		26	5.3
20	23	26,467	-51.6		26	6.3
15	21	28,327	-50.3		26	7.4
10	14	31,011	-46.4			
7						

• ANCHORAGE, ALASKA
1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	45	.1	-3.3	09	.4
1000	26	129	1.5	-2.5	08	.8
950	31	517	.7	-4.6	13	1.5
900	31	950	-1.4	-6.4	14	3.2
850	31	1,403	-4.2	-8.7	16	3.6
800	31	1,880	-6.0	-13.0	19	5.0
750	31	2,384	-8.1	-16.6	20	5.7
700	31	2,917	-11.0	-19.8	22	6.4
650	31	3,483	-13.9	-23.5	22	7.7
600	31	4,087	-17.3	-25.7	22	9.8
550	31	4,735	-21.2	-28.7	23	11.5
500	31	5,431	-26.0	-32.0	23	13.4
450	31	6,186	-31.2	-35.7	23	14.4
400	31	7,011	-37.1	-39.6	23	16.3
350	31	7,924	-43.4	-39.0	23	18.4
300	31	8,944	-50.0		24	21.3
250	31	10,125	-53.6		24	21.4
200	31	11,559	-53.2		24	19.1
175	31	12,420	-52.9		25	18.0
150	31	13,415	-52.9		25	17.3
125	31	14,593	-52.5		25	15.6
100	31	16,032	-53.5		25	14.4
80	30	17,463	-53.7		26	13.1
70	29	18,317	-54.4		26	12.6
60	28	19,297	-55.1		26	12.6
50	28	20,458	-56.5		26	13.0
40	28	21,873	-57.2		27	13.0
30	26	23,698	-57.6		28	14.0
25	22	24,835	-58.3		27	14.8
20	17	26,273	-57.4		28	13.5
15	13	28,123	-56.4		29	17.0
10	9	30,666	-56.3			
7						

• ANNETTE, ALASKA
1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	37	5.6	3.1	15	.9
1000	30	162	6.2	2.6	17	1.3
950	31	576	4.9	.9	20	3.4
900	31	1,017	3.4	-2.6	22	4.0
850	31	1,479	1.8	-5.8	24	5.0
800	31	1,967	.1	-8.0	25	6.9
750	31	2,482	-2.6	-11.4	26	8.2
700	31	3,026	-5.5	-15.0	27	9.7
650	31	3,604	-8.6	-17.7	27	11.3
600	31	4,221	-12.3	-20.7	28	12.7
550	31	4,881	-16.3	-24.0	28	13.6
500	31	5,592	-20.7	-28.1	28	16.2
450	31	6,364	-25.9	-33.3	29	15.8
400	31	7,206	-32.0	-38.7	28	17.3
350	31	8,138	-38.9	-42.7	29	17.9
300	31	9,177	-45.9		29	20.6
250	31	10,372	-52.9		30	22.4
200	31	11,794	-57.4		30	21.5
175	31	12,635	-58.4		30	20.5
150	29	13,601	-56.9		30	18.1
125	28	14,759	-57.3		30	16.1
100	28	16,168	-57.8		30	13.8
80	26	17,578	-57.7		30	10.0
70	26	18,420	-58.1		30	9.3
60	25	19,387	-58.2		30	9.0
50	25	20,535	-58.4		31	9.2
40	24	21,934	-59.0		31	8.5
30	23	23,744	-58.7		31	9.2
25	22	24,885	-59.1		31	10.2
20	20	26,294	-58.3		31	11.0
15	14	28,092	-57.5		31	15.7
10	9	30,731	-54.7			
7	5	32,995	-50.6			

ATHENS, GEORGIA
991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	246	11.6	9.0	03	2.0
1000	5	267	7.0	.5		
950	31	602	13.7	7.9	07	3.6
900	31	1,057	12.6	5.4	07	1.4
850	31	1,536	11.0	.3	27	1.5
800	31	2,041	9.2	-2.6	28	4.4
750	31	2,574	7.3	-7.2	28	6.3
700	31	3,140	4.9	-11.3	28	7.7
650	31	3,741	1.9	-13.3	28	8.8
600	31	4,382	-2.0	-18.0	27	9.7
550	31	5,069	-6.1	-21.9	28	11.7
500	31	5,808	-10.5	-27.9	28	13.4
450	31	6,611	-16.0	-31.5	28	15.6
400	31	7,487	-22.5	-37.1	29	17.8
350	31	8,456	-29.8	-43.2	29	19.1
300	31	9,533	-38.3	-49.9	29	21.3
250	31	10,762	-47.8		29	24.5
200	31	12,201	-58.0		29	27.6
175	31	13,035	-61.6		29	27.3
150	31	13,982	-64.8		29	24.0
125	31	15,088	-67.7		29	20.0
100	31	16,423	-69.6		29	13.8
80	31	17,756	-68.0		29	9.6
70	31	18,563	-65.7		29	6.8
60	31	19,506	-63.1		29	3.8
50	31	20,638	-59.3		27	2.9
40	31	22,044	-56.9		27	2.1
30	29	23,877	-54.3		29	.6
25	28	25,046	-52.9		36	.8
20	27	26,494	-51.1		06	1.4
15	24	28,379	-49.0		06	1.5
10	14	30,994	-45.9		03	1.9
7						
5						

BARTER IS., ALASKA
1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	29	15	-5.2	-6.7	23	1.9
1000	25	95	-5.0	-7.1	22	1.8
950	29	482	-4.9	-8.0	25	2.9
900	29	906	-7.2	-10.3	26	3.7
850	29	1,349	-9.6	-13.0	26	5.1
800	29	1,815	-12.0	-15.7	26	5.8
750	29	2,307	-14.4	-18.2	26	6.0
700	29	2,828	-16.9	-20.8	26	6.7
650	29	3,381	-19.8	-24.6	26	7.7
600	29	3,971	-23.4	-27.9	26	8.6
550	29	4,603	-27.4	-32.6	26	10.2
500	29	5,283	-31.6	-36.4	26	12.0
450	29	6,021	-36.6	-40.1	26	13.7
400	29	6,827	-42.0	-40.9	26	16.4
350	29	7,724	-47.4		26	18.3
300	29	8,728	-52.5		26	20.6
250	29	9,902	-53.1		26	17.4
200	29	11,349	-50.7		26	15.9
175	29	12,219	-50.9		26	13.9
150	28	13,220	-51.4		26	14.5
125	26	14,398	-51.4		27	13.6
100	22	15,845	-52.5		27	12.2
80	22	17,283	-53.9		27	12.4
70	22	18,139	-55.1		27	11.8
60	21	19,119	-56.2		27	12.3
50	21	20,275	-57.3		28	13.3
40	21	21,682	-58.6		28	13.4
30	19	23,504	-59.0		28	14.6
25	19	24,646	-59.6		28	15.3
20	19	26,042	-59.6		29	16.2
15	17	27,829	-60.6		30	19.0
10	9	30,347	-59.6			
7						
5						

BETHEL, ALASKA
1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	39	.6	-.9	17	2.1
1000	21	104	1.1	-1.1	19	2.9
950	31	476	-.3	-2.7	19	5.9
900	31	907	-2.6	-5.6	20	6.9
850	31	1,358	-4.9	-9.7	21	7.3
800	31	1,833	-7.2	-13.6	21	7.0
750	31	2,334	-9.8	-18.2	21	7.3
700	31	2,864	-12.7	-20.9	21	8.1
650	31	3,426	-15.6	-23.3	22	9.0
600	31	4,026	-19.1	-27.1	22	9.3
550	31	4,668	-23.2	-31.2	22	10.3
500	31	5,360	-28.0	-36.0	22	11.0
450	31	6,109	-32.9	-41.8	22	11.1
400	31	6,928	-38.8	-44.7	22	12.3
350	31	7,835	-45.0	-48.0	22	14.3
300	31	8,850	-50.3		23	16.4
250	31	10,033	-52.4		23	19.6
200	31	11,478	-51.6		23	19.5
175	31	12,345	-51.1		23	17.7
150	31	13,349	-51.0		23	16.3
125	31	14,535	-51.0		24	15.7
100	31	15,985	-51.6		24	13.3
80	31	17,429	-52.8		24	13.5
70	31	18,291	-53.1		25	13.6
60	31	19,284	-53.6		25	13.0
50	31	20,454	-54.6		26	12.8
40	30	21,880	-55.7		26	13.6
30	29	23,708	-56.3		27	14.5
25	26	24,859	-56.5		27	13.7
20	23	26,295	-55.9		28	14.5
15	16	28,191	-54.2		28	16.3
10						
7						
5						

• BISMARCK, N. DAK.
959 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	503	1.1	-2.8	02	.6
1000						
950	27	592	.9	-4.2	01	.8
900	31	1,013	3.1	-5.2	30	2.2
850	31	1,476	2.1	-6.8	30	3.9
800	31	1,966	1.8	-11.0	30	6.0
750	31	2,485	.1	-11.3	30	7.8
700	31	3,035	-2.8	-14.5	30	9.6
650	31	3,619	-5.5	-17.0	29	11.2
600	31	4,243	-9.0	-21.2	29	12.6
550	31	4,911	-13.4	-25.8	29	14.4
500	31	5,630	-18.1	-30.9	29	17.0
450	31	6,410	-22.9	-35.9	28	18.8
400	31	7,262	-29.1	-41.1	28	20.9
350	31	8,205	-36.3	-45.6	28	23.4
300	31	9,253	-44.6	-51.3	28	26.4
250	31	10,453	-52.4		28	28.1
200	31	11,876	-57.6		27	27.7
175	31	12,717	-58.1		27	26.6
150	31	13,686	-58.5		28	25.8
125	31	14,930	-59.4		28	21.7
100	31	16,224	-60.1		28	18.1
80	31	17,616	-60.2		28	14.5
70	31	18,449	-60.2		29	12.7
60	31	19,412	-59.9		29	11.6
50	30	20,548	-59.5		29	9.5
40	28	21,945	-58.7		28	9.7
30	24	23,774	-56.7		28	10.2
25	23	24,942	-55.4		28	9.8
20	21	26,390	-53.3		27	11.5
15	20	28,262	-51.0		26	12.9
10	16	30,939	-47.1		26	14.4
7	13	33,321	-44.2			
5	7	35,667	-40.8			

BOISE, IDAHO
916 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	871	7.0	1.4	14	.7
1000						
950						
900	31	1,018	9.6	1.4	36	.2
850	31	1,492	9.1	-1.7	33	1.7
800	31	1,992	6.2	-4.3	34	1.9
750	31	2,519	3.0	-6.8	33	1.3
700	31	3,074	-.7	-9.6	30	1.0
650	31	3,662	-4.6	-13.4	28	2.0
600	31	4,287	-8.5	-17.3	30	2.2
550	31	4,957	-12.8	-25.0	31	2.2
500	30	5,683	-17.3	-30.2	27	1.6
450	30	6,464	-23.0	-33.3	28	1.7
400	30	7,315	-29.6	-39.8	27	2.0
350	30	8,257	-36.8	-46.1	27	2.6
300	30	9,304	-44.5		27	3.2
250	30	10,506	-51.5		26	4.8
200	30	11,937	-55.8		26	7.5
175	30	12,787	-56.4		27	7.8
150	30	13,763	-57.7		26	8.2
125	30	14,908	-59.7		26	9.1
100	29	16,299	-60.6		26	8.3
80	28	17,666	-61.4		27	6.9
70	28	18,514	-61.7		27	6.0
60	28	19,470	-61.3		28	5.8
50	27	20,606	-60.4		29	5.5
40	26	22,001	-59.1		29	5.6
30	25	23,809	-57.2		28	6.2
25	24	24,977	-55.7		28	6.9
20	22	26,408	-54.0		28	7.8
15	18	28,290	-51.7		28	8.2
10	14	30,990	-48.1			
7						
5						

BOOTHVILLE, LA.
1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	29	1	21.9	19.2	07	1.4
1000	29	152	22.3	18.6	09	2.3
950	29	597	19.7	14.9	11	2.7
900	29	1,062	17.6	10.2	13	1.3
850	29	1,550	15.5	5.3	23	.8
800	29	2,063	13.5	1.2	27	1.5
750	29	2,604	11.1	-4.1	29	2.3
700	29	3,177	8.1	-8.6	29	2.9
650	28	3,784	5.4	-12.5	30	3.6
600	28	4,434	1.8	-16.6	30	5.0
550	28	5,130	-2.6	-19.9	29	6.0
500	28	5,879	-7.5	-25.6	30	6.6
450	28	6,691	-13.0	-29.7	30	8.4
400	28	7,577	-19.4	-34.1	30	10.7
350	28	8,559	-26.8	-39.9	30	11.7
300	28	9,648	-35.7	-47.5	30	12.5
250	27	10,889	-45.4		30	13.8
200	27	12,345	-55.5		30	17.8
175	27	13,186	-60.4		30	17.5
150	27	14,134	-65.9		30	16.8
125	25	15,236	-71.4		30	13.0
100	25	16,546	-73.3		30	9.4
80	25	17,855	-71.8		30	4.7
70	25	18,650	-67.9		33	1.7
60	24	19,590	-63.8		03	1.5
50	23	20,722	-59.3		11	1.3
40	22	22,124	-56.7		06	1.1
30	21	23,960	-54.0		07	3.7
25	20	25,140	-51.5		07	4.8
20	18	26,587	-49.3		07	4.6
15	17	28,474	-47.8		08	1.2
10	13	31,128	-45.0			
7						
5						

• BROWNSVILLE, TEXAS
1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	30	7	21.5	18.8	14	.4
1000	30	130	24.6	21.1	13	2.4
950	30	580	21.7	18.5	14	5.9
900	30	1,048	19.1	13.2	15	5.3
850	30	1,538	16.8	6.4	15	4.5
800	30	2,053	14.5	2.4	15	2.8
750	30	2,597	12.4	-2.5	14	1.8
700	30	3,173	9.5	-6.6	15	1.0
650	30	3,784	6.2	-11.6	13	.5
600	30	4,435	2.1	-17.4	25	.3
550	30	5,132	-1.8	-22.7	20	1.0
500	30	5,883	-6.4	-27.0	22	1.6
450	30	6,699	-11.9	-32.4	25	2.8
400	30	7,589	-18.3	-37.5	26	4.6
350	30	8,574	-25.7	-41.4	26	6.5
300	30	9,669	-34.3	-48.4	27	8.5
250	30	10,919	-44.2		28	9.6
200	29	12,378	-55.4		29	13.9
175	29	13,218	-61.6		29	13.6
150	29	14,158	-68.1		29	11.4
125	29	15,237	-74.0		29	8.0
100	26	16,530	-77.5		29	4.4
80	24	17,814	-75.6		34	2.3
70	23	18,593	-70.4		03	2.1
60	23	19,521	-65.3		07	2.2
50	23	20,643	-61.3		11	3.0
40	21	22,040	-58.4		09	3.8
30	21	23,866	-54.8		08	5.4
25	21	25,038	-52.7		09	4.8
20	21	26,486	-50.4		07	4.6
15	19	28,370	-48.2		09	5.2
10	18	31,062	-44.1		10	3.3
7	13	33,502	-39.7			
5						

BUFFALO, N. Y.
994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	218	5.5	3.0	21	1.8
1000	10	250	4.6	.7	15	2.3
950	31	592	5.7	.9	24	4.2
900	31	1,033	3.5	-1.3	26	5.3
850	31	1,495	1.3	-5.2	27	6.6
800	31	1,982	.1	-8.5	27	8.1
750	31	2,498	-2.0	-11.2	27	9.8
700	31	3,044	-3.8	-17.2	27	11.8
650	31	3,628	-6.0	-18.4	27	13.1
600	31	4,251	-9.1	-21.0	28	14.7
550	31	4,920	-12.9	-25.1	28	17.1
500	31	5,640	-17.6	-29.5	28	19.1
450	31	6,421	-22.8	-33.5	28	21.2
400	31	7,275	-28.6	-37.4	28	22.7
350	31	8,220	-35.6	-44.7	28	25.2
300	31	9,273	-43.0	-50.2	27	27.4
250	31	10,480	-51.2		27	27.6
200	31	11,909	-56.9		27	27.4
175	31	12,753	-58.0		27	24.1
150	30	13,720	-58.0		28	23.0
125	30	14,865	-59.4		27	20.5
100	29	16,260	-60.1		27	16.1
80	28	17,654	-59.8		27	13.0
70	28	18,490	-59.5		27	10.7
60	28	19,457	-58.4		27	9.7
50	28	20,607	-57.0		26	8.3
40	28	22,028	-54.9		26	7.7
30	28	23,877	-52.1		26	8.0
25	28	25,062	-51.0		26	7.3
20	26	26,509	-50.0		26	7.3
15	22	28,409	-48.0		26	8.8
10	12	31,088	-45.1			
7						
5						

CAPE HATTERAS, N. C.
1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	4	16.8	13.7	03	3.2
1000	30	167	16.8	12.4	03	4.1
950	31	596	14.5	9.8	01	3.2
900	31	1,051	12.2	6.6	32	2.0
850	31	1,529	10.4	-.5	28	3.3
800	31	2,032	8.6	-5.7	28	5.3
750	31	2,564	6.8	-10.6	28	7.0
700	31	3,128	4.0	-14.2	29	8.9
650	31	3,727	1.0	-15.9	28	10.0
600	31	4,367	-2.6	-19.2	28	10.4
550	31	5,051	-6.7	-23.7	28	11.2
500	30	5,790	-11.5	-27.4	28	11.7
450	30	6,589	-16.9	-32.2	27	13.4
400	30	7,462	-23.3	-36.9	28	14.3
350	30	8,429	-30.5	-43.0	28	15.8
300	30	9,503	-39.0	-49.5	28	17.8
250	30	10,729	-48.4		28	20.4
200	30	12,165	-58.0		28	23.4
175	30	12,999	-61.7		28	24.1
150	30	13,948	-64.0		28	22.6
125	30	15,059	-66.3		28	19.4
100	30	16,407	-67.0		28	14.4
80	28	17,764	-66.0		28	8.3
70	28	18,579	-63.4		28	5.8
60	27	19,526	-61.3		27	4.8
50	26	20,664	-58.6		27	4.1
40	24	22,071	-56.1		26	3.1
30	24	23,908	-54.1		04	.2
25	22	25,067	-52.7		07	1.3
20	21	26,538	-51.0		08	1.4
15	21	28,418	-49.3		02	1.8
10	17	31,142	-45.1		36	4.8
7						
5						

• CARIBOU, MAINE
994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	191	1.5	-1.1	27	2.7
1000	12	233	.1	-3.7	27	2.2
950	31	557	1.5	-3.0	28	3.4
900	31	992	-.1	-5.3	28	5.2
850	31	1,449	-1.9	-8.1	28	6.7
800	31	1,929	-3.7	-10.2	28	7.6
750	31	2,438	-5.2	-12.8	28	9.7
700	31	2,978	-7.2	-16.1	27	11.1
650	31	3,553	-10.1	-18.6	27	12.5
600	31	4,167	-13.1	-24.6	27	13.8
550	31	4,825	-16.7	-30.0	27	16.0
500	31	5,535	-21.1	-33.7	26	18.5
450	31	6,306	-26.2	-37.1	26	20.7
400	31	7,148	-31.8	-41.1	25	23.4
350	31	8,083	-38.0	-45.5	25	25.5
300	31	9,126	-44.8		25	26.5
250	31	10,330	-50.5		25	28.7
200	31	11,773	-54.0		25	26.6
175	31	12,629	-54.8		25	25.7
150	31	13,614	-55.4		25	23.3
125	31	14,774	-56.4		25	21.7
100	31	16,188	-57.1		25	17.1
80	31	17,600	-56.9		25	13.3
70	31	18,447	-56.6		25	12.0
60	30	19,427	-56.1		25	11.1
50	30	20,587	-55.5		25	9.8
40	30	22,015	-54.1		24	9.1
30	28	23,873	-52.1		25	7.2
25	27	25,056	-51.5		25	6.2
20	26	26,516	-49.9		25	6.6
15	22	28,399	-48.7		25	5.2
10	21	31,079	-45.6		24	5.5
7	14	33,515	-42.0		25	6.5
5	8	35,809	-40.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1972

CHARLESTON, S. C.
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	14.9	12.5	01	2.0
1000	31	158	16.5	12.7	04	2.8
950	31	596	16.4	9.8	06	2.2
900	31	1,055	14.7	6.0	32	1.0
850	31	1,538	12.9	-.2	29	2.7
800	31	2,045	10.6	-2.9	28	4.1
750	31	2,581	8.3	-7.6	29	5.2
700	31	3,147	5.3	-10.6	28	6.7
650	31	3,750	2.3	-15.3	28	8.3
600	31	4,392	-1.4	-17.3	28	8.9
550	31	5,080	-5.6	-22.0	28	10.6
500	31	5,821	-10.5	-26.9	28	11.5
450	31	6,624	-15.5	-32.1	29	13.2
400	31	7,502	-21.9	-37.1	29	15.5
350	31	8,473	-29.1	-42.9	29	18.3
300	31	9,554	-37.6	-50.4	29	19.4
250	31	10,786	-47.2		29	21.3
200	31	12,230	-57.1		30	23.9
175	31	13,068	-61.1		30	23.6
150	31	14,016	-64.7		29	21.6
125	31	15,120	-68.0		29	19.0
100	30	16,455	-69.5		29	13.8
80	29	17,791	-68.0		29	8.4
70	29	18,599	-65.3		29	5.5
60	29	19,544	-62.2		28	3.4
50	29	20,681	-58.8		27	3.6
40	28	22,091	-56.2		29	1.0
30	28	23,931	-53.5		06	1.1
25	28	25,106	-52.5		08	2.1
20	28	26,556	-50.3		06	2.0
15	26	28,444	-48.1		07	1.7
10	24	31,142	-44.9		33	3.0
7	5	33,554	-42.2			

CHATHAM, MASS.
1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	9.2	5.8	32	1.0
1000	29	177	8.8	3.3	32	1.8
950	31	586	6.8	2.9	31	2.7
900	31	1,029	4.4	-.8	29	3.1
850	31	1,492	2.4	-6.8	28	5.0
800	31	1,982	2.0	-11.9	27	7.0
750	31	2,502	.8	-15.3	27	9.2
700	31	3,054	-1.7	-16.8	26	11.0
650	31	3,641	-4.4	-18.3	27	13.1
600	31	4,268	-7.4	-22.6	27	14.4
550	31	4,941	-11.4	-26.4	26	16.2
500	31	5,665	-15.9	-31.3	26	18.0
450	31	6,451	-21.3	-35.0	26	20.5
400	31	7,310	-27.2	-39.6	26	22.0
350	31	8,262	-34.1	-44.5	26	24.0
300	31	9,320	-42.1	-50.5	27	24.7
250	31	10,532	-50.5		26	27.7
200	31	11,962	-57.4		27	26.8
175	30	12,807	-59.0		26	24.7
150	30	13,773	-59.5		26	22.6
125	30	14,911	-60.7		26	19.2
100	30	16,295	-61.8		27	15.9
80	30	17,681	-60.6		26	12.2
70	29	18,511	-59.7		26	10.1
60	28	19,473	-58.8		25	8.4
50	28	20,623	-56.6		25	7.7
40	26	22,049	-55.1		25	7.5
30	24	23,903	-52.9		25	5.9
25	22	25,077	-52.0		26	4.7
20	21	26,530	-50.7		27	4.5
15	19	28,414	-48.7		27	4.0
10	14	31,060	-45.8		27	4.6
7	8	33,433	-44.2			

CHIHUAHUA, MEXICO
857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	13.5	9.2	21	.6
1000						
950						
900						
850	31	1,500	15.4	9.6	20	.9
800	31	2,016	15.6	6.8	20	3.3
750	31	2,561	12.4	3.7	20	5.1
700	31	3,136	8.3	-.6	21	6.0
650	31	3,745	4.8	-8.1	22	6.0
600	31	4,394	1.3	-12.7	23	7.5
550	31	5,089	-3.0	-19.1	23	9.7
500	31	5,837	-7.7	-23.5	23	9.9
450	31	6,649	-13.0	-28.1	24	11.6
400	31	7,536	-19.0	-31.8	24	11.8
350	31	8,519	-26.0	-37.5	24	13.8
300	31	9,614	-34.3	-45.4	24	14.3
250	31	10,864	-43.6		25	13.2
200	31	12,328	-54.3		26	11.4
175	31	13,173	-60.3		26	12.5
150	31	14,119	-66.6		26	11.9
125	31	15,207	-71.9		26	8.6
100	31	16,510	-75.3		26	5.2
80	29	17,811	-73.2		27	1.7
70	28	18,602	-69.3		36	1.3
60	26	19,535	-64.7		06	2.0
50	25	20,663	-61.1		10	1.6
40	25	22,062	-57.6		07	.9
30	24	23,887	-54.8		07	2.8
25	24	25,058	-53.1		08	3.1
20	23	26,499	-51.1		07	1.5
15	22	28,381	-48.1		05	1.3
10	16	31,048	-45.8		21	2.4
7	9	33,492	-42.2			

* COLD BAY, ALASKA
1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	30	3.7	1.8	19	2.1
1000	20	121	3.8	1.0	21	1.8
950	29	481	1.8	.5	21	2.5
900	29	915	-.9	-2.1	22	3.2
850	29	1,369	-3.4	-6.2	23	4.8
800	29	1,847	-5.4	-10.4	24	5.5
750	29	2,352	-8.0	-14.3	24	5.2
700	29	2,885	-11.1	-17.5	24	5.9
650	29	3,450	-14.2	-22.4	24	7.4
600	29	4,053	-17.8	-26.3	23	8.2
550	29	4,699	-21.8	-30.7	23	9.3
500	29	5,395	-26.2	-35.2	23	9.8
450	29	6,150	-31.3	-39.4	24	10.2
400	29	6,975	-36.5	-42.7	24	11.4
350	29	7,891	-42.3	-44.0	24	14.0
300	29	8,919	-47.3		24	15.6
250	29	10,115	-50.7		24	17.1
200	29	11,567	-50.9		24	15.7
175	28	12,428	-50.4		24	13.8
150	27	13,437	-50.9		24	14.0
125	27	14,622	-51.3		24	12.4
100	27	16,071	-51.8		24	10.9
80	25	17,514	-52.6		24	9.4
70	25	18,376	-53.2		24	9.1
60	23	19,361	-53.5		25	7.8
50	23	20,532	-54.6		25	6.2
40	22	21,954	-55.0		25	6.7
30	21	23,793	-55.0		27	7.5
25	20	24,955	-55.4		27	8.7
20	16	26,420	-53.9		28	8.9
15	9	28,302	-52.2			
10						
7						

DAYTON, OHIO
986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	7.1	4.5	16	.5
1000						
950	31	601	8.2	3.1	23	3.0
900	31	1,047	6.6	1.0	27	3.4
850	31	1,516	5.7	-5.0	27	4.9
800	31	2,012	4.6	-7.8	28	6.2
750	31	2,536	2.8	-9.8	28	8.0
700	31	3,092	.2	-12.3	28	9.9
650	31	3,683	-2.6	-16.6	28	11.8
600	31	4,314	-5.5	-22.0	28	13.8
550	31	4,992	-9.4	-25.7	28	15.4
500	31	5,721	-14.6	-29.8	28	16.4
450	31	6,512	-19.8	-33.5	28	18.7
400	31	7,375	-26.0	-38.2	28	21.1
350	31	8,331	-32.9	-44.6	28	23.4
300	31	9,396	-40.8	-48.7	28	26.9
250	31	10,612	-49.8		28	29.4
200	30	12,051	-57.2		28	32.5
175	29	12,894	-59.1		29	31.0
150	28	13,852	-61.4		29	27.8
125	28	14,979	-62.9		29	23.5
100	26	16,340	-63.7		28	18.3
80	24	17,714	-62.7		28	15.8
70	24	18,540	-61.6		28	13.5
60	24	19,498	-60.0		28	11.7
50	23	20,649	-57.8		28	9.9
40	23	22,063	-56.0		26	8.0
30	22	23,910	-52.7		25	6.5
25	21	25,091	-51.6		26	6.4
20	21	26,545	-50.2		26	5.3
15	16	28,444	-47.9		26	5.4
10	11	31,154	-45.1			
7						

DEL RIO, TEXAS
979 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	18.0	15.1	10	2.6
1000						
950	31	576	18.3	15.3	15	5.9
900	31	1,040	16.8	12.7	17	7.7
850	31	1,527	15.6	7.9	18	6.9
800	31	2,041	14.0	2.2	18	6.1
750	31	2,584	11.7	-2.7	20	5.3
700	31	3,157	8.5	-8.2	23	4.7
650	31	3,766	5.4	-12.3	23	5.6
600	31	4,415	1.4	-15.7	22	6.5
550	31	5,110	-3.0	-18.8	23	7.0
500	31	5,858	-8.0	-24.0	23	8.7
450	31	6,669	-13.2	-30.1	24	10.5
400	31	7,555	-19.4	-35.6	25	11.2
350	31	8,537	-26.4	-39.9	25	13.0
300	31	9,630	-34.6	-47.6	26	14.4
250	31	10,878	-44.3		26	17.4
200	29	12,336	-54.8		28	21.2
175	28	13,179	-60.3		28	21.8
150	28	14,127	-65.9		28	19.4
125	28	15,216	-72.3		27	15.6
100	28	16,517	-75.1		27	11.4
80	25	17,823	-72.5		28	4.8
70	24	18,612	-69.9		30	2.0
60	23	19,544	-64.4		34	.5
50	23	20,671	-60.2		16	1.4
40	23	22,074	-57.3		21	.9
30	23	23,903	-54.8		05	1.4
25	22	25,070	-52.7		08	2.1
20	18	26,529	-51.2		08	3.0
15	17	28,410	-48.2		09	1.8
10	10	31,133	-45.1			
7						

DENVER, COLO.
839 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	6.1	-.6	14	.1
1000						
950						
900						
850						
800	31	2,000	6.7	-2.2	33	1.6
750	31	2,529	5.9	-5.6	30	3.0
700	30	3,095	3.3	-7.7	28	4.0
650	30	3,693	-.2	-10.2	27	5.5
600	30	4,329	-4.4	-13.3	26	8.2
550	30	5,009	-8.9	-21.2	26	9.9
500	30	5,741	-13.3	-26.5	26	12.1
450	30	6,535	-18.8	-30.7	25	15.4
400	30	7,401	-25.4	-34.9	25	16.5
350	30	8,359	-32.3	-42.6	25	19.2
300	30	9,426	-40.3	-45.6	25	22.6
250	30	10,647	-48.7		25	27.8
200	30	12,087	-56.5		26	32.7
175	30	12,927	-60.0		26	31.9
150	30	13,885	-62.2		26	29.5
125	30	15,007	-63.9		26	24.3
100	30	16,372	-65.0		27	16.0
80	30	17,730	-65.0		27	10.3
70	30	18,546	-64.2		27	8.3
60	28	19,493	-62.8		29	5.3
50	27	20,624	-60.9		28	5.3
40	26	22,016	-58.9		29	4.8
30	26	23,833	-56.0		28	5.9
25	26	24,998	-54.3		27	7.3
20	25	26,428	-53.0		27	7.6
15	24	28,288	-51.2		26	10.1
10	12	31,004	-47.1			
7						

DODGE CITY, KANS.
926 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	8.6	2.8	17	.4
1000						
950						
900	31	1,027	9.8	5.1	20	2.0
850	31	1,505	11.6	3.2	23	3.6
800	31	2,011	10.6	.4	23	4.3
750	31	2,547	7.9	-2.8	24	5.3
700	31	3,114	5.1	-7.4	25	6.8
650	31	3,715	1.8	-11.6	25	7.5
600	31	4,356	-2.3	-15.7	25	8.8
550	31	5,041	-6.6	-22.0	25	10.6
500	31	5,778	-11.9	-26.6	26	13.5
450	31	6,577	-17.3	-31.2	26	16.2
400	31	7,449	-23.4	-35.6	26	19.6
350	31	8,415	-30.5	-39.9	26	22.7
300	31	9,489	-39.1	-45.2	26	24.8
250	31	10,715	-47.9		26	29.9
200	31	12,157	-57.0		27	35.9
175	31	12,995	-61.0		27	36.1
150	31	13,945	-64.2		27	29.9
125	27	15,056	-66.5		27	24.8
100	22	16,410	-68.7		27	15.9
80	20	17,757	-68.1		28	8.8
70	19	18,562	-65.9		28	6.6
60	17	19,500	-63.8		28	5.0
50	17	20,627	-61.1		29	4.7
40	16	22,022	-58.3		29	4.0
30	16	23,847	-55.2		26	4.0
25	14	25,014	-53.2		27	5.1
20	13	26,446	-52.6		27	5.9
15	12	28,314	-50.1		28	5.4
10	11	30,962	-47.1			
7						

EL PASO, TEXAS
882 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	13.6	8.7	16	.1
1000						
950						
900						
850	30	1,507	15.5	6.1	18	1.0
800	30	2,020	13.2	3.2	21	2.5
750	30	2,560	10.1	.8	22	4.8
700	30	3,130	6.1	-3.0	22	7.0
650	30	3,734	2.5	-9.3	24	8.6
600	30	4,376	-1.2	-15.4	24	10.2
550	30	5,065	-5.4	-22.0	23	12.9
500	29	5,804	-10.5	-25.8	23	14.2
450	28	6,606	-15.9	-31.1	23	16.4
400	28	7,484	-21.7	-36.2	23	18.8
350	28	8,458	-28.2	-41.0	24	21.7
300	28	9,544	-35.8	-48.9	24	25.7
250	28	10,788	-44.7		25	29.1
200	28	12,248	-54.6		25	31.1
175	28	13,093	-59.6		26	31.0
150	28	14,044	-65.1		26	28.2
125	27	15,139	-69.2		25	24.5
100	27	16,461	-72.0		26	14.9
80	25	17,772	-71.2		26	8.7
70	24	18,573	-67.6		26	4.1
60	23	19,509	-64.7		28	2.3
50	22	20,628	-61.2		28	2.5
40	22	22,024	-58.1		26	2.0
30	22	23,848	-55.5		26	2.4
25	22	25,015	-53.7		30	1.2
20	21	26,460	-51.8		25	3.4
15	15	28,347	-49.6		28	3.5
10	10	31,087	-46.8			
7						

ELY, NEV.
809 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	3.0	-.2	23	.6
1000						
950						
900						
850						
800	30	1,999	4.6	-.8	22	.4
750	31	2,522	3.0	-2.8	15	1.0
700	31	3,077	-.9	-6.4	20	2.5
650	31	3,665	-4.4	-11.3	21	4.3
600	31	4,292	-8.0	-17.1	22	4.6
550	31	4,964	-12.0	-24.0	23	6.2
500	31	5,687	-16.6	-29.1	23	7.2
450	31	6,471	-21.8	-34.9	24	8.0
400	31	7,327	-28.1	-40.3	24	11.6
350	31	8,276	-34.6	-45.8	23	14.6
300	31	9,333	-41.7	-47.2	23	18.0
250	31	10,548	-49.1		23	20.9
200	30	11,990	-54.6		24	24.4
175	30	12,840	-56.7		25	21.3
150	30	13,813	-58.6		25	19.2
125	30	14,955	-60.0		25	14.9
100	30	16,341	-62.1		25	10.0
80	29	17,719	-63.2		26	6.8
70	29	18,542	-62.6		27	4.7
60	29	19,495	-61.6		28	3.8
50	29	20,627	-60.8		29	4.2
40	28	22,023	-58.9		29	3.7
30	26	23,844	-55.6		28	4.1
25	26	25,010	-54.3		27	5.5
20	26	26,446	-52.6		27	7.4
15	24	28,325	-50.9		28	7.7
10	17	31,034	-47.5		28	6.0
7	5	33,388	-44.6			

EMPALME, MEXICO
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	22.3	16.8	34	1.3
1000	31	101	24.0	16.3	35	1.5
950	31	549	22.7	12.3	36	1.3
900	31	1,019	20.5	8.5	20	.6
850	31	1,510	17.2	6.4	19	2.8
800	31	2,025	14.2	2.4	20	4.4
750	31	2,568	11.7	-4.1	21	5.9
700	31	3,141	8.3	-7.5	21	7.3
650	31	3,750	4.8	-12.5	21	9.1
600	31	4,397	.8	-16.5	22	9.5
550	31	5,091	-3.2	-19.9	23	10.6
500	31	5,839	-7.5	-25.2	24	12.3
450	31	6,652	-12.8	-29.7	24	13.8
400	31	7,539	-19.1	-35.1	24	14.9
350	31	8,523	-26.1	-40.2	24	17.3
300	31	9,617	-34.0	-47.9	25	17.9
250	31	10,869	-43.3		25	20.7
200	31	12,337	-53.9		25	24.0
175	29	13,187	-59.6		25	23.8
150	29	14,137	-66.0		25	23.9
125	29	15,230	-71.0		25	19.2
100	26	16,531	-73.9		25	11.9
80	25	17,836	-72.1		26	5.9
70	25	18,630	-68.3		26	2.1
60	24	19,567	-64.4		15	.2
50	24	20,693	-60.6		11	1.0
40	24	22,091	-57.8		10	1.3
30	24	23,919	-55.1		09	2.1
25	23	25,086	-52.9		08	2.3
20	23	26,533	-50.5		08	1.7
15	21	28,413	-49.3		03	1.0
10	[illegible]	31,080	-46.2			

* FAIRBANKS, ALASKA
996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	135	-4.0	-8.4	34	.8
1000	8	181	-4.4	-7.5		
950	29	506	-2.5	-7.3	16	1.5
900	29	934	-4.0	-8.4	22	3.4
850	29	1,384	-6.2	-11.1	23	4.6
800	29	1,856	-8.4	-13.0	24	5.4
750	29	2,355	-10.7	-15.9	24	6.2
700	29	2,883	-13.6	-17.8	25	7.3
650	29	3,443	-17.0	-20.7	25	8.8
600	29	4,039	-20.5	-23.7	25	10.4
550	29	4,679	-24.4	-27.8	25	12.0
500	29	5,367	-28.6	-32.9	25	14.0
450	29	6,115	-33.6	-36.7	25	15.8
400	29	6,931	-39.6	-38.5	25	18.3
350	29	7,836	-45.4		25	21.0
300	29	8,847	-51.4		25	23.4
250	29	10,020	-55.4		25	24.8
200	29	11,447	-53.9		25	18.1
175	29	12,306	-53.4		25	17.8
150	29	13,300	-52.9		25	17.0
125	29	14,476	-52.8		25	15.4
100	28	15,914	-53.3		26	14.3
80	26	17,339	-54.8		26	14.2
70	26	18,192	-55.3		26	13.0
60	24	19,176	-56.2		26	13.0
50	21	20,329	-57.3		27	13.7
40	18	21,738	-57.5		28	14.6
30	14	23,566	-58.1		28	14.1
25	12	24,727	-57.3		28	16.7
20	11	26,148	-56.9		28	17.3
15	8	27,997	-56.9			
10						

FLINT, MICH.
992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	236	5.1	2.2	25	1.0
1000						
950	30	592	5.3	-.5	26	3.2
900	30	1,032	3.4	-2.0	27	4.5
850	30	1,495	1.9	-6.9	28	5.7
800	30	1,983	.7	-10.9	28	7.8
750	30	2,500	-1.0	-13.5	28	9.2
700	30	3,048	-3.3	-16.1	28	11.1
650	30	3,632	-5.9	-19.1	28	13.2
600	30	4,256	-8.7	-21.8	28	15.1
550	30	4,925	-12.7	-24.4	28	16.8
500	30	5,646	-17.3	-29.1	28	18.8
450	30	6,428	-22.6	-33.8	28	20.5
400	30	7,282	-28.8	-39.7	28	23.9
350	30	8,226	-35.8	-45.5	28	26.5
300	30	9,278	-43.5	-47.2	28	30.6
250	30	10,482	-51.8		28	32.9
200	30	11,908	-57.3		29	33.6
175	30	12,750	-58.5		29	32.2
150	30	13,718	-59.2		28	27.8
125	28	14,844	-60.2		28	23.1
100	28	16,230	-61.3		28	18.8
80	28	17,616	-60.9		28	15.3
70	27	18,444	-59.9		28	12.1
60	27	19,407	-59.5		28	10.5
50	26	20,556	-57.9		27	9.5
40	25	21,969	-56.2		27	7.9
30	25	23,808	-53.8		26	9.1
25	24	24,977	-52.4		26	9.9
20	23	26,429	-50.8		25	9.3
15	20	28,305	-49.3		26	10.7
10	8	31,006	-47.2			

FORT WORTH, TEXAS
996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	15.0	12.0	19	.5
1000	8	202	13.4	9.6		
950	31	583	15.7	10.2	20	4.5
900	31	1,043	15.9	8.4	22	5.0
850	31	1,528	14.5	5.2	23	4.0
800	31	2,039	12.4	1.4	24	4.5
750	31	2,578	9.8	-3.0	26	4.7
700	31	3,148	7.1	-7.9	26	6.1
650	30	3,753	3.7	-11.3	26	6.7
600	30	4,398	.0	-16.5	26	8.1
550	30	5,090	-4.1	-21.7	25	9.5
500	30	5,834	-9.1	-26.2	26	11.1
450	30	6,642	-14.1	-30.7	26	13.2
400	30	7,525	-20.4	-35.8	27	15.1
350	30	8,502	-27.6	-41.6	27	16.9
300	30	9,589	-36.2	-48.1	27	19.4
250	30	10,829	-45.8		27	21.8
200	30	12,281	-55.7		28	23.5
175	30	13,121	-61.1		28	24.6
150	29	14,068	-65.7		28	23.3
125	28	15,167	-69.8		28	18.6
100	27	16,485	-72.4		28	12.4
80	26	17,802	-70.6		29	7.3
70	25	18,602	-67.3		29	4.1
60	24	19,539	-64.2		29	2.3
50	23	20,671	-60.0		25	1.5
40	22	22,076	-56.8		28	2.0
30	21	23,916	-53.8		28	.8
25	21	25,090	-52.7		26	.6
20	20	26,546	-50.9		32	.6
15	17	28,408	-49.6		35	.6
10	7	31,134	-45.4			

GLASGOW, MONT.
936 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	1.1	-4.5	06	1.5
1000						
950						
900	31	1,017	4.4	-3.4	31	1.1
850	31	1,482	3.8	-6.0	30	3.4
800	31	1,973	2.2	-8.4	30	5.4
750	31	2,493	.2	-10.0	29	7.2
700	31	3,043	-2.9	-12.8	29	9.2
650	31	3,627	-6.0	-16.8	29	10.0
600	31	4,250	-9.4	-21.2	29	11.7
550	31	4,917	-13.7	-25.6	29	12.3
500	31	5,635	-18.6	-28.3	29	13.6
450	31	6,412	-23.9	-34.2	29	15.1
400	31	7,262	-30.1	-39.8	29	15.6
350	31	8,201	-37.3	-44.3	29	16.7
300	31	9,246	-45.0		28	19.1
250	31	10,444	-52.8		28	20.4
200	31	11,865	-57.6		28	20.0
175	31	12,708	-57.6		28	20.4
150	30	13,691	-58.6		28	20.4
125	30	14,837	-59.1		28	18.7
100	30	16,234	-59.7		[illegible]	14.8
80	29	17,621	-59.9		29	13.1
70	29	18,456	-59.7		29	11.2
60	29	19,420	-59.6		29	9.7
50	29	20,560	-59.4		29	8.5
40	28	21,957	-58.9		29	8.2
30	28	23,769	-57.7		29	8.9
25	27	24,926	-56.1		28	9.2
20	26	26,352	-55.2		28	10.1
15	25	28,195	-53.1		28	12.4
10	13	30,868	-50.2		27	18.6

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GRAND JUNCTION, COLO.
853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	9.0	4.8	12	2.6
1000						
950						
900						
850	25	1,513	10.5	3.3	12	2.9
800	31	2,002	8.8	.9	15	3.3
750	31	2,534	5.5	-1.7	20	3.0
700	31	3,094	2.1	-4.0	22	4.7
650	31	3,689	-2.0	-7.9	23	6.2
600	31	4,320	-6.1	-12.9	23	8.1
550	31	4,997	-10.2	-20.2	23	10.5
500	31	5,725	-14.7	-26.2	22	12.6
450	31	6,515	-19.7	-31.7	23	15.8
400	31	7,379	-25.7	-36.9	24	19.0
350	31	8,336	-32.7	-42.6	24	21.2
300	31	9,401	-40.5	-47.9	24	22.8
250	31	10,621	-48.9		24	27.1
200	31	12,064	-55.7		25	30.1
175	31	12,910	-58.3		25	28.7
150	31	13,874	-60.4		25	25.4
125	31	15,005	-62.4		25	21.6
100	31	16,375	-64.7		25	14.0
80	31	17,735	-64.7		26	10.2
70	31	18,553	-63.7		28	6.9
60	31	19,502	-62.6		28	4.7
50	31	20,630	-61.3		28	4.3
40	31	22,026	-58.1		28	4.4
30	30	23,845	-56.1		28	5.8
25	26	25,010	-54.3		27	6.8
20	22	26,437	-52.6		27	7.0
15	17	28,332	-50.7		26	7.8
10	7	31,027	-47.1			
7						

• GREAT FALLS, MONT.
890 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	2.7	-2.7	24	2.9
1000						
950						
900						
850	31	1,492	5.0	-5.7	26	4.2
800	31	1,986	3.3	-7.2	29	4.6
750	31	2,508	1.3	-9.4	29	4.5
700	31	3,060	-2.0	-12.9	29	5.5
650	31	3,645	-5.4	-16.9	28	6.8
600	31	4,269	-9.2	-20.8	29	7.7
550	31	4,937	-13.3	-25.5	29	7.8
500	31	5,656	-18.2	-29.5	29	8.0
450	31	6,434	-23.8	-36.0	29	8.6
400	31	7,284	-30.1	-40.2	29	9.3
350	31	8,224	-37.0	-44.9	28	11.4
300	31	9,270	-44.6		27	12.8
250	31	10,468	-52.8		27	15.5
200	31	11,891	-57.2		27	14.7
175	31	12,735	-57.9		27	15.1
150	31	13,706	-58.3		27	15.2
125	31	14,851	-59.0		27	14.5
100	30	16,247	-60.2		28	12.3
80	30	17,639	-60.2		28	10.8
70	30	18,472	-60.2		29	9.8
60	30	19,435	-59.8		29	8.4
50	27	20,577	-59.9		29	8.1
40	27	21,974	-59.2		29	7.1
30	25	23,775	-58.1		30	8.3
25	24	24,929	-56.8		30	8.1
20	20	26,363	-55.6		29	9.5
15	14	28,260	-52.3		28	13.0
10	10	30,927	-48.5			
7	8	33,311	-45.9			

GREEN BAY, WIS.
993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	4.3	1.4	29	.1
1000	8	234	-.2	-4.4		
950	31	573	4.3	-.3	27	3.0
900	31	1,012	2.6	-3.3	27	4.5
850	31	1,473	1.5	-7.8	27	5.8
800	31	1,961	.2	-10.2	27	7.9
750	31	2,477	-1.5	-13.0	28	10.3
700	31	3,025	-4.0	-16.0	28	11.8
650	31	3,607	-6.4	-17.9	28	14.4
600	31	4,229	-9.4	-22.0	28	16.5
550	31	4,897	-13.3	-24.3	28	19.0
500	31	5,616	-18.0	-28.6	28	21.0
450	31	6,396	-23.2	-33.8	28	22.5
400	31	7,248	-29.1	-40.8	28	24.9
350	31	8,192	-36.2	-45.9	29	27.6
300	31	9,241	-43.9		29	30.3
250	31	10,444	-51.9		29	34.4
200	31	11,869	-57.5		29	33.6
175	31	12,710	-58.5		29	33.4
150	31	13,680	-58.7		28	28.3
125	30	14,826	-59.7		28	23.9
100	30	16,218	-60.6		28	20.9
80	30	17,605	-60.7		28	15.6
70	30	18,437	-59.9		28	13.2
60	30	19,402	-59.2		28	11.4
50	30	20,548	-58.0		28	10.1
40	29	21,960	-56.6		27	9.3
30	29	23,795	-54.0		27	9.4
25	29	24,971	-52.3		26	9.1
20	27	26,416	-51.3		26	11.3
15	27	28,294	-49.3		25	12.1
10	23	30,990	-46.0		26	15.5
7	5	33,408	-44.2			

GREENSBORO, N. C.
998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	8.6	6.9	36	1.0
1000						
950	31	606	11.3	5.7	02	2.7
900	31	1,057	9.8	2.7	35	3.0
850	31	1,531	9.4	-1.7	30	3.4
800	31	2,033	8.1	-5.9	28	4.7
750	31	2,565	6.3	-8.4	28	6.4
700	31	3,128	3.7	-12.9	28	8.4
650	31	3,726	.6	-15.2	28	9.6
600	31	4,365	-3.0	-17.5	28	10.7
550	31	5,048	-7.2	-21.7	28	11.6
500	31	5,785	-11.8	-27.2	29	13.3
450	31	6,583	-17.3	-32.6	29	15.3
400	31	7,455	-23.8	-38.2	29	16.5
350	31	8,419	-30.9	-43.7	29	18.8
300	31	9,491	-39.3	-50.0	28	21.1
250	31	10,715	-48.6		29	24.8
200	31	12,153	-57.4		29	28.4
175	31	12,990	-60.2		29	28.2
150	31	13,946	-62.9		29	25.6
125	31	15,062	-65.2		29	20.9
100	31	16,415	-67.0		29	15.7
80	31	17,766	-65.4		29	10.5
70	31	18,583	-63.4		29	8.8
60	31	19,535	-61.1		28	6.0
50	31	20,675	-58.5		27	4.3
40	31	22,087	-55.6		27	4.1
30	29	23,927	-53.2		27	2.4
25	28	25,112	-51.6		25	1.6
20	25	26,567	-49.9		23	.3
15	21	28,462	-48.2		35	.8
10	20	31,158	-45.6		35	1.3
7	7	33,537	-41.8			

GUADALUPE IS., MEXICO
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	23	18.9	16.4	34	3.5
1000	30	123	16.5	12.9	34	3.5
950	30	559	14.0	9.5	32	3.4
900	30	1,013	11.8	6.5	31	2.7
850	30	1,492	13.5	.2	29	1.9
800	30	1,996	10.0	-4.8	25	[illegible]
750	30	2,531	7.7	-7.6	24	6.4
700	30	3,096	4.9	-12.7	23	8.4
650	30	3,697	1.8	-15.4	23	10.4
600	30	4,338	-2.2	-20.2	23	11.0
550	30	5,024	-6.7	-24.1	24	10.8
500	30	5,761	-11.5	-28.7	25	13.2
450	30	6,561	-16.9	-31.8	25	14.7
400	29	7,439	-23.2	-35.8	25	17.4
350	29	8,406	-30.3	-40.5	25	16.4
300	28	9,483	-37.8	-47.0		
250	27	10,718	-46.3			
200	25	12,169	-56.3			
175	25	13,007	-61.5			
150	24	13,957	-67.1			
125	23	15,046	-71.6			
100	22	16,355	-74.1			
80	21	17,654	-72.6			
70	21	18,445	-69.5			
60	21	19,372	-66.0			
50	21	20,486	-63.1			
40	20	21,872	-59.8			
30	19	23,683	-57.0			
25	19	24,844	-55.0			
20	18	26,271	-53.4			
15	18	28,133	-51.4			
10	13	30,775	-48.9			
7						

* GUAM, MARIANA IS.
997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.9	23.2	04	.1
1000	7	119	24.7	23.2		
950	31	540	23.6	21.9	03	1.4
900	31	1,012	20.8	18.0	36	1.2
850	31	1,506	18.1	14.0	33	1.0
800	31	2,025	16.0	8.8	35	1.0
750	31	2,572	13.7	4.1	02	1.3
700	31	3,151	10.8	-2.6	05	1.7
650	31	3,766	7.6	-8.1	05	2.0
600	31	4,421	3.8	-12.4	06	2.1
550	31	5,122	-.3	-15.7	07	2.2
500	31	5,878	-4.9	-20.1	07	2.6
450	31	6,699	-9.9	-25.3	08	2.7
400	31	7,598	-15.7	-32.3	10	2.8
350	31	8,595	-22.4	-37.0	09	3.1
300	31	9,706	-30.5	-44.8	08	2.9
250	31	10,974	-40.9	-48.5	11	6.3
200	31	12,453	-53.1		11	10.6
175	31	13,300	-59.9		11	12.5
150	30	14,247	-67.5		10	14.4
125	29	15,325	-75.2		09	16.7
100	28	16,597	-80.8		10	17.0
80	26	17,853	-78.7		10	13.5
70	25	18,622	-73.2		10	12.5
60	24	19,537	-68.7		09	14.3
50	24	20,640	-65.3		09	17.4
40	23	22,011	-61.2		09	21.4
30	23	23,823	-55.5		09	23.8
25	22	24,987	-53.2		09	24.9
20	21	26,426	-49.8		09	23.8
15	20	28,323	-45.9		09	19.5
10	9	31,058	-41.3			
7						
5						

HILO, HAWAII
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	21.8	19.3	23	1.6
1000	31	129	22.9	19.5	23	.9
950	31	575	19.8	17.3	10	1.7
900	31	1,040	16.7	14.3	10	2.9
850	31	1,526	13.8	10.9	10	2.3
800	31	2,036	11.6	5.5	10	2.3
750	31	2,575	10.0	-3.1	09	1.8
700	31	3,145	7.7	-10.2	06	1.1
650	31	3,754	5.5	-15.6	01	.4
600	31	4,404	2.2	-18.7	30	1.4
550	31	5,100	-2.2	-22.6	28	2.1
500	31	5,850	-7.5	-25.9	27	3.5
450	31	6,662	-12.9	-31.1	26	5.2
400	31	7,549	-18.9	-36.7	26	8.2
350	31	8,534	-25.7	-41.9	26	11.0
300	31	9,629	-34.1	-49.3	26	13.4
250	31	10,880	-43.9		26	15.6
200	31	12,342	-55.0		26	16.8
175	31	13,184	-60.9		27	16.9
150	31	14,128	-66.9		26	14.8
125	31	15,214	-72.7		26	12.0
100	30	16,507	-76.4		27	5.8
80	30	17,798	-73.9		06	2.0
70	30	18,586	-69.9		08	4.1
60	30	19,510	-67.0		09	6.5
50	30	20,622	-63.4		09	9.1
40	30	22,003	-60.2		09	12.6
30	30	23,815	-56.2		09	16.3
25	30	24,980	-53.7		09	17.5
20	30	26,423	-51.3		09	17.0
15	27	28,298	-49.1		09	14.0
10	18	31,008	-45.2		09	8.8
7	9	33,448	-39.9			
5						

HUNTINGTON W. VA.
992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	7.3	5.6	23	.2
1000						
950	31	604	9.9	3.6	23	2.2
900	31	1,053	8.4	1.2	27	3.7
850	31	1,524	6.6	-3.2	28	4.5
800	31	2,022	5.6	-6.9	28	6.2
750	31	2,548	4.0	-8.5	28	7.6
700	31	3,107	1.5	-12.6	28	9.8
650	31	3,701	-.9	-15.7	28	11.5
600	31	4,336	-4.2	-20.1	28	13.5
550	31	5,017	-8.2	-24.7	28	15.2
500	31	5,751	-12.9	-28.2	28	17.2
450	31	6,546	-18.3	-31.6	28	18.4
400	31	7,414	-24.8	-37.8	28	20.4
350	31	8,375	-31.9	-45.1	28	21.6
300	31	9,442	-40.2	-46.8	28	26.1
250	31	10,663	-49.1		29	30.2
200	31	12,100	-56.9		29	32.9
175	31	12,941	-59.3		29	30.1
150	31	13,900	-61.7		29	26.9
125	31	15,025	-63.4		29	20.7
100	30	16,389	-64.8		28	15.8
80	28	17,750	-63.8		28	11.5
70	28	18,573	-62.1		28	9.0
60	28	19,529	-60.7		28	6.8
50	27	20,669	-58.0		27	6.1
40	25	22,081	-55.7		26	5.4
30	24	23,933	-52.5		27	4.8
25	23	25,116	-51.2		26	4.5
20	22	26,580	-49.6		26	4.0
15	20	28,479	-47.6		26	3.8
10	10	31,157	-46.0			
7						
5						

• INTERNATIONAL FALLS, MINN.
974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	2.1	-1.8	25	.7
1000						
950	31	557	1.4	-1.4	26	2.6
900	31	992	.5	-4.5	29	5.2
850	31	1,450	-1.0	-9.8	30	6.8
800	31	1,933	-2.3	-12.6	30	8.5
750	31	2,443	-4.3	-15.0	30	10.1
700	31	2,985	-6.6	-18.1	29	11.9
650	31	3,561	-9.5	-20.1	29	13.7
600	31	4,175	-12.9	-22.7	29	15.6
550	31	4,834	-16.9	-27.2	29	17.4
500	31	5,543	-21.4	-30.2	29	19.4
450	31	6,313	-26.2	-35.0	29	22.7
400	31	7,155	-32.1	-41.2	29	27.5
350	31	8,088	-38.6	-46.1	28	30.0
300	31	9,128	-45.8		28	31.0
250	31	10,323	-52.9		28	34.0
200	31	11,749	-56.5		28	30.6
175	31	12,596	-56.5		28	27.7
150	31	13,575	-56.2		28	25.0
125	29	14,732	-57.7		28	21.8
100	27	16,131	-58.4		29	18.0
80	27	17,533	-58.7		29	15.4
70	27	18,372	-58.5		29	14.5
60	26	19,348	-58.4		29	12.5
50	26	20,496	-58.2		29	10.5
40	23	21,903	-57.8		29	10.0
30	22	23,726	-55.0		28	9.5
25	22	24,894	-53.9		27	10.4
20	22	26,333	-52.2		26	10.9
15	22	28,203	-50.5		26	12.0
10	22	30,865	-47.3		26	14.9
7	18	33,227	-44.5		27	19.3
5	8	35,480	-43.0			

JACKSON, MISS.
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	15.0	13.3	[illegible]	.9
1000	30	166	15.7	12.4	11	1.2
950	31	598	15.9	11.4	14	1.8
900	31	1,058	15.2	7.7	23	1.8
850	31	1,542	13.7	2.4	26	3.1
800	31	2,051	11.6	[illegible]	26	3.6
750	31	2,589	9.4	-4.1	27	4.7
700	31	3,158	6.5	-8.0	28	5.8
650	31	3,764	3.7	-12.4	28	6.9
600	31	4,409	.1	-17.8	28	8.9
550	31	5,101	-4.0	-21.3	29	11.0
500	31	5,846	-8.9	-24.9	28	12.5
450	31	6,653	-14.4	-29.7	28	13.0
400	31	7,535	-20.9	-35.2	28	14.5
350	31	8,510	-28.1	-39.9	28	16.9
300	31	9,595	-36.8	-47.7	28	19.0
250	31	10,831	-46.5		29	21.2
200	31	12,280	-56.4		29	23.2
175	31	13,118	-61.3		29	24.3
150	29	14,059	-65.6		30	23.1
125	27	15,162	-69.6		29	19.3
100	27	16,484	-71.9		29	13.7
80	26	17,801	-70.4		29	7.7
70	25	18,601	-67.4		30	4.7
60	25	19,538	-63.6		31	3.2
50	24	20,664	-60.1		26	2.2
40	23	22,065	-56.9		29	2.1
30	22	23,903	-53.6		30	.8
25	22	25,079	-52.5		36	.5
20	19	26,535	-50.5		36	.7
15	18	28,421	-48.2		20	.6
10	13	31,120	-44.7			
7						
5						

JOHN F. KENNEDY INT. AP NY
1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	9.8	3.2	33	2.8
1000	29	186	9.1	3.2	31	2.5
950	31	595	7.0	1.0	30	3.3
900	31	1,038	5.0	-1.7	29	3.1
850	31	1,504	4.3	-8.0	29	4.5
800	31	1,997	3.2	-10.2	29	7.7
750	31	2,519	1.9	-13.5	28	10.0
700	31	3,074	-.1	-15.3	28	11.2
650	31	3,664	-2.8	-18.1	28	12.5
600	31	4,295	-6.4	-20.8	28	13.7
550	31	4,970	-10.3	-24.3	28	16.6
500	31	5,697	-15.0	-29.0	28	19.1
450	31	6,486	-20.2	-33.9	27	20.8
400	30	7,350	-26.7	-40.0	27	22.3
350	30	8,303	-33.7	-44.7	27	24.8
300	30	9,363	-41.9	-50.9	27	27.4
250	30	10,576	-50.5		27	28.7
200	29	12,010	-56.8		28	32.9
175	27	12,850	-58.3		28	26.2
150	25	13,819	-59.1		28	24.0
125	25	14,957	-60.9		27	19.5
100	24	16,341	-62.0		27	19.0
80	24	17,726	-60.4		26	12.9
70	24	18,561	-59.1		26	9.7
60	24	19,531	-58.0		26	6.2
50	23	20,676	-56.5		25	5.6
40	22	22,103	-54.3		25	5.8
30	21	23,961	-51.6		24	4.8
25	21	25,147	-50.6		24	3.5
20	20	26,619	-49.0		26	2.3
15	18	28,517	-46.9		32	1.3
10	12	31,221	-43.9			
7						

JOHNSTON IS., PACIFIC AREA
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	26.3	22.4	09	4.6
1000	31	111	25.1	21.8	09	5.1
950	31	561	21.7	20.0	09	5.9
900	31	1,029	18.9	15.6	09	6.1
850	31	1,519	16.1	11.9	09	4.9
800	31	2,033	13.6	8.1	09	3.0
750	31	2,576	11.3	2.3	10	1.1
700	31	3,150	8.7	-3.9	20	.9
650	31	3,760	5.5	-7.8	20	1.8
600	31	4,410	1.8	-12.6	20	2.5
550	31	5,106	-2.2	-19.1	21	2.6
500	31	5,857	-7.1	-21.7	23	3.3
450	31	6,671	-12.2	-26.0	24	3.6
400	31	7,561	-18.1	-32.2	25	6.3
350	31	8,549	-24.5	-36.0	25	10.6
300	31	9,652	-32.3	-43.4	26	14.9
250	30	10,918	-42.2		27	17.4
200	29	12,389	-54.0		27	20.3
175	29	13,234	-60.5		27	18.7
150	29	14,179	-67.4		27	15.7
125	29	15,261	-73.5		27	10.6
100	28	16,549	-77.9		30	4.1
80	27	17,828	-75.6		06	4.0
70	26	18,610	-70.8		08	6.5
60	26	19,531	-67.9		09	9.7
50	26	20,637	-63.9		09	13.6
40	25	22,014	-60.2		09	16.7
30	23	23,828	-56.2		09	20.9
25	22	24,992	-53.4		09	23.0
20	22	26,440	-50.0		09	22.2
15	19	28,335	-48.2		09	18.0
10	13	31,044	-42.6		09	7.3
7	7	33,462	-38.2			

KEY WEST, FLA.
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	25.3	21.8	06	3.0
1000	31	129	24.8	20.8	07	4.2
950	31	578	21.4	17.9	08	5.4
900	31	1,046	18.6	13.5	09	4.7
850	31	1,534	15.4	9.5	09	3.5
800	31	2,047	13.1	3.4	08	2.6
750	31	2,588	10.6	-3.3	06	2.1
700	31	3,160	8.0	-9.3	06	1.9
650	31	3,768	5.3	-14.7	05	2.3
600	31	4,418	1.8	-18.6	07	2.0
550	31	5,114	-2.1	-22.8	36	2.3
500	31	5,864	-6.8	-26.8	34	3.0
450	31	6,678	-12.4	-32.0	33	3.5
400	30	7,567	-18.8	-37.2	32	4.8
350	30	8,550	-26.4	-42.8	31	6.0
300	30	9,641	-35.2	-49.0	31	6.9
250	30	10,886	-45.1		31	8.9
200	29	12,343	-55.6		31	11.6
175	29	13,183	-61.1		31	11.9
150	29	14,127	-66.9		31	10.3
125	29	15,213	-72.3		31	9.4
100	28	16,514	-75.2		32	6.6
80	28	17,814	-72.2		35	3.2
70	28	18,610	-67.2		03	2.1
60	27	19,547	-63.8		08	2.2
50	26	20,672	-61.2		09	3.4
40	26	22,067	-57.9		08	6.0
30	26	23,897	-54.4		09	6.9
25	24	25,074	-52.3		08	7.7
20	23	26,524	-50.0		09	8.5
15	23	28,413	-47.8		09	6.1
10	13	31,119	-44.2		07	[illegible]
7						

• KOROR, CAROLINE IS.
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	28.3	24.6	29	1.3
1000	31	98	26.9	23.9	28	1.6
950	31	552	23.6	21.6	28	2.8
900	31	1,024	20.9	17.3	28	3.2
850	31	1,517	17.9	14.0	29	3.1
800	31	2,035	15.3	11.1	30	2.4
750	31	2,581	12.6	7.3	29	1.9
700	31	3,158	9.7	1.4	32	.9
650	31	3,771	6.6	-2.8	01	.6
600	31	4,424	3.0	-7.8	36	.5
550	31	5,125	-.7	-16.2	04	.7
500	31	5,880	-4.8	-21.2	04	.2
450	31	6,702	-9.7	-27.1	10	1.3
400	31	7,600	-15.7	-31.4	10	1.8
350	31	8,598	-22.4	-38.0	11	2.2
300	31	9,708	-30.9	-45.2	10	3.1
250	31	10,975	-41.3	-50.8	09	5.0
200	31	12,450	-53.5		09	7.1
175	31	13,297	-60.0		09	10.5
150	31	14,243	-66.9		10	14.2
125	31	15,328	-73.2		10	13.2
100	31	16,614	-78.6		09	9.6
80	31	17,885	-77.3		08	7.7
70	31	18,659	-73.0		08	9.4
60	31	19,572	-69.5		09	14.4
50	30	20,671	-65.3		09	21.9
40	30	22,045	-60.8		09	26.0
30	28	23,862	-55.1		09	29.5
25	28	25,033	-52.8		09	[illegible]
20	27	26,489	-48.8		09	30.9
15	24	28,403	-43.3		09	21.5
10	[illegible]	31,169	-37.5		10	2.6
7	[illegible]	33,630	-35.0			

KWAJALEIN, MARSHALL IS.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	24.5	24	2.0
1000	31	84	26.6	24.2	26	2.3
950	31	537	23.5	21.8	26	3.9
900	31	1,009	20.6	18.3	26	4.2
850	31	1,502	18.2	14.7	27	4.1
800	31	2,021	15.6	10.7	27	3.8
750	31	2,568	13.0	7.3	27	3.5
700	31	3,145	9.9	3.1	28	3.1
650	31	3,758	6.4	.0	28	2.7
600	31	4,411	2.5	-3.0	28	2.2
550	31	5,111	-1.4	-7.7	28	1.7
500	31	5,865	-5.5	-13.8	26	.8
450	31	6,685	-10.2	-19.1	14	.7
400	31	7,583	-15.9	-24.7	10	1.1
350	31	8,577	-22.6	-30.1	08	3.0
300	31	9,690	-30.9	-39.6	09	5.3
250	31	10,957	-41.3	-49.6	09	7.5
200	31	12,431	-53.9	[illegible]	08	10.2
175	31	13,275	-61.0		08	11.4
150	28	14,211	-68.6		07	11.9
125	24	15,287	-75.6		07	11.6
100	14	16,545	-80.9		09	8.2
80	11	17,812	-77.9		09	5.9
70	10	18,587	-73.4		08	10.2
60	9	19,498	-70.1			
50	8	20,594	-66.4			
40	7	21,973	-60.7			
30	7	23,780	-56.3			
25	7	24,947	-53.3			
20	7	26,392	-50.6			
15	7	28,290	-44.5			
10	[illegible]	31,016	-39.9			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1972

LAKE CHARLES, LA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	16.2	15.3	04	1.4
1000	31	150	18.4	15.3	07	1.9
950	31	590	17.7	12.1	14	1.5
900	31	1,053	16.5	6.7	20	1.9
850	31	1,539	14.9	3.0	24	1.8
800	31	2,050	12.6	-.9	27	2.2
750	31	2,590	10.4	-5.5	28	3.0
700	31	3,161	7.9	-10.0	29	2.9
650	31	3,769	5.0	-14.8	29	3.9
600	31	4,413	1.4	-19.3	28	5.6
550	31	5,107	-3.1	-23.6	28	6.3
500	30	5,853	-8.1	-26.5	28	8.3
450	30	6,664	-13.5	-31.4	28	10.2
400	30	7,548	-20.0	-34.3	28	12.4
350	30	8,527	-27.3	-40.7	28	13.7
300	30	9,615	-35.9	-48.3	28	15.0
250	30	10,856	-45.7		29	17.0
200	29	12,308	-56.2		29	19.1
175	29	13,147	-60.9		30	19.2
150	29	14,094	-66.0		29	18.9
125	28	15,185	-71.2		29	14.8
100	27	16,502	-73.5		29	10.6
80	27	17,808	-72.1		29	5.8
70	26	18,604	-68.0		32	3.1
60	25	19,539	-64.3		34	1.5
50	24	20,671	-59.6		01	.7
40	24	22,077	-57.0		34	.4
30	22	23,903	-54.3		06	1.8
25	21	25,069	-52.8		06	1.8
20	20	26,512	-50.1		04	1.2
15	19	28,407	-48.2		08	.7
10	13	31,093	-46.0		29	5.4

LANDER, WYO. 831 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	3.0	-2.5	23	1.0
1000						
950						
900						
850						
800	31	2,002	5.2	-4.3	31	.5
750	31	2,527	3.0	-7.0	31	1.2
700	31	3,083	-.2	-10.1	27	3.3
650	31	3,673	-3.1	-13.7	26	5.4
600	31	4,302	-7.2	-17.9	26	6.3
550	31	4,975	-11.4	-23.8	26	8.3
500	31	5,700	-16.2	-28.2	25	9.9
450	31	6,484	-21.8	-33.5	25	11.6
400	31	7,341	-28.1	-38.5	25	14.0
350	31	8,288	-35.3	-44.1	25	17.1
300	31	9,340	-43.9		25	21.5
250	31	10,542	-51.6		25	26.5
200	30	11,977	-57.6		25	24.2
175	29	12,828	-59.5		26	22.4
150	29	13,792	-59.9		25	20.4
125	29	14,924	-62.3		26	17.7
100	28	16,306	-63.2		26	14.5
80	27	17,675	-63.2		28	10.1
70	27	18,497	-62.9		28	8.7
60	26	19,444	-62.7		28	7.2
50	24	20,562	-61.6		30	6.3
40	21	21,937	-60.4		29	6.4
30	20	23,746	-57.5		28	7.1
25	20	24,901	-56.1		28	8.1
20	19	26,332	-54.1		28	8.5
15	17	28,173	-52.6		27	12.5
10	7	30,877	-50.1			

* LIHUE KAUAI, HAWAII 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	24.0	21.4	08	1.9
1000	31	137	23.8	20.7	08	2.6
950	31	584	20.4	18.9	09	4.2
900	31	1,051	17.4	15.2	09	4.1
850	31	1,538	14.4	11.6	09	3.4
800	31	2,049	12.1	6.0	10	2.5
750	31	2,588	10.7	-2.3	11	1.9
700	31	3,161	8.1	-7.6	13	.5
650	31	3,769	5.1	-12.2	24	1.7
600	31	4,419	1.6	-16.4	26	2.6
550	31	5,114	-2.9	-20.8	24	3.5
500	31	5,862	-8.0	-23.9	24	4.4
450	31	6,672	-13.4	-28.6	25	5.9
400	31	7,558	-19.7	-32.3	25	9.0
350	31	8,538	-26.7	-39.0	25	10.9
300	31	9,630	-34.9	-46.3	25	13.4
250	31	10,878	-44.4		25	16.4
200	31	12,338	-55.1		26	18.5
175	31	13,180	-60.7		26	18.3
150	31	14,127	-66.1		26	17.2
125	30	15,218	-71.4		26	13.1
100	30	16,522	-75.3		26	6.0
80	29	17,822	-73.1		07	.2
70	27	18,615	-69.5		09	3.6
60	26	19,543	-65.5		09	4.8
50	26	20,660	-62.8		09	7.3
40	26	22,045	-59.5		09	10.0
30	25	23,863	-55.4		09	12.8
25	25	25,032	-53.2		09	13.7
20	25	26,479	-50.7		09	12.3
15	23	28,362	-48.6		10	9.7
10	16	31,040	-44.7		09	4.4

LITTLE ROCK, ARK. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	12.7	10.0	04	.8
1000	30	161	14.5	9.8	11	.3
950	31	592	14.2	9.3	20	1.8
900	31	1,048	12.6	6.6	23	1.9
850	31	1,528	12.1	2.4	27	3.0
800	31	2,035	10.7	-1.0	28	4.1
750	31	2,571	8.3	-5.2	28	5.0
700	31	3,139	5.9	-9.0	28	6.6
650	31	3,742	2.7	-10.9	28	8.1
600	31	4,386	-1.1	-15.3	28	10.2
550	31	5,074	-5.2	-20.8	28	12.1
500	31	5,816	-10.1	-25.5	28	13.5
450	31	6,620	-15.6	-29.4	28	15.6
400	31	7,497	-22.0	-34.8	28	18.7
350	31	8,469	-29.0	-40.9	28	21.5
300	30	9,547	-37.5	-47.9	28	22.7
250	29	10,788	-47.1		28	27.1
200	29	12,232	-56.7		29	30.8
175	27	13,067	-61.0		29	30.0
150	27	14,014	-65.8		29	27.2
125	27	15,113	-68.8		29	23.0
100	23	16,438	-70.4		29	15.7
80	22	17,767	-68.1		29	9.0
70	22	18,574	-65.8		29	5.6
60	22	19,516	-63.3		29	4.5
50	22	20,647	-59.8		29	3.7
40	22	22,052	-56.9		26	4.2
30	22	23,892	-53.2		28	3.7
25	22	25,069	-52.1		26	2.7
20	22	26,521	-50.0		24	3.4
15	21	28,416	-47.8		27	2.3
10	9	31,150	-44.1			

MCGRATH, ALASKA 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	-1.0	-5.3	17	.7
1000	14	145	-1.3	-4.3	18	2.2
950	31	497	-1.7	-4.7	19	3.5
900	31	927	-3.4	-6.2	20	5.8
850	31	1,377	-5.4	-9.3	20	7.4
800	31	1,852	-7.5	-12.6	20	8.0
750	30	2,352	-10.5	-15.0	21	7.5
700	30	2,880	-13.4	-19.0	22	8.4
650	30	3,442	-16.0	-22.5	23	8.4
600	30	4,041	-19.6	-26.0	23	9.3
550	30	4,682	-23.8	-31.2	23	10.5
500	30	5,372	-28.2	-36.7	23	12.1
450	30	6,120	-33.2	-40.4	23	13.7
400	30	6,939	-38.5	-41.5	23	15.7
350	30	7,847	-44.9		23	19.1
300	30	8,861	-50.6		23	21.3
250	30	10,042	-53.3		24	18.8
200	29	11,473	-51.8		24	16.4
175	28	12,341	-51.9		24	15.2
150	28	13,342	-51.4		25	14.7
125	27	14,526	-51.9		25	13.8
100	27	15,971	-52.2		25	13.9
80	26	17,408	-53.2		25	13.2
70	26	18,266	-54.4		25	13.3
60	24	19,251	-54.7		25	13.8
50	24	20,415	-55.3		25	14.1
40	24	21,835	-56.5		26	15.2
30	21	23,660	-57.2		27	15.4
25	18	24,807	-57.8		27	15.0
20	13	26,213	-57.9			

+ MAJURO, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.3	24.5	26	2.3
1000	31	92	27.0	23.3	26	2.7
950	31	546	23.7	21.7	27	4.9
900	31	1,018	21.0	18.3	27	5.8
850	31	1,512	18.2	14.8	27	6.4
800	31	2,032	16.0	11.1	27	6.0
750	31	2,579	13.2	7.9	27	5.1
700	30	3,159	10.1	4.9	26	3.6
650	30	3,773	6.9	1.6	26	3.1
600	30	4,427	3.2	-2.3	26	2.1
550	30	5,129	-.4	-6.6	26	2.1
500	30	5,885	-5.0	-10.8	22	.8
450	30	6,707	-9.6	-16.2	12	1.6
400	30	7,608	-15.1	-21.8	09	2.5
350	30	8,608	-21.6	-29.9	10	3.7
300	30	9,723	-29.9	-39.0	09	5.8
250	30	10,995	-40.1	-48.8	08	8.4
200	30	12,478	-52.5		08	10.7
175	30	13,327	-59.5		08	11.5
150	29	14,274	-67.2		08	11.5
125	29	15,355	-74.2		07	9.7
100	29	16,633	-80.4		07	8.0
80	28	17,902	-76.5		08	7.0
70	25	18,681	-72.1		09	8.8
60	24	19,593	-69.7		09	13.2
50	23	20,695	-65.1		09	20.9
40	21	22,[illegible]69	-60.4		09	24.0
30	21	23,883	-55.0		09	29.2
25	21	25,058	-51.7		09	29.9
20	20	26,532	-46.4		09	24.6
15	20	28,470	-40.4		09	10.7
10	13	31,269	-35.3			
7						
5						

* MEDFORD, OREG. 971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	5.1	3.2	24	.3
1000						
950	31	582	8.4	4.6	32	.2
900	31	1,031	9.0	2.2	12	.8
850	31	1,503	7.5	-1.5	11	1.4
800	31	2,002	5.9	-7.3	07	1.1
750	31	2,528	3.6	-11.3	06	1.7
700	31	3,084	-.1	-13.5	04	2.1
650	31	3,674	-3.6	-18.5	01	2.5
600	31	4,302	-7.3	-23.5	35	3.5
550	31	4,974	-11.9	-28.3	35	4.9
500	31	5,696	-17.0	-32.2	35	5.3
450	31	6,478	-22.6	-36.3	36	6.5
400	31	7,331	-29.1	-42.5	36	8.2
350	31	8,274	-36.5	-47.1	01	9.5
300	31	9,321	-44.5		01	10.7
250	31	10,523	-51.2		36	11.2
200	29	11,949	-55.1		34	11.2
175	29	12,798	-57.0		33	9.0
150	29	13,773	-57.8		31	8.5
125	28	14,923	-59.0		30	7.4
100	27	16,316	-60.4		30	6.2
80	27	17,705	-60.7		29	5.1
70	27	18,536	-60.7		28	4.3
60	27	19,496	-60.1		29	3.8
50	27	20,634	-60.4		29	3.7
40	25	22,031	-59.1		29	3.5
30	24	23,853	-57.2		28	4.0
25	24	25,011	-55.6		28	5.4
20	23	26,444	-53.6		28	5.7
15	21	28,291	-51.6		27	9.5
10	17	30,990	-48.5		26	12.0
7	13	33,335	-46.8			
5	5	35,679	-42.5			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	21.8	21.4	10	.9
1000	31	120	24.2	22.5	10	3.3
950	31	570	22.8	19.3	11	5.7
900	31	1,041	20.4	15.2	10	4.6
850	31	1,533	17.5	9.7	09	4.4
800	31	2,049	14.9	6.3	09	4.0
750	31	2,594	12.2	.6	09	3.5
700	31	3,169	9.2	-4.3	09	3.2
650	31	3,780	6.4	-9.6	06	3.3
600	31	4,433	3.0	-14.9	07	3.4
550	31	5,132	-.9	-19.8	07	2.6
500	31	5,886	-5.6	-25.0	06	3.0
450	31	6,704	-11.0	-29.3	05	3.1
400	31	7,598	-17.2	-33.4	04	3.5
350	31	8,588	-24.2	-40.9	03	3.9
300	31	9,691	-32.7	-47.0	02	3.4
250	31	10,948	-42.8		36	2.9
200	31	12,416	-54.3		33	3.2
175	31	13,260	-60.3		33	3.1
150	31	14,207	-66.8		30	4.3
125	31	15,294	-72.1		31	5.3
100	31	16,593	-76.2		33	5.1
80	31	17,884	-73.4		36	3.8
70	30	18,677	-68.4		02	2.7
60	30	19,609	-65.2		08	2.1
50	29	20,731	-61.7		07	3.9
40	29	22,123	-58.5		08	7.2
30	29	23,951	-54.0		09	9.7
25	27	25,132	-51.9		09	11.5
20	26	26,584	-49.4		09	11.7
15	24	28,472	-47.8		09	12.2
10	16	31,155	-43.8			

MIAMI, FLA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	22.8	20.5	02	1.6
1000	31	136	24.1	20.5	06	2.6
950	31	584	21.1	18.0	08	4.1
900	31	1,051	18.0	14.0	08	3.6
850	31	1,539	15.1	10.1	08	2.1
800	31	2,052	13.1	4.6	09	1.1
750	31	2,593	11.2	-2.0	03	.8
700	31	3,166	8.2	-5.4	04	1.5
650	31	3,775	5.1	-9.8	01	1.6
600	31	4,424	1.8	-15.9	35	2.0
550	31	5,121	-2.1	-20.2	34	3.5
500	31	5,871	-7.0	-24.3	33	4.9
450	31	6,685	-12.6	-28.0	32	5.8
400	31	7,573	-18.8	-34.1	31	6.1
350	31	8,556	-26.4	-39.7	30	6.9
300	31	9,648	-35.2	-46.0	30	9.2
250	31	10,892	-45.1		30	11.7
200	31	12,348	-55.5		30	13.7
175	31	13,189	-61.0		30	14.4
150	31	14,135	-66.4		30	13.1
125	31	15,224	-71.7		30	11.2
100	30	16,529	-74.5		31	7.4
80	27	17,829	-71.2		33	3.7
70	27	18,629	-66.5		35	2.3
60	27	19,570	-63.3		07	1.8
50	27	20,700	-60.6		09	2.3
40	26	22,099	-57.6		08	5.0
30	26	23,927	-54.5		09	5.4
25	23	25,104	-52.0		08	6.0
20	21	26,567	-49.7		09	5.6
15	18	28,449	-48.3		10	4.6
10	13	31,163	-44.7			
7	6	33,558	-40.4			

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	12.0	9.8	13	1.4
1000						
950						
900	31	1,032	14.3	9.8	17	3.4
850	31	1,516	15.4	6.5	20	5.7
800	31	2,030	14.0	3.6	21	4.8
750	31	2,572	10.9	-.4	23	4.7
700	31	3,144	7.4	-6.0	24	4.7
650	31	3,751	4.2	-12.0	24	6.2
600	31	4,397	.4	-17.6	24	7.6
550	31	5,089	-3.9	-21.7	24	9.3
500	31	5,835	-8.8	-25.7	24	11.4
450	31	6,643	-14.0	-30.4	24	14.0
400	31	7,526	-20.4	-35.1	24	15.7
350	31	8,504	-27.4	-39.7	24	18.4
300	31	9,592	-35.6	-47.4	25	19.5
250	31	10,835	-45.2		26	23.0
200	31	12,293	-54.8		26	26.0
175	31	13,137	-59.9		26	26.8
150	31	14,087	-65.4		27	24.8
125	31	15,183	-70.3		26	20.8
100	31	16,498	-73.3		27	13.5
80	26	17,806	-71.6		28	6.6
70	26	18,601	-68.5		28	3.6
60	25	19,537	-65.2		29	.9
50	25	20,660	-61.1		29	.9
40	23	22,056	-58.2		27	2.2
30	22	23,890	-54.4		27	1.7
25	21	25,072	-52.6		20	1.0
20	21	26,520	-50.8		31	1.2
15	20	28,407	-49.3		31	.7
10	18	31,077	-46.0		27	1.4
7	10	33,469	-43.2			

MONTERREY, MEXICO 964 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	18.6	17.9	04	.3
1000						
950	31	560	19.2	17.9	11	1.4
900	31	1,046	17.8	15.2	13	3.8
850	31	1,535	16.3	11.5	14	4.4
800	31	2,050	15.0	5.0	14	3.9
750	31	2,595	12.7	-1.5	16	2.7
700	31	3,171	9.4	-3.9	20	2.2
650	31	3,781	5.7	-9.0	21	2.9
600	31	4,432	1.9	-15.0	19	3.4
550	31	5,128	-2.2	-20.7	20	3.3
500	31	5,879	-6.4	-25.5	22	3.9
450	31	6,694	-12.0	-29.5	21	4.8
400	31	7,584	-18.5	-33.9	23	5.4
350	31	8,570	-25.4	-40.0	24	7.1
300	31	9,667	-34.0	-48.1	25	8.4
250	31	10,918	-43.7		26	9.2
200	31	12,381	-54.9		27	12.0
175	31	13,223	-60.8		27	13.1
150	31	14,167	-67.2		28	10.7
125	31	15,251	-73.0		28	7.4
100	31	16,545	-77.0		28	4.7
80	23	17,838	-74.7		33	1.5
70	23	18,624	-69.4		05	2.0
60	22	19,555	-65.4		09	3.4
50	22	20,677	-61.1		10	4.5
40	22	22,074	-57.8		09	4.1
30	22	23,901	-55.4		08	6.9
25	21	25,078	-53.1		09	5.9
20	20	26,524	-51.1		08	6.7
15	18	28,413	-48.5		08	9.1
10	7	31,138	-44.1			
7						

MONETT, MO. 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	11.0	8.5	14	1.6
1000						
950	31	588	11.0	6.8	18	2.4
900	31	1,041	11.7	4.8	24	4.1
850	31	1,518	10.7	2.0	26	4.8
800	31	2,023	9.2	-1.0	27	6.3
750	31	2,556	6.9	-5.0	27	7.2
700	31	3,120	4.1	-8.6	27	8.2
650	31	3,720	1.1	-11.4	28	10.0
600	31	4,360	-2.3	-15.3	27	12.0
550	31	5,046	-6.5	-20.4	27	13.4
500	31	5,784	-11.5	-25.4	27	15.0
450	31	6,583	-16.9	-30.2	27	16.3
400	31	7,457	-23.0	-36.2	28	19.0
350	31	8,424	-30.3	-40.1	28	21.6
300	31	9,500	-38.5	-47.6	28	24.4
250	31	10,729	-47.6		28	27.5
200	30	12,175	-57.1		28	32.1
175	29	13,014	-61.3		28	32.8
150	29	13,962	-64.6		28	29.9
125	29	15,067	-67.5		28	25.0
100	28	16,412	-68.8		29	16.2
80	28	17,748	-67.6		28	10.9
70	28	18,558	-65.2		29	7.7
60	26	19,497	-63.2		28	5.5
50	24	20,631	-59.8		28	4.8
40	24	22,034	-57.1		27	4.9
30	22	23,859	-54.0		27	5.0
25	22	25,034	-52.6		26	4.6
20	21	26,490	-50.7		27	3.7
15	18	28,386	-48.6		27	4.9
10	17	31,072	-46.0		27	6.0
7	5	33,403	-44.7			

MONTGOMERY, ALA. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	13.8	11.3	04	1.0
1000	31	161	15.0	11.2	07	2.0
950	31	597	15.6	10.1	10	2.9
900	31	1,056	14.9	6.1	19	1.3
850	31	1,539	13.1	1.4	26	2.4
800	31	2,047	10.8	-2.6	27	3.1
750	31	2,583	8.6	-7.0	28	4.0
700	31	3,150	5.8	-10.7	28	5.4
650	31	3,754	3.0	-15.2	28	6.9
600	31	4,398	-.7	-18.8	29	8.6
550	31	5,087	-4.6	-23.5	29	10.7
500	31	5,831	-9.5	-26.8	29	11.9
450	31	6,636	-15.1	-30.9	29	13.6
400	31	7,516	-21.3	-35.9	29	15.0
350	31	8,490	-28.6	-41.5	29	16.4
300	31	9,572	-37.2	-49.2	29	18.5
250	31	10,806	-47.1		29	20.2
200	30	12,246	-57.2		30	23.0
175	30	13,082	-61.8		30	23.1
150	30	14,026	-65.9		30	21.6
125	30	15,125	-68.9		29	18.4
100	30	16,451	-71.3		29	12.8
80	30	17,775	-69.2		29	8.3
70	29	18,580	-66.5		29	4.9
60	29	19,521	-63.1		30	3.2
50	29	20,653	-59.5		27	3.0
40	29	22,059	-56.8		29	1.4
30	29	23,895	-53.6		08	1.1
25	27	25,076	-52.4		07	1.9
20	27	26,526	-50.6		08	1.6
15	21	28,434	-48.0		08	1.1
10	15	31,123	-45.3		35	1.3

NASHVILLE, TENN. 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	10.8	8.7	08	.5
1000	13	215	9.3	5.3	11	1.2
950	31	601	11.5	6.2	18	2.1
900	31	1,053	10.4	4.9	24	3.3
850	31	1,529	9.5	-1.4	28	4.9
800	31	2,031	8.0	-5.6	29	6.0
750	31	2,561	5.9	-10.1	29	7.7
700	31	3,124	3.7	-11.7	29	8.5
650	31	3,723	1.0	-16.3	28	9.5
600	31	4,362	-2.5	-19.7	28	11.4
550	31	5,047	-6.8	-22.4	28	13.4
500	31	5,784	-11.7	-27.4	28	15.2
450	31	6,583	-17.0	-32.2	28	17.6
400	31	7,457	-23.2	-36.6	28	20.1
350	31	8,423	-30.4	-41.9	28	21.7
300	31	9,497	-38.9	-47.5	29	25.2
250	31	10,723	-48.3		29	28.3
200	31	12,160	-57.8		29	31.5
175	31	12,995	-61.5		29	31.4
150	31	13,944	-64.3		29	29.1
125	31	15,054	-66.4		29	23.0
100	31	16,398	-68.1		29	16.1
80	30	17,744	-66.5		29	10.5
70	30	18,556	-64.9		29	7.8
60	30	19,500	-62.9		29	6.0
50	30	20,634	-59.8		28	3.7
40	29	22,032	-57.4		26	4.4
30	29	23,866	-53.9		27	3.7
25	28	25,043	-52.1		26	3.5
20	28	26,494	-50.4		26	2.5
15	25	28,385	-48.7		26	2.8
10	21	31,087	-46.1		28	3.3
7	8	33,579	-43.4			

* NOME, ALASKA 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-.1	-2.0	11	1.6
1000	22	74	-.2	-2.4	11	1.2
950	31	452	-2.0	-3.5	16	3.3
900	31	[illegible]	-4.6	-6.1	18	4.1
850	31	1,329	-7.1	-9.3	20	4.7
800	31	1,799	-9.5	-13.2	21	5.3
750	31	2,296	-12.2	-17.7	21	4.9
700	31	2,821	-14.8	-21.7	21	5.5
650	31	3,379	-17.8	-24.7	22	6.6
600	31	3,974	-21.1	-27.1	23	7.5
550	31	4,611	-25.2	-31.5	23	8.8
500	31	5,297	-29.7	-37.0	23	9.2
450	31	6,041	-34.8	-41.0	23	10.0
400	31	6,853	-40.3	-44.3	24	10.6
350	31	7,754	-46.7		24	11.6
300	31	8,759	-52.7		25	11.2
250	31	9,932	-53.4		25	9.3
200	31	11,375	-51.3		24	10.3
175	31	12,244	-50.8		24	10.1
150	31	13,247	-50.8		24	9.6
125	31	14,433	-51.3		25	10.1
100	31	15,881	-52.2		24	10.0
80	31	17,323	-52.9		25	10.8
70	31	18,183	-53.8		25	11.0
60	30	19,171	-54.6		25	11.6
50	28	20,331	-55.9		25	12.1
40	27	21,753	-56.4		26	13.4
30	25	23,581	-57.2		27	14.8
25	23	24,730	-57.8		26	16.4
20	17	26,156	-57.4		27	17.2
15	12	28,040	-55.8		26	22.7

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NORTH PLATTE, NEBR. 920 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	2.9	-.9	02	.8
1000						
950						
900	31	1,028	5.8	-.7	34	.6
850	31	1,498	7.4	-1.1	24	1.3
800	31	1,998	7.4	-2.8	25	3.0
750	31	2,528	5.5	-4.3	26	4.3
700	31	3,089	2.5	-8.7	26	6.5
650	31	3,685	-.7	-13.4	26	8.1
600	31	4,320	-4.5	-19.0	26	10.3
550	31	5,000	-8.9	-22.3	26	12.0
500	31	5,731	-14.1	-25.4	26	13.6
450	31	6,522	-19.3	-31.5	26	15.5
400	31	7,387	-25.6	-36.7	26	17.5
350	31	8,345	-32.7	-42.2	26	20.9
300	31	9,410	-40.8	-46.9	26	26.0
250	31	10,627	-49.6		26	29.3
200	31	12,062	-57.3		26	33.0
175	31	12,900	-60.4		27	33.9
150	31	13,858	-61.5		27	29.9
125	31	14,983	-63.3		27	23.8
100	30	16,349	-64.4		27	17.7
80	28	17,710	-64.0		27	11.8
70	28	18,531	-63.0		28	9.8
60	26	19,482	-61.3		28	8.3
50	26	20,617	-60.0		28	6.9
40	26	22,015	-58.5		27	6.6
30	24	23,840	-55.6		28	7.0
25	24	25,006	-53.9		27	8.4
20	24	26,447	-52.0		26	9.2
15	20	28,314	-50.3		26	11.6
10	13	30,998	-46.8			
7						
5						

OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	14.0	10.9	10	.4
1000	30	126	14.4	9.6	11	.4
950	30	558	12.2	6.9	14	.9
900	30	1,011	11.3	2.4	16	1.2
850	30	1,487	9.8	-5.3	17	1.4
800	30	1,988	7.2	-9.0	15	1.1
750	30	2,516	3.8	-11.6	11	1.1
700	30	3,072	.3	-16.4	10	1.0
650	30	3,662	-3.1	-19.4	33	.6
600	30	4,291	-7.0	-25.0	30	1.9
550	30	4,964	-11.6	-29.9	28	3.1
500	30	5,687	-16.8	-33.2	29	4.0
450	30	6,469	-22.5	-38.5	29	3.5
400	30	7,322	-29.3	-45.3	28	4.2
350	30	8,265	-36.5	-51.5	27	5.0
300	30	9,314	-43.7		26	8.2
250	30	10,523	-49.6		26	10.9
200	30	11,970	-53.4		28	11.4
175	30	12,826	-55.2		27	12.5
150	30	13,805	-57.2		27	12.9
125	30	14,952	-59.4		26	11.2
100	29	16,347	-61.6		27	7.8
80	29	17,728	-61.7		27	5.7
70	28	18,557	-61.9		27	3.9
60	27	19,514	-61.4		30	2.7
50	27	20,645	-61.1		31	1.9
40	26	22,038	-58.8		28	2.0
30	26	23,856	-56.2		28	3.5
25	26	25,020	-54.2		27	5.0
20	22	26,448	-52.8		28	6.4
15	19	28,310	-51.2		27	9.5
10	14	30,919	-49.6		27	12.8
7						
5						

OMAHA, NEBR. 971 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	6.2	3.3	08	.3
1000						
950	31	580	7.9	3.1	28	.1
900	31	1,027	8.4	.1	28	2.0
850	31	1,499	7.9	-2.2	28	3.1
800	31	1,999	6.9	-5.0	28	4.4
750	31	2,528	4.8	-6.9	27	6.4
700	31	3,087	1.9	-10.2	27	8.4
650	31	3,682	-1.3	-14.2	28	10.1
600	31	4,316	-4.9	-18.2	28	12.1
550	31	4,995	-9.1	-24.1	28	13.8
500	31	5,725	-13.7	-28.4	28	15.6
450	31	6,518	-19.0	-33.6	27	17.9
400	31	7,385	-25.1	-37.6	27	19.7
350	31	8,344	-32.4	-43.1	27	22.7
300	31	9,409	-40.9	-46.4	27	25.5
250	31	10,626	-49.7		27	30.0
200	31	12,057	-57.8		27	34.7
175	31	12,894	-60.1		27	34.8
150	30	13,850	-61.6		28	31.5
125	30	14,975	-63.4		28	24.2
100	30	16,341	-64.2		28	18.0
80	29	17,706	-63.8		28	13.6
70	29	18,527	-62.7		28	11.5
60	28	19,481	-61.1		28	9.6
50	28	20,618	-59.3		28	7.9
40	28	22,020	-57.7		27	7.5
30	28	23,850	-54.8		27	8.6
25	27	25,016	-53.6		27	8.2
20	27	26,458	-51.6		26	10.3
15	23	28,328	-49.8		26	12.9
10	10	31,004	-48.2			
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+ PAGO PAGO, AMERICAN SAMOA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.8	23.4	[illegible]	5.6
1000	31	109	25.8	21.9	[illegible]	6.1
950	31	559	22.3	19.6	09	7.5
900	31	1,029	19.0	16.4	09	6.2
850	31	1,519	16.2	13.0	08	4.9
800	31	2,035	15.2	9.0	04	3.2
750	31	2,581	12.8	5.0	02	3.3
700	31	3,158	9.8	.6	36	3.8
650	31	3,771	6.9	-4.7	35	3.0
600	31	4,425	3.3	-9.3	33	2.7
550	31	5,125	-.8	-13.9	33	2.6
500	31	5,881	-4.8	-20.8	34	2.2
450	31	6,703	-9.8	-24.6	33	1.3
400	31	7,602	-15.5	-29.7	31	1.4
350	31	8,600	-22.1	-34.8	29	2.3
300	31	9,713	-30.4	-43.1	31	3.8
250	31	10,982	-40.6	-48.4	30	5.8
200	31	12,462	-53.0		28	7.9
175	31	13,309	-59.9		28	7.3
150	31	14,256	-67.2		27	6.0
125	31	15,335	-74.7		27	3.5
100	31	16,608	-80.6		09	1.1
80	31	17,871	-77.6		09	5.1
70	31	18,649	-71.3		09	6.5
60	31	19,571	-67.3		09	8.2
50	31	20,680	-63.7		09	11.5
40	28	22,061	-60.8		09	15.9
30	28	23,870	-56.3		09	16.0
25	27	25,039	-53.4		09	15.9
20	25	26,501	-48.6		08	13.4
15	23	28,420	-44.6		09	7.7
10	20	31,162	-39.8		26	2.5
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• PEORIA, ILL. 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	6.4	4.5	[illegible]	.9
1000	7	237	4.1	-1.3		
950	31	590	7.7	2.8	23	3.3
900	31	1,035	6.9	-.7	26	4.6
850	31	1,505	6.8	-4.7	28	6.3
800	31	2,003	5.7	-5.8	28	8.3
750	31	2,529	3.4	-7.8	28	9.8
700	31	3,086	.5	-10.5	28	11.2
650	31	3,677	-2.8	-14.1	28	12.1
600	31	4,308	-5.8	-18.4	28	13.9
550	31	4,985	-9.7	-23.1	28	16.1
500	31	5,715	-14.3	-28.0	28	17.9
450	31	6,506	-19.7	-32.9	28	19.1
400	31	7,369	-25.9	-39.9	29	21.4
350	31	8,326	-32.9	-44.8	28	24.1
300	31	9,389	-41.1	-50.3	29	28.2
250	31	10,606	-49.7		29	33.0
200	31	12,037	-58.5		28	36.2
175	31	12,873	-60.4		28	35.6
150	31	13,831	-61.6		28	32.2
125	29	14,948	-63.6		29	26.9
100	29	16,315	-64.2		29	19.7
80	27	17,680	-63.2		29	14.4
70	27	18,504	-62.1		28	11.9
60	27	19,461	-60.7		28	10.0
50	27	20,601	-58.5		28	8.3
40	27	22,010	-56.6		27	7.2
30	27	23,848	-53.7		26	8.0
25	26	25,020	-52.3		27	7.6
20	25	26,473	-51.0		26	8.6
15	25	28,351	-49.4		26	8.1
10	21	31,037	-46.2		26	10.5
7	13	33,408	-43.5		26	12.2
5	5	35,589	-42.6			

• PITTSBURGH, PA. 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	6.2	3.6	21	.6
1000						
950	31	597	7.2	2.3	25	2.0
900	31	1,041	5.4	.2	28	4.6
850	31	1,507	3.7	-3.8	27	6.0
800	31	1,999	2.7	-8.6	28	7.6
750	31	2,520	.9	-11.3	28	9.2
700	31	3,073	-.9	-15.2	28	11.6
650	31	3,662	-3.4	-17.6	28	13.4
600	31	4,291	-6.7	-20.9	28	15.2
550	31	4,965	-10.6	-25.3	28	17.3
500	31	5,692	-15.5	-29.5	28	19.2
450	31	6,480	-20.7	-33.8	28	21.3
400	31	7,340	-26.9	-39.2	28	22.2
350	31	8,292	-34.2	-45.6	28	23.8
300	31	9,350	-42.5	-49.8	28	25.4
250	31	10,558	-51.2		28	28.7
200	30	11,986	-57.6		29	30.7
175	29	12,822	-59.1		28	28.0
150	29	13,785	-60.6		28	27.1
125	28	14,916	-61.9		28	22.4
100	28	16,293	-62.9		28	17.9
[illegible]	27	17,666	-62.1		28	13.5
70	26	18,495	-60.8		28	10.3
60	26	19,456	-59.9		28	8.4
50	26	20,599	-58.1		27	8.0
40	26	22,013	-55.7		26	8.3
30	24	23,858	-52.7		26	7.5
25	23	25,042	-51.2		26	6.5
20	19	26,499	-50.7		26	5.3
15	18	28,386	-48.6		27	5.5
10	16	31,057	-46.5		26	7.6
7	12	33,418	-43.3			
5	6	35,620	-41.0			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	29.0	24.4	26	2.0
1000	31	80	27.6	23.1	26	2.2
950	31	533	23.8	20.8	26	4.0
900	31	1,006	20.6	17.0	27	5.1
850	31	1,499	17.8	13.3	27	5.2
800	31	2,016	15.5	9.9	28	3.5
750	31	2,563	13.1	4.8	28	2.6
700	31	3,141	10.2	1.2	28	1.7
650	31	3,754	6.7	-2.3	28	1.6
600	31	4,408	3.0	-6.6	25	1.9
550	31	5,108	-.9	-11.1	22	1.0
500	31	5,863	-4.9	-17.5	14	.6
450	31	6,685	-9.5	-23.1	09	1.7
400	31	7,586	-15.2	-28.7	10	2.9
350	31	8,585	-21.9	-35.6	09	3.7
300	31	9,698	-30.4	-42.4	09	6.4
250	31	10,967	-40.7	-49.0	08	9.1
200	31	12,446	-52.9		08	13.8
175	31	13,295	-59.6		08	15.3
150	31	14,241	-67.1		07	15.7
125	31	15,321	-74.6		07	16.2
100	31	16,597	-79.7		08	13.4
80	31	17,870	-76.4		09	8.2
70	29	18,644	-73.2		09	8.7
60	29	19,555	-69.5		09	14.3
50	29	20,652	-65.8		09	21.0
40	28	22,023	-61.3		09	25.7
30	27	23,832	-55.6		09	29.4
25	26	25,001	-52.5		09	30.3
20	24	26,463	-48.1		09	28.2
15	20	28,390	-42.1		09	17.1
10	18	31,158	-36.6		07	2.3
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PORTLAND, MAINE 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	4.1	1.2	30	1.5
1000	29	175	5.5	.5	29	2.1
950	31	579	4.8	-1.7	28	3.5
900	31	1,019	2.7	-3.6	28	4.9
850	31	1,480	.8	-7.7	29	6.0
800	31	1,967	-.2	-12.1	28	7.0
750	31	2,482	-1.7	-15.4	27	8.5
700	31	3,028	-4.2	-16.9	27	10.4
650	31	3,610	-6.7	-20.0	27	12.5
600	31	4,231	-9.9	-23.8	27	14.6
550	31	4,898	-13.7	-27.9	27	16.5
500	31	5,617	-18.2	-32.4	26	18.9
450	31	6,396	-23.3	-35.5	27	21.8
400	31	7,248	-29.3	-40.3	26	24.0
350	31	8,192	-35.6	-44.6	26	26.8
300	31	9,246	-42.9	-48.3	26	28.6
250	31	10,455	-50.4		27	30.0
200	30	11,896	-55.6		27	25.9
175	30	12,745	-56.6		27	23.3
150	30	13,722	-56.9		26	22.2
125	30	14,874	-58.4		27	18.4
100	30	16,274	-59.2		26	14.5
80	30	17,673	-58.6		27	12.0
70	30	18,514	-58.3		27	9.3
60	30	19,487	-57.1		25	8.6
50	30	20,645	-55.9		26	7.8
40	30	22,070	-54.2		25	7.4
30	27	23,923	-52.3		25	6.3
25	25	25,110	-50.8		25	4.5
20	24	26,568	-50.0		25	3.9
15	21	28,453	-48.5		27	3.7
10	15	31,132	-45.8		28	.5
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• QUILLAYUTE, WASH. 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	6.1	3.4	04	1.5
1000	31	165	8.6	4.3	06	2.0
950	31	590	9.1	1.6	03	1.9
900	31	1,038	8.0	-2.0	34	2.1
850	31	1,508	6.3	-5.3	33	3.2
800	31	2,004	4.4	-7.7	32	3.5
750	31	2,527	1.7	-12.3	32	4.6
700	31	3,081	-1.0	-15.3	31	5.3
650	31	3,668	-4.4	-17.5	32	5.7
600	31	4,294	-8.1	-21.4	31	6.9
550	31	4,965	-12.6	-24.7	32	7.6
500	31	5,685	-17.5	-28.8	32	8.2
450	31	6,467	-22.6	-32.5	31	8.9
400	31	7,320	-28.9	-38.4	32	8.9
350	30	8,264	-35.4	-44.1	32	10.8
300	30	9,317	-43.4	-46.7	33	12.8
250	30	10,521	-51.8		32	13.8
200	30	11,944	-58.6		32	14.8
175	29	12,786	-60.0		31	14.5
150	29	13,748	-59.9		31	13.2
125	29	14,886	-60.0		30	11.2
100	25	16,270	-59.6		30	9.1
80	23	17,660	-59.6		30	6.7
70	22	18,505	-59.6		30	6.2
60	20	19,471	-59.2		30	6.3
50	18	20,608	-60.0		30	5.4
40	18	22,005	-58.8		31	5.5
30	17	23,826	-57.5		31	5.3
25	15	24,994	-56.4		29	5.9
20	13	26,438	-55.0		29	7.3
15	11	28,298	-53.3		29	10.0
10	9	30,956	-49.9			
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RAPID CITY, S. DAK. 906 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	2.1	-2.2	32	2.0
1000						
950						
900	25	1,042	2.7	-2.0	32	2.3
850	31	1,489	5.5	-4.2	31	2.6
800	31	1,985	5.6	-6.1	30	3.8
750	31	2,511	3.3	-9.1	29	4.6
700	31	3,068	.2	-11.6	28	6.4
650	31	3,658	-3.1	-15.4	28	8.3
600	31	4,288	-6.8	-18.6	27	10.1
550	31	4,961	-11.1	-23.4	27	11.4
500	31	5,686	-16.1	-29.1	27	13.0
450	31	6,472	-21.3	-32.9	27	15.3
400	31	7,329	-27.8	-37.8	27	16.1
350	31	8,278	-35.0	-43.9	27	18.1
300	31	9,332	-43.1	-46.6	27	22.3
250	31	10,537	-51.5		27	26.4
200	31	11,963	-58.1		26	28.1
175	30	12,799	-59.4		26	27.0
150	30	13,762	-60.2		27	25.2
125	30	14,894	-61.9		27	21.3
100	30	16,274	-62.7		28	16.8
80	29	17,653	-62.4		28	13.3
70	28	18,474	-61.9		28	11.9
60	27	19,430	-61.3		29	9.5
50	27	20,564	-60.2		28	8.7
40	25	21,963	-59.1		28	8.2
30	25	23,775	-56.4		28	9.8
25	25	24,936	-55.3		27	9.7
20	23	26,361	-54.2		27	9.5
15	17	28,228	-51.8		26	11.4
10	12	30,850	-49.8			
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ST CLOUD, MINN. 982 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	2.4	-.4	32	.2
1000						
950	31	581	3.9	-.8	29	1.4
900	31	1,020	3.6	-3.3	29	3.6
850	31	1,484	2.5	-8.4	30	5.1
800	31	1,973	1.6	-11.5	29	7.5
750	31	2,492	-.2	-13.4	29	10.0
700	31	3,041	-2.9	-14.5	29	11.8
650	31	3,626	-5.7	-18.0	29	13.6
600	31	4,249	-8.9	-21.9	29	15.3
550	31	4,918	-12.9	-25.1	29	18.4
500	31	5,638	-17.4	-28.9	28	20.4
450	31	6,420	-22.6	-34.1	28	22.5
400	31	7,274	-28.6	-39.7	28	24.6
350	31	8,219	-35.7	-44.4	28	27.9
300	31	9,270	-43.6		28	31.8
250	31	10,472	-52.7		28	34.9
200	31	11,893	-57.9		28	33.7
175	31	12,734	-58.6		28	31.3
150	31	13,702	-59.1		28	27.7
125	30	14,841	-59.8		28	23.6
100	26	16,217	-60.5		28	20.3
[illegible]	24	17,588	-60.2		28	15.9
70	24	18,422	-59.9		28	15.4
60	22	19,386	-59.6		28	13.1
50	21	20,526	-58.8		29	11.7
40	20	21,936	-57.5		28	9.3
30	18	23,753	-55.4		27	10.7
25	15	24,903	-53.9		27	14.1
20	13	26,343	-52.3		26	14.4
15	13	28,207	-51.3			
10	9	30,910	-47.2			
7	5	33,161	-47.5			

• ST PAUL IS., ALASKA 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	10	3.3	2.0	24	2.9
1000	19	95	2.7	.2	24	5.1
950	28	457	.5	-1.0	23	5.0
900	28	889	-2.3	-4.3	24	6.5
850	28	1,341	-4.8	-8.3	24	6.2
800	28	1,816	-7.2	-13.6	24	5.3
750	28	2,317	-9.6	-17.8	23	5.9
700	28	2,848	-12.4	-21.1	22	6.9
650	28	3,411	-15.5	-26.0	23	6.9
600	28	4,011	-19.0	-29.3	23	7.2
550	28	4,653	-23.0	-33.2	23	7.3
500	28	5,346	-27.4	-36.5	23	7.5
450	28	6,096	-32.5	-40.5	23	7.1
400	28	6,916	-38.4	-42.5	24	9.1
350	28	7,825	-44.6	-43.2	23	9.1
300	28	8,841	-50.0		23	11.0
250	28	10,027	-51.4		23	11.6
200	28	11,478	-50.4		24	11.1
175	28	12,351	-49.6		24	10.8
150	28	13,359	-50.0		25	10.2
125	28	14,550	-50.6		25	10.2
100	28	16,003	-51.2		25	9.5
80	28	17,453	-51.7		25	9.3
70	28	18,318	-52.4		25	8.8
60	28	19,313	-53.0		25	9.0
50	28	20,487	-53.5		25	8.6
40	27	21,916	-54.4		25	8.4
30	24	23,768	-54.4		27	8.0
25	21	24,937	-55.0		27	9.9
20	19	26,366	-54.8		27	9.7
15	16	28,217	-53.9		27	11.8
10	9	30,892	-51.1			
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SALEM, ILL. 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	8.9	6.4	13	.6
1000	14	208	8.3	3.4	11	1.2
950	31	593	9.8	4.4	23	2.0
900	31	1,042	8.7	.3	26	4.0
850	31	1,515	8.4	-5.1	28	4.5
800	31	2,015	7.0	-6.7	29	6.0
750	31	2,544	4.8	-9.4	29	8.1
700	31	3,103	2.0	-12.4	28	9.4
650	31	3,698	-1.0	-16.0	28	11.2
600	31	4,333	-4.3	-19.1	28	12.9
550	31	5,014	-8.4	-22.9	28	14.8
500	31	5,746	-13.3	-28.5	28	17.4
450	31	6,541	-18.6	-32.7	28	19.0
400	31	7,408	-25.0	-38.9	28	21.4
350	31	8,368	-31.7	-45.5	28	23.6
300	31	9,438	-39.6	-50.1	28	27.4
250	31	10,659	-49.3		28	30.1
200	31	12,093	-57.8		29	34.3
175	31	12,929	-60.9		29	32.8
150	31	13,882	-63.5		29	30.1
125	31	14,997	-65.1		29	22.4
100	29	16,357	-66.6		29	17.4
80	26	17,703	-65.0		29	11.2
70	26	18,521	-63.6		28	8.3
60	26	19,472	-62.0		28	7.7
50	26	20,608	-59.0		28	6.2
40	26	22,014	-56.8		27	5.8
30	26	23,851	-53.7		26	5.0
25	26	25,027	-52.3		27	5.5
20	25	26,474	-51.0		26	4.9
15	23	28,364	-49.1		26	6.0
10	19	31,052	-45.9		26	8.1
7						

SALEM, OREG. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	5.6	3.4	14	.1
1000	31	156	9.1	7.1	03	1.0
950	31	582	10.1	2.6	03	2.3
900	31	1,032	9.5	-1.3	03	1.8
850	31	1,505	7.8	-6.8	01	1.6
800	31	2,003	5.8	-10.7	35	2.1
750	31	2,529	3.0	-13.1	34	2.9
700	31	3,084	-.5	-16.9	33	3.3
650	31	3,672	-4.2	-21.7	34	3.9
600	31	4,298	-8.0	-25.7	34	4.2
550	31	4,968	-12.4	-27.9	34	4.9
500	31	5,690	-17.0	-32.1	34	5.7
450	31	6,472	-22.5	-37.1	35	6.0
400	31	7,326	-29.0	-43.1	35	7.4
350	31	8,270	-36.0	-47.8	36	9.8
300	31	9,320	-43.8		01	11.7
250	31	10,523	-51.7		36	13.5
200	31	11,950	-57.3		35	11.6
175	31	12,792	-58.5		33	9.7
150	30	13,754	-59.2		32	8.6
125	30	14,898	-59.2		31	8.0
100	30	16,292	-60.1		30	6.0
80	29	17,683	-60.4		30	5.6
70	29	18,516	-60.0		29	5.0
60	29	19,478	-60.1		29	4.6
50	29	20,618	-59.5		31	4.2
40	28	22,020	-59.2		29	3.5
30	27	23,841	-57.2		29	4.9
25	24	25,004	-55.7		29	6.0
20	22	26,427	-54.3		29	6.8
15	21	28,270	-53.1		28	10.5
10	6	31,012	-48.0			
7						

SALT LAKE CITY, UTAH 872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	7.9	2.9	15	2.2
1000						
950						
900						
850	31	1,458	9.6	.9	17	2.9
800	31	2,000	7.1	-2.1	19	3.0
750	31	2,528	4.0	-4.2	22	2.3
700	31	3,085	.0	-6.3	23	3.5
650	31	3,675	-4.0	-11.2	22	4.8
600	31	4,302	-7.7	-16.4	23	6.5
550	31	4,974	-11.7	-22.8	23	7.0
500	31	5,698	-16.6	-28.6	22	8.4
450	31	6,482	-21.8	-33.7	23	10.1
400	31	7,339	-27.9	-39.8	23	12.9
350	31	8,288	-34.5	-45.5	23	16.0
300	31	9,345	-42.1	-47.1	23	19.7
250	31	10,557	-49.9		24	22.7
200	31	11,997	-55.6		24	23.7
175	31	12,845	-57.4		25	20.8
150	31	13,816	-59.0		25	20.5
125	31	14,954	-61.1		25	16.5
100	31	16,336	-62.2		25	[illegible]
80	31	17,713	-63.0		27	8.2
70	31	18,536	-62.6		27	6.4
60	31	19,488	-61.7		28	5.5
50	31	20,621	-60.6		28	4.9
40	30	22,018	-58.6		29	5.0
30	29	23,840	-56.3		28	5.5
25	28	25,005	-54.8		28	6.5
20	28	26,437	-53.3		27	7.9
15	26	28,302	-51.1		27	8.9
10	21	30,940	-49.1		26	14.0
7	8	33,336	-47.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1972

SAN DIEGO, CALIF. 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	15.4	12.4	03	1.1
1000	13	140	14.8	10.4	02	1.5
950	31	553	15.4	8.6	36	1.2
900	31	1,010	13.4	4.6	29	1.2
850	31	1,489	11.2	-.7	23	1.7
800	31	1,994	9.0	-3.3	23	3.9
750	31	2,526	6.4	-7.9	23	5.2
700	31	3,089	3.4	-11.9	24	7.0
650	31	3,687	.5	-16.5	25	8.8
600	31	4,325	-3.1	-19.8	24	10.5
550	31	5,008	-7.3	-24.2	24	11.9
500	31	5,744	-12.4	-28.1	24	13.9
450	31	6,541	-17.8	-32.0	24	15.8
400	31	7,411	-24.1	-37.0	24	19.0
350	31	8,374	-31.0	-43.7	24	21.6
300	31	9,448	-38.5	-48.6	24	25.1
250	31	10,680	-46.6		24	29.9
200	31	12,133	-54.5		24	34.9
175	31	12,982	-57.8		24	34.5
150	31	13,946	-61.4		24	31.5
125	31	15,069	-64.2		25	25.3
100	31	16,425	-66.5		25	15.1
80	29	17,772	-66.4		25	7.4
70	29	18,585	-64.5		27	4.2
60	29	19,531	-62.7		26	1.5
50	26	20,657	-60.4		27	1.8
40	26	22,055	-58.1		28	2.3
30	25	23,888	-54.8		27	2.2
25	25	25,060	-52.7		26	3.6
20	24	26,510	-50.7		26	5.3
15	22	28,397	-48.7		27	4.3
10	14	31,130	-45.6		27	3.2
7	6	33,509	-43.0			
5						

SAN JUAN, P. R. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	25.9	22.2	18	1.7
1000	31	119	25.3	22.5	12	2.2
950	31	570	22.5	19.8	10	3.5
900	31	1,040	19.8	16.5	11	3.8
850	31	1,532	16.8	12.1	10	2.9
800	31	2,047	14.3	7.8	10	2.4
750	31	2,590	11.6	3.9	13	2.0
700	31	3,165	8.4	-1.5	12	1.4
650	31	3,774	5.1	-6.8	11	.8
600	31	4,423	1.3	-10.9	35	.1
550	31	5,118	-2.7	-16.1	25	.9
500	31	5,868	-7.2	-21.8	29	.5
450	31	6,682	-12.2	-26.8	30	.6
400	31	7,572	-18.1	-31.9	29	2.0
350	31	8,559	-25.2	-38.3	28	3.2
300	31	9,657	-33.7	-46.0	28	5.4
250	31	10,910	-43.7		28	8.9
200	31	12,372	-55.0		28	13.2
175	30	13,216	-61.2		28	14.7
150	30	14,158	-67.6		28	14.7
125	29	15,241	-73.4		29	12.5
100	29	16,535	-75.7		30	6.4
80	28	17,836	-71.8		05	1.1
70	27	18,632	-68.2		09	3.6
60	26	19,566	-65.2		08	7.0
50	26	20,685	-62.2		09	10.2
40	26	22,074	-58.9		09	14.4
30	26	23,899	-54.4		09	18.5
25	25	25,080	-51.9		09	18.8
20	23	26,532	-49.1		09	18.4
15	22	28,425	-46.8		09	16.6
10	12	31,142	-42.8			
7						
5						

* SAULT STE MARIE, MICH. 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	3.6	1.3	36	.5
1000	5	246	-1.3	-3.6		
950	31	565	2.7	-.5	25	2.4
900	31	1,002	.8	-2.6	26	4.7
850	31	1,460	-1.1	-7.5	27	6.4
800	31	1,943	-2.4	-9.8	27	8.6
750	31	2,454	-4.3	-12.6	27	10.6
700	31	2,996	-6.6	-15.4	28	12.2
650	31	3,573	-8.7	-17.9	28	14.0
600	31	4,189	-12.1	-20.7	28	16.1
550	31	4,850	-16.2	-24.4	28	17.9
500	31	5,561	-20.7	-29.6	28	20.1
450	31	6,333	-25.5	-32.5	28	23.1
400	31	7,178	-31.1	-39.3	28	26.7
350	31	8,115	-37.6	-44.4	28	28.0
300	31	9,159	-45.1		28	30.2
250	31	10,358	-51.6		28	32.4
200	31	11,791	-55.5		28	31.8
175	31	12,642	-55.8		28	29.8
150	31	13,623	-55.8		28	27.2
125	31	14,781	-57.1		28	23.6
100	31	16,191	-57.4		28	19.4
80	31	17,600	-57.8		28	14.1
70	31	18,443	-57.7		28	13.6
60	31	19,417	-57.0		27	11.7
50	30	20,572	-56.7		27	11.0
40	30	21,993	-54.9		26	10.5
30	30	23,841	-52.6		26	10.3
25	29	25,020	-51.7		25	11.2
20	28	26,469	-50.0		25	11.7
15	24	28,348	-48.3		25	16.3
10	22	31,029	-45.7		24	18.2
7	16	33,375	-44.2		25	22.1
5	[illegible]	35,695	-40.2			

* SHEMYA, ALASKA 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	4.9	1.7	29	2.6
1000	23	121	4.3	.2	30	3.2
950	31	498	1.6	-.7	29	4.9
900	31	932	-1.6	-3.1	30	5.4
850	31	1,385	-3.7	-7.7	30	6.0
800	31	1,862	-6.4	-12.0	30	6.4
750	31	2,365	-8.4	-16.2	30	7.5
700	31	2,897	-11.3	-20.0	30	8.4
650	31	3,463	-14.4	-22.9	30	9.4
600	31	4,066	-17.9	-26.5	30	10.7
550	31	4,711	-22.0	-30.1	30	11.2
500	31	5,405	-26.8	-35.4	31	12.8
450	31	6,158	-31.7	-40.6	31	13.7
400	31	6,982	-37.4	-43.7	31	15.0
350	31	7,895	-43.2		31	16.1
300	31	8,917	-49.0		31	18.0
250	31	10,106	-51.6		30	18.5
200	31	11,553	-51.7		29	17.9
175	31	12,421	-51.0		28	17.6
150	31	13,422	-51.8		[illegible]	17.0
125	30	14,605	-51.9		28	14.9
100	30	16,050	-52.6		28	12.2
80	29	17,492	-52.9		28	10.2
70	29	18,354	-53.1		27	7.7
60	29	19,347	-53.5		27	8.1
50	28	20,521	-53.9		27	7.5
40	27	21,959	-53.7		28	6.3
30	26	23,809	-53.3		28	5.8
25	26	24,982	-53.4		29	5.6
20	26	26,421	-52.6		30	6.1
15	21	28,291	-51.6		31	6.6
10	14	30,931	-48.4		30	11.5
7						
5						

* SHREVEPORT, LA. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	14.8	12.8	08	.7
1000	30	158	16.7	13.5	13	1.2
950	31	592	15.8	10.9	17	2.4
900	31	1,051	14.9	6.4	22	3.0
850	31	1,535	13.9	3.1	25	3.3
800	31	2,045	11.9	.1	26	3.6
750	31	2,583	9.7	-5.6	28	4.4
700	31	3,153	7.2	-9.4	28	5.6
650	31	3,759	4.0	-13.3	28	7.0
600	31	4,406	.4	-17.2	28	8.2
550	31	5,098	-3.8	-20.7	28	9.8
500	31	5,843	-9.0	-24.3	27	12.1
450	31	6,651	-14.2	-28.8	27	13.8
400	31	7,534	-20.6	-35.5	28	16.1
350	31	8,511	-27.7	-40.9	28	16.8
300	31	9,597	-36.1	-48.6	28	20.1
250	31	10,837	-46.1		28	23.4
200	31	12,286	-56.4		29	24.7
175	31	13,125	-60.8		29	26.7
150	31	14,072	-65.8		29	24.8
125	30	15,169	-70.1		29	20.2
100	29	16,486	-72.4		29	14.0
80	27	17,803	-70.3		28	7.7
70	27	18,602	-67.6		29	4.5
60	27	19,540	-63.6		30	2.0
50	27	20,669	-59.8		27	1.6
40	27	22,072	-57.3		28	1.9
30	27	23,906	-53.8		31	1.2
25	26	25,080	-52.3		31	1.1
20	23	26,517	-51.0		34	.2
15	22	28,400	-48.6		07	1.4
10	18	31,117	-45.6		01	1.2
7	16	33,506	-42.2		26	1.1
5	10	35,877	-38.6			

SPOKANE, WASH. 934 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	720	4.0	-.7	12	1.2
1000						
950						
900	31	1,024	7.4	.1	10	.5
850	31	1,494	6.1	-2.9	28	.8
800	31	1,989	3.9	-6.7	27	2.4
750	31	2,512	1.4	-10.8	29	3.5
700	31	3,065	-1.4	-14.1	30	4.4
650	31	3,652	-4.6	-19.1	30	5.2
600	31	4,277	-8.4	-22.0	30	5.9
550	31	4,947	-12.8	-26.2	29	6.3
500	31	5,667	-18.0	-30.7	30	7.0
450	31	6,446	-23.3	-34.3	30	7.2
400	31	7,297	-29.7	-39.3	31	6.3
350	31	8,238	-36.8	-45.0	31	6.3
300	31	9,286	-44.1		33	8.3
250	31	10,488	-51.9		34	10.5
200	31	11,914	-57.4		32	10.0
175	31	12,756	-58.2		30	9.4
150	31	13,726	-58.1		29	10.5
125	31	14,872	-59.6		29	9.8
100	31	16,267	-59.5		28	9.5
80	30	17,663	-59.9		29	8.6
70	29	18,495	-59.8		29	7.9
60	29	19,459	-59.6		29	7.2
50	29	20,599	-60.0		29	6.7
40	29	21,995	-59.4		30	6.4
30	29	23,803	-58.2		30	7.5
25	29	24,955	-57.0		29	7.9
20	29	26,371	-55.9		28	8.7
15	25	28,202	-54.0		28	12.6
10	14	30,845	-52.0		27	14.3
7	6	33,069	-51.0			

* SWAN ISLAND, W. I. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	26.4	23.3	06	2.7
1000	30	106	26.3	23.1	07	3.5
950	30	558	22.9	20.8	07	4.7
900	30	1,029	19.9	16.4	08	4.5
850	30	1,520	16.7	12.2	08	4.5
800	30	2,035	14.0	9.3	08	4.1
750	30	2,578	11.4	4.3	08	4.2
700	30	3,153	8.5	-1.1	08	3.8
650	30	3,763	5.7	-6.1	08	4.1
600	30	4,414	1.9	-10.7	07	4.2
550	30	5,111	-1.9	-15.5	07	3.7
500	30	5,862	-6.5	-22.2	07	4.6
450	30	6,678	-11.7	-27.1	06	4.6
400	30	7,569	-17.8	-32.4	05	4.2
350	30	8,557	-24.8	-38.1	02	4.2
300	30	9,657	-33.2	-45.7	36	3.5
250	30	10,911	-43.5		35	3.6
200	30	12,374	-55.2		32	4.6
175	30	13,214	-61.5		30	5.5
150	29	14,153	-68.2		30	5.2
125	29	15,231	-74.5		32	4.4
100	29	16,515	-77.9		01	3.7
80	29	17,802	-73.6		07	3.0
70	29	18,592	-69.1		09	4.4
60	29	19,520	-66.5		09	7.4
50	28	20,634	-62.2		09	11.9
40	28	22,020	-59.7		09	15.4
30	26	23,834	-55.4		09	18.0
25	25	25,005	-51.9		09	18.0
20	24	26,464	-48.9		09	17.4
15	18	28,355	-47.1		09	15.3
10	7	31,020	-42.6			
7						

TAMPA, FLA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	20.0	18.3	06	1.9
1000	31	150	22.0	18.7	07	2.9
950	31	596	20.1	15.7	10	2.8
900	31	1,061	17.3	11.6	11	1.6
850	31	1,548	14.9	6.0	10	.5
800	31	2,060	13.0	-1.1	35	.6
750	31	2,600	10.8	-6.1	33	1.2
700	31	3,172	8.0	-10.3	32	1.7
650	31	3,780	4.7	-13.4	32	2.3
600	31	4,428	1.3	-17.2	32	4.2
550	31	5,123	-2.7	-21.5	32	5.5
500	31	5,871	-7.8	-27.1	31	6.0
450	31	6,682	-13.3	-30.7	31	7.2
400	31	7,568	-19.7	-34.0	30	8.6
350	31	8,548	-27.1	-39.5	30	10.1
300	31	9,636	-35.8	-47.2	30	11.6
250	31	10,877	-45.6		30	12.5
200	31	12,330	-56.0		30	16.3
175	31	13,169	-61.2		30	15.9
150	31	14,115	-66.1		30	15.0
125	31	15,208	-70.7		30	13.1
100	31	16,519	-73.4		30	9.3
80	31	17,832	-70.6		31	4.6
70	31	18,631	-67.1		33	3.3
60	31	19,572	-62.9		01	.6
50	31	20,703	-59.9		07	.8
40	30	22,103	-57.4		08	3.3
30	30	23,937	-53.9		09	4.0
25	29	25,107	-52.4		07	3.8
20	29	26,557	-50.3		07	3.5
15	27	28,445	-48.4		08	1.7
10	23	31,131	-44.1		05	3.3
7	7	33,490	-42.1			

TOPEKA, KANS. 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	268	9.0	5.3	15	.3
1000						
950	31	587	9.9	4.9	20	1.6
900	31	1,037	9.9	3.1	23	3.6
850	31	1,512	9.9	-.4	26	4.2
800	31	2,015	8.4	-2.6	27	4.7
750	31	2,547	6.2	-6.6	27	5.8
700	31	3,109	3.0	-9.6	27	6.4
650	31	3,707	-.1	-13.4	27	8.3
600	31	4,343	-3.6	-19.1	27	10.6
550	31	5,026	-7.6	-22.8	27	12.8
500	31	5,761	-12.3	-27.3	27	15.1
450	31	6,558	-18.0	-30.2	27	17.0
400	31	7,428	-23.9	-36.5	27	19.5
350	31	8,392	-30.9	-41.4	28	22.8
300	31	9,465	-38.9	-46.8	27	25.2
250	30	10,687	-48.1		27	30.6
200	30	12,127	-57.4		27	35.3
175	30	12,965	-60.3		28	36.2
150	29	13,919	-62.8		28	32.3
125	25	15,029	-65.1		28	26.2
100	22	16,372	-65.8		28	20.3
80	22	17,728	-65.4		28	14.4
70	21	18,546	-63.6		28	11.4
60	21	19,495	-62.3		28	9.5
50	21	20,627	-60.2		27	7.2
40	21	22,026	-58.3		28	7.3
30	20	23,851	-54.2		26	8.4
25	20	25,024	-52.9		26	9.0
20	19	26,479	-50.7		26	9.4
15	19	28,364	-48.6		25	9.0
10	17	31,037	-46.0		25	9.1
7	5	33,475	-43.2			

+ TRUK, CAROLINE IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.8	25.2	24	3.3
1000	31	97	27.4	23.8	24	3.5
950	31	551	23.7	21.6	25	4.7
900	31	1,023	21.0	17.8	26	5.2
850	31	1,517	18.1	13.7	27	4.5
800	31	2,035	15.6	10.4	27	3.9
750	31	2,582	13.0	4.6	28	3.0
700	31	3,159	10.1	-.1	29	2.3
650	31	3,773	7.1	-5.6	28	2.0
600	31	4,427	3.2	-9.3	28	1.4
550	31	5,127	-.6	-14.2	32	.9
500	31	5,883	-4.8	-18.9	35	.5
450	31	6,705	-9.6	-24.0	08	1.1
400	31	7,605	-15.3	-29.5	09	2.8
350	31	8,604	-22.0	-35.3	07	3.3
300	31	9,716	-30.4	-42.5	10	4.7
250	31	10,985	-40.8	-47.8	10	8.4
200	31	12,465	-52.7		09	12.6
175	31	13,314	-59.5		09	15.4
150	30	14,261	-67.0		08	17.2
125	30	15,342	-74.6		08	17.9
100	29	16,620	-79.0		08	13.7
80	29	17,894	-77.0		09	9.0
70	29	18,670	-73.0		09	9.6
60	27	19,584	-69.3		09	14.1
50	26	20,682	-66.0		09	21.0
40	25	22,052	-60.9		09	25.7
30	24	23,867	-55.1		09	30.5
25	23	25,042	-51.6		09	30.6
20	23	26,503	-48.0		09	29.2
15	20	28,417	-43.0		09	21.6
10	16	31,196	-37.5		09	3.9
7	8	33,671	-35.6			

* TUCSON, ARIZ. 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	14.8	10.3	15	2.3
1000						
950						
900	31	1,012	17.4	8.5	16	2.3
850	31	1,499	15.5	4.4	18	1.6
800	31	2,011	12.1	1.6	20	4.5
750	31	2,548	8.4	-1.9	21	5.8
700	31	3,115	4.8	-7.5	21	7.5
650	31	3,716	1.7	-12.8	22	8.8
600	31	4,356	-2.2	-18.0	23	10.3
550	31	5,042	-6.6	-23.0	23	12.4
500	31	5,779	-11.5	-27.1	23	14.2
450	31	6,579	-16.7	-31.4	23	16.4
400	31	7,454	-22.5	-38.0	23	19.6
350	31	8,425	-29.1	-43.0	24	23.1
300	31	9,508	-36.4	-48.6	24	27.2
250	30	10,746	-45.1		24	32.3
200	30	12,207	-54.1		25	36.4
175	30	13,053	-59.4		25	36.2
150	30	14,007	-63.9		25	33.1
125	30	15,114	-67.8		25	26.7
100	26	16,443	-70.1		25	16.1
80	23	17,777	-68.9		26	7.6
70	23	18,581	-66.5		26	4.0
60	23	19,522	-63.8		26	2.1
50	22	20,647	-60.9		29	1.8
40	21	22,043	-58.3		28	3.1
30	21	23,869	-55.0		25	3.0
25	21	25,039	-53.2		28	2.9
20	20	26,481	-51.1		25	4.2
15	20	28,361	-49.2		27	5.4
10	17	31,052	-46.3		27	6.6
7	11	33,4 1	-41.3		26	5.7
5	5	35,717	-40.0			

* VANDENBERG AFB, CALIF. 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	13.7	10.7	12	.7
1000	25	133	13.6	10.5	12	1.0
950	31	559	13.8	7.9	09	.7
900	31	1,014	12.2	3.6	18	.8
850	31	1,491	9.6	.0	19	1.1
800	31	1,992	6.8	-4.5	22	1.2
750	31	2,520	4.6	-10.0	24	1.6
700	31	3,079	1.7	-15.3	26	2.5
650	31	3,673	-1.5	-19.1	27	3.7
600	31	4,306	-5.4	-22.7	26	5.3
550	31	4,983	-9.9	-27.1	25	7.3
500	31	5,710	-15.2	-30.6	25	9.0
450	31	6,497	-20.9	-35.4	25	10.4
400	31	7,356	-27.6	-39.8	25	11.7
350	31	8,306	-34.5	-45.6	25	14.4
300	31	9,367	-40.7	-50.7	25	18.6
250	31	10,590	-47.5		25	22.5
200	31	12,041	-54.4		25	26.4
175	31	12,892	-56.4		25	25.1
150	31	13,865	-58.9		25	22.8
125	31	15,001	-61.8		25	18.7
100	31	16,374	-63.8		26	12.7
80	31	17,739	-64.2		26	7.8
70	31	18,557	-63.7		27	4.5
60	31	19,506	-62.5		28	2.7
50	31	20,636	-60.7		27	2.8
40	30	22,029	-59.0		26	3.5
30	30	23,847	-56.0		29	3.2
25	30	25,012	-53.9		27	4.6
20	30	26,453	-51.6		27	5.3
15	29	28,333	-49.9		27	7.6
10	26	30,986	-48.4		27	9.3
7	21	33,337	-45.8		26	13.4
5	8	35,608	-42.8			

VICTORIA, TEXAS 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	17.3	16.0	04	1.6
1000	31	138	20.6	17.7	08	1.9
950	31	582	19.4	15.3	14	4.3
900	31	1,047	17.9	9.9	17	3.9
850	31	1,535	16.3	4.2	18	3.7
800	31	2,048	13.7	-.2	19	3.3
750	31	2,590	11.6	-5.6	20	2.3
700	31	3,164	8.8	-9.2	21	1.8
650	31	3,774	5.6	-14.9	23	2.5
600	31	4,423	1.5	-18.1	24	3.1
550	31	5,118	-2.8	-22.8	26	3.6
500	31	5,866	-7.5	-27.2	26	5.9
450	31	6,678	-13.1	-30.6	26	7.7
400	31	7,564	-19.5	-36.4	27	9.1
350	31	8,545	-26.6	-42.2	27	11.0
300	31	9,636	-35.1	-49.3	27	13.1
250	31	10,882	-44.8		28	15.6
200	31	12,339	-55.6		29	19.0
175	30	13,178	-61.2		29	17.5
150	30	14,122	-66.8		29	15.3
125	30	15,209	-72.5		29	13.0
100	29	16,504	-75.3		29	8.4
80	29	17,799	-73.9		30	4.6
70	29	18,586	-69.6		32	2.2
60	29	19,517	-64.9		03	.7
50	29	20,642	-60.7		13	1.1
40	29	22,038	-58.3		13	.2
30	28	23,863	-54.9		08	3.0
25	28	25,034	-52.9		09	2.6
20	28	26,480	-51.1		05	3.1
15	26	28,369	-48.7		08	3.8
10	21	31,059	-45.5		04	.3
7	11	33,469	-42.4			
5						

* WAKE IS., PACIFIC AREA 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.3	24.4	08	7.1
1000	31	110	26.8	23.3	08	8.6
950	31	563	23.0	21.5	08	10.0
900	31	1,034	20.1	18.0	09	10.1
850	31	1,527	17.4	14.2	09	9.2
800	31	2,044	14.8	9.8	09	8.8
750	31	2,589	13.0	1.5	09	8.2
700	31	3,167	10.6	-5.1	09	8.4
650	31	3,781	7.1	-8.9	09	8.1
600	31	4,435	3.6	-13.6	09	8.2
550	31	5,136	-.3	-18.7	08	8.5
500	31	5,893	-4.7	-23.0	08	8.5
450	31	6,714	-9.8	-27.0	07	8.9
400	31	7,613	-15.9	-32.9	07	8.3
350	31	8,609	-22.7	-39.0	07	7.3
300	31	9,718	-31.1	-45.2	07	5.7
250	31	10,986	-40.7	-54.0	06	3.5
200	31	12,466	-52.6		04	3.5
175	31	13,316	-59.2		05	4.7
150	31	14,265	-66.7		05	6.4
125	29	15,348	-74.0		06	9.2
100	28	16,629	-80.5		07	10.7
80	25	17,895	-79.0		08	11.1
70	25	18,666	-73.7		08	10.8
60	25	19,580	-68.1		09	10.4
50	25	20,689	-63.0		09	11.3
40	24	22,075	-59.5		09	13.4
30	24	23,892	-55.9		09	17.0
25	23	25,060	-53.3		09	18.3
20	22	26,512	-49.7		09	18.3
15	20	28,410	-47.6		09	14.7
10	11	31,117	-43.2			
7						
5						

* WALLOPS IS., VA. NASA 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	11.8	8.2	36	2.9
1000	30	173	11.9	6.1	02	3.7
950	31	594	9.9	3.8	01	3.9
900	31	1,042	8.4	-.8	33	3.9
850	31	1,514	7.1	-3.9	29	4.6
800	31	2,012	5.9	-8.4	28	6.2
750	31	2,538	4.0	-10.3	28	7.8
700	31	3,097	1.7	-13.5	28	9.5
650	31	3,692	-1.0	-15.5	28	11.3
600	31	4,326	-4.6	-19.3	27	12.6
550	31	5,006	-8.9	-23.8	27	13.6
500	31	5,738	-13.5	-28.3	27	15.0
450	31	6,531	-18.8	-33.3	27	16.5
400	31	7,398	-25.2	-39.2	27	18.1
350	31	8,357	-32.4	-44.6	27	19.4
300	31	9,422	-41.1	-48.5	27	20.6
250	31	10,636	-50.5		28	26.2
200	31	12,063	-58.4		28	26.3
175	31	12,897	-61.2		28	25.2
150	30	13,847	-62.7		28	21.5
125	30	14,968	-63.9		28	18.7
100	30	16,330	-65.0		28	14.4
80	28	17,688	-63.7		27	10.3
70	28	18,511	-62.0		27	7.5
60	28	19,469	-60.3		26	5.9
50	27	20,609	-58.0		26	5.7
40	26	22,027	-55.1		26	5.2
30	26	23,874	-53.2		25	3.1
25	25	25,055	-51.6		25	3.5
20	24	26,504	-50.2		27	2.5
15	21	28,396	-49.0		27	2.7
10	16	31,071	-45.7		28	2.6
7	10	33,429	-42.9			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	WASHINGTON DULLES INT. AP 1011 MB						WAYCROSS, GA. 1013 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind		No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.					Direction	Speed M.p.s.
SURFACE	31	85	5.9	3.8	33	1.0	31	44	15.2	13.4	02	1.5
1000	28	192	8.4	4.0	35	1.0	30	157	17.0	13.9	05	2.3
950	31	601	8.3	2.8	32	2.3	31	593	17.7	12.6	07	2.5
900	31	1,047	6.5	.2	31	3.3	31	1,055	16.2	7.8	18	.6
850	31	1,515	5.6	-4.8	30	4.8	31	1,539	13.8	3.0	26	1.9
800	31	2,011	4.4	-5.7	29	6.2	31	2,049	11.7	-3.7	28	2.9
750	31	2,535	3.3	-10.3	28	8.3	31	2,586	9.5	-8.8	28	4.2
700	31	3,093	1.1	-13.4	28	10.5	31	3,155	6.5	-11.5	28	5.5
650	31	3,686	-1.5	-17.1	28	12.0	31	3,759	3.1	-14.7	28	6.6
600	31	4,320	-4.8	-19.9	28	13.5	31	4,404	-.4	-18.0	28	7.7
550	31	4,999	-8.9	-23.5	28	15.2	31	5,094	-4.6	-21.4	28	8.7
500	31	5,730	-14.0	-28.2	28	16.6	31	5,838	-9.3	-27.5	29	10.2
450	31	6,522	-19.3	-32.8	28	18.0	31	6,645	-14.5	-31.5	29	12.4
400	31	7,387	-25.5	-37.8	28	19.6	31	7,526	-21.1	-36.3	29	13.6
350	31	8,345	-32.8	-43.9	28	20.9	31	8,500	-28.4	-42.1	29	14.5
300	31	9,408	-41.4	-46.7	27	23.8	31	9,584	-36.9	-50.0	29	16.4
250	31	10,621	-50.3		27	27.3	31	10,820	-46.7		29	18.7
200	31	12,050	-57.7		28	29.5	31	12,265	-57.0		30	23.1
175	31	12,887	-60.3		28	26.8	31	13,102	-61.3		30	22.4
150	31	13,848	-60.6		28	24.7	31	14,050	-64.9		29	19.7
125	31	14,979	-62.2		28	21.2	31	15,152	-69.1		29	17.2
100	31	16,349	-64.5		28	15.8	31	16,477	-71.0		29	12.5
80	30	17,712	-63.1		28	13.2	31	17,804	-68.7		30	6.4
70	30	18,536	-61.8		28	9.9	31	18,609	-66.2		29	4.1
60	30	19,496	-59.9		27	7.5	31	19,552	-62.4		29	2.7
50	30	20,640	-57.8		27	6.8	31	20,687	-59.2		28	2.0
40	30	22,056	-55.6		26	5.6	28	22,099	-56.9		03	1.3
30	30	23,900	-52.8		26	4.9	28	23,934	-53.9		08	2.5
25	30	25,080	-51.8		26	4.5	28	25,110	-52.2		07	3.4
20	28	26,521	-50.6		27	3.2	27	26,566	-50.3		08	3.0
15	27	28,409	-48.5		29	1.4	26	28,450	-48.5		09	1.7
10	25	31,101	-45.8		28	3.9	25	31,138	-44.5		02	4.1
7	5	33,446	-44.2				9	33,534	-41.9			

Standard pressure surface (mb)	WINNEMUCCA, NEV. 871 MB						WINSLOW, ARIZ. 852 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind		No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.					Direction	Speed M.p.s.
SURFACE	31	1,312	3.9	.9	12	.6	31	1,487	9.6	7.0	20	.6
1000												
950												
900												
850	31	1,511	8.1	-.1	06	1.1	21	1,521	11.1	6.9	18	.8
800	31	2,011	6.0	-3.0	04	1.0	31	2,008	10.0	3.2	21	2.8
750	31	2,536	2.5	-5.7	34	.9	31	2,542	6.6	.7	21	5.6
700	31	3,091	-1.2	-9.6	33	1.6	31	3,105	3.0	-4.1	22	8.2
650	31	3,678	-4.9	-13.0	30	2.2	31	3,702	-.2	-9.4	22	9.5
600	31	4,303	-8.7	-18.2	29	2.0	31	4,339	-4.0	-14.6	23	11.2
550	31	4,972	-13.0	-24.2	30	2.2	31	5,020	-8.5	-18.7	23	11.8
500	31	5,692	-18.0	-29.3	31	2.7	31	5,753	-13.2	-25.6	23	13.4
450	31	6,471	-23.6	-34.5	30	2.8	31	6,548	-18.5	-30.0	23	16.6
400	31	7,321	-30.0	-40.3	28	3.7	31	7,416	-24.5	-34.9	23	19.2
350	31	8,261	-36.9	-47.0	27	5.0	31	8,378	-31.3	-40.9	24	22.6
300	31	9,308	-44.2		24	12.5	31	9,451	-38.4	-46.2	24	25.2
250	31	10,514	-50.5		24	14.6	31	10,683	-46.6		24	28.6
200	30	11,963	-55.4		25	12.8	31	12,136	-54.7		24	31.5
175	30	12,813	-56.2		24	13.3	30	12,981	-58.5		25	31.5
150	30	13,789	-57.9		24	12.3	30	13,942	-61.9		25	26.3
125	29	14,931	-60.0		25	9.4	30	15,061	-65.1		25	21.6
100	29	16,319	-61.4		26	6.6	29	16,413	-67.6		25	14.1
80	29	17,702	-62.1		26	5.8	29	17,756	-67.1		25	8.6
70	28	18,528	-62.4		27	5.2	29	18,566	-65.5		26	5.7
60	28	19,481	-61.9		28	4.3	28	19,505	-63.3		26	3.8
50	26	20,613	-60.7		29	3.3	28	20,631	-61.5		27	3.5
40	25	22,009	-59.6		29	2.8	26	22,024	-59.1		27	2.7
30	24	23,819	-57.3		30	3.3	26	23,842	-55.5		26	3.9
25	22	24,978	-55.4		30	4.1	25	25,006	-54.1		26	4.1
20	21	26,408	-54.3		29	5.9	22	26,450	-52.5		26	6.0
15	16	28,305	-51.1		27	6.4	20	28,325	-50.3		26	6.9
10							13	31,025	-47.9			
7												

Standard pressure surface (mb)	YAKUTAT, ALASKA 1013 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind	
					Direction	Speed M.p.s.
SURFACE	31	12	2.3	1.3	12	1.6
1000	29	136	4.7	1.4	12	1.5
950	31	536	3.2	-1.4	15	2.4
900	31	973	.9	-4.2	17	2.5
850	31	1,430	-1.4	-9.0	20	2.3
800	31	1,911	-3.6	-11.3	23	3.6
750	31	2,419	-6.0	-14.4	24	5.3
700	31	2,957	-9.0	-18.3	24	7.6
650	31	3,528	-11.7	-21.3	24	9.7
600	31	4,137	-14.9	-25.5	25	11.1
550	31	4,790	-19.0	-28.6	25	13.5
500	31	5,494	-23.3	-33.4	25	15.3
450	31	6,257	-28.6	-38.2	26	16.6
400	31	7,091	-34.5	-44.0	26	19.5
350	31	8,015	-40.6	-45.3	26	20.7
300	31	9,047	-47.5		26	24.1
250	31	10,236	-53.0		26	25.6
200	31	11,668	-54.5		27	22.0
175	31	12,523	-54.6		27	20.5
150	31	13,510	-54.6		27	19.9
125	30	14,674	-55.1		27	19.2
100	29	16,100	-55.6		27	16.8
80	29	17,523	-55.6		27	15.2
70	29	18,374	-55.6		28	13.7
60	27	19,347	-57.0		28	12.5
50	26	20,498	-57.2		28	12.1
40	24	21,911	-58.5		28	12.7
30	22	23,717	-59.0		29	11.5
25	20	24,872	-58.9		30	14.1
20	18	26,270	-59.5		30	15.7
15	15	28,095	-58.7		29	19.1
10	9	30,704	-57.9			
7						

Standard pressure surface (mb)	+ YAP, CAROLINE IS. 1009 MB						YUCCA FLAT, NEV. 881 MB					
SURFACE	31	14	28.7	24.6	28	.7	31	1,198	7.3	1.3	34	.7
1000	31	92	27.2	23.8	27	1.0						
950	31	545	23.7	21.6	28	1.6						
900	31	1,017	20.7	17.4	31	1.3						
850	31	1,510	17.8	14.1	33	1.3	31	1,492	10.8	.7	33	1.2
800	31	2,028	15.3	10.9	33	.9	31	1,995	7.7	-1.5	20	1.4
750	31	2,574	12.9	6.0	31	.5	31	2,523	4.2	-4.3	19	2.2
700	31	3,152	10.0	.1	03	.5	31	3,081	.5	-10.4	19	2.4
650	31	3,765	6.8	-3.6	06	1.0	31	3,673	-2.9	-15.2	21	3.5
600	31	4,418	3.1	-8.8	06	1.4	31	4,303	-6.2	-20.9	22	5.3
550	31	5,119	-.8	-15.3	07	.9	31	4,978	-10.5	-25.5	24	6.8
500	31	5,874	-5.3	-21.1	08	.9	31	5,705	-15.4	-30.5	24	8.3
450	31	6,694	-9.9	-26.3	10	1.5	31	6,492	-20.9	-34.7	24	10.3
400	31	7,592	-15.8	-31.3	10	2.2	31	7,352	-26.7	-39.8	24	12.7
350	30	8,591	-22.4	-36.8	08	2.5	31	8,306	-33.6	-45.7	24	15.7
300	30	9,701	-31.0	-45.7	09	3.5	31	9,367	-41.1	-50.7	23	18.7
250	30	10,966	-41.4		10	5.0	31	10,588	-48.2		24	23.9
200	30	12,441	-53.5		10	8.3	31	12,036	-54.6		24	28.8
175	30	13,288	-60.1		10	11.3	30	12,884	-56.2		24	24.5
150	30	14,234	-67.1		09	14.6	30	13,859	-58.7		24	22.9
125	30	15,316	-73.6		09	15.9	30	14,997	-61.3		25	17.1
100	30	16,600	-78.8		09	12.4	29	16,377	-63.0		25	12.6
80	30	17,867	-77.9		09	10.2	27	17,754	-63.8		26	6.7
70	30	18,641	-73.2		09	11.2	27	18,574	-63.5		27	4.7
60	30	19,552	-69.4		09	14.8	26	19,521	-62.0		28	3.8
50	30	20,652	-65.4		09	20.8	25	20,649	-60.9		29	3.4
40	30	22,024	-60.9		09	25.4	25	22,043	-59.0		28	3.1
30	29	23,838	-55.4		09	29.4	24	23,855	-56.0		28	4.2
25	28	25,012	-52.4		09	30.1	24	25,019	-54.5		26	4.1
20	27	26,469	-48.2		09	30.7	22	26,462	-52.3		28	6.9
15	27	28,383	-43.9		09	23.7	16	28,333	-51.3		27	9.3
10	26	31,135	-37.9		10	6.1	7	30,954	-48.9			
7	17	33,610	-35.7		29	1.7						
5	6	35,928	-31.9									

Note: All observations scheduled at 1200 G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. OCTOBER 1972

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Oct.									
1-----	1.03	1.09	1.20	1.31	1.38	1.22	1.02	0.87	0.74
2-----	----	----	----	----	1.35	1.21	1.03	.77	.66
3-----	.77	.87	1.00	1.15	1.29	----	----	----	----
7-----	----	----	----	1.11	1.24	1.06	----	----	----
8-----	.85	.97	1.08	1.21	----	1.23	----	.98	.88
9-----	.81	.90	1.03	1.19	1.32	----	----	----	----
14----	.77	.91	1.00	----	1.20	----	----	----	----
15----	----	(.81)	.89	1.07	----	----	----	----	----
16----	.72	.84	.96	1.15	1.27	1.13	----	----	.75
17----	.71	.79	.89	----	----	1.11	----	----	----
21----	----	----	----	----	1.31	----	----	----	----
22----	----	----	----	1.30	----	1.28	(1.13)	----	----
23----	----	----	----	----	1.34	1.17	----	.86	.68
26----	----	----	----	----	----	----	(.96)	(.84)	(.72)
28----	(.69)	(.79)	(.96)	(1.08)	(1.30)	1.22	1.10	1.00	.87
29----	.94	1.04	1.13	1.30	1.37	1.22	----	----	----
30----	----	----	(1.09)	----	----	----	----	----	----
Aver-ages	0.83	0.93	1.02	1.20	1.31	1.19	1.05	0.90	0.76
OMAHA, NEBR.									
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Oct.									
1-----	----	----	----	1.14	1.34	----	1.06	----	----
4-----	----	----	----	HS1.24	----	----	----	----	----
7-----	1.00	1.11	1.20	----	1.41	1.30	1.10	1.00	0.90
14----	----	----	----	----	HS1.26	1.24	1.12	.96	.51
16----	----	----	----	1.30	----	1.29	1.26	1.19	1.15
Aver-ages	1.00	1.11	1.20	1.23	1.34	1.28	1.16	1.05	.85

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
TUCSON, ARIZ.									
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Oct.									
1----	0.86	0.98	1.11	1.26	1.47	1.22	1.11	0.98	0.85
2----	.87	.97	1.11	1.26	1.38	1.22	1.06	.93	.80
5----	----	----	----	----	----	1.18	----	----	----
6----	----	.88	1.02	1.21	----	----	----	----	----
9----	----	----	----	----	----	1.29	----	----	----
10---	.96	1.05	1.16	1.28	1.46	1.31	1.18	1.06	.95
11---	.96	1.03	1.14	1.30	1.43	1.26	----	----	----
12---	----	----	1.06	1.20	----	----	----	----	----
13---	.83	.92	1.06	----	1.36	1.19	1.08	.96	.85
14---	.97	1.06	1.17	1.32	1.41	1.25	1.11	.99	.89
15---	.76	.88	1.01	1.22	1.34	----	1.08	----	----
16---	.88	.98	1.10	1.25	1.37	1.21	----	.97	.88
17---	.81	.92	1.04	----	----	----	----	----	----
20---	1.02	1.11	1.21	1.40	1.44	1.31	----	----	----
21---	.73	.85	1.00	1.16	1.32	----	1.08	1.00	.87
22---	.87	.96	----	1.30	1.44	1.17	1.01	.93	.83
23---	.85	.95	1.08	1.25	1.39	1.26	----	.86	----
25---	----	.86	1.04	1.16	1.27	1.12	----	----	----
26---	.84	.98	1.08	1.30	1.41	----	----	----	----
28---	.92	1.01	1.11	1.30	1.42	1.31	1.08	.96	.88
29---	----	1.06	1.20	1.32	1.43	1.33	1.18	1.06	----
31---	----	----	----	1.28	----	1.31	1.14	----	.92
Aver-ages	0.88	0.97	1.09	1.26	1.40	1.25	1.10	0.97	0.87
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Oct.									
1-----	----	----	----	----	-----	S 1.21	1.03	.79	----
2-----	M 0.75	M 0.87	M 0.99	----	-----	----	----	----	----
8-----	S .77	S .92	S 1.07	S 1.29	-----	----	----	----	----
9-----	S .97	S 1.08	S 1.19	S 1.33	S 1.39	S 1.25	----	S .96	0.84
13----	----	----	M .98	S 1.18	S 1.21	----	----	----	----
14----	----	----	S 1.07	S 1.23	----	----	----	----	----
16----	S .73	S .82	S .98	S 1.19	S 1.33	S 1.26	S 1.06	S .93	S .81
17----	----	----	----	S 1.34	----	----	----	----	----
19----	S .99	S 1.10	S 1.23	S 1.37	S 1.39	S 1.33	S 1.20	S 1.07	S .98
Aver-ages	0.82	0.96	1.07	1.28	1.33	1.26	1.10	0.94	0.88

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

OCTOBER 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	23	6	- 52	- 11	17	- 13	- 11	- 12	- 1	17	27	33	22	- 17	- 10	- 25	- 11	- 36	- 8	- 28	- 4	5	- 9	- 23	22	- 68	- 27	25	32	19	14	-33

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	10.97	9.26	4.99	10.60	7.43	5.11	10.84	9.99	10.23	6.82	3.77	8.53	9.14	9.63	3.77	9.26	8.04	9.14	9.02	1.95	1.82	1.46	2.80	8.16	8.16	8.16	7.55	2.92	7.67	1.09	1.58	6.76

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder.

This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled 'PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA.'

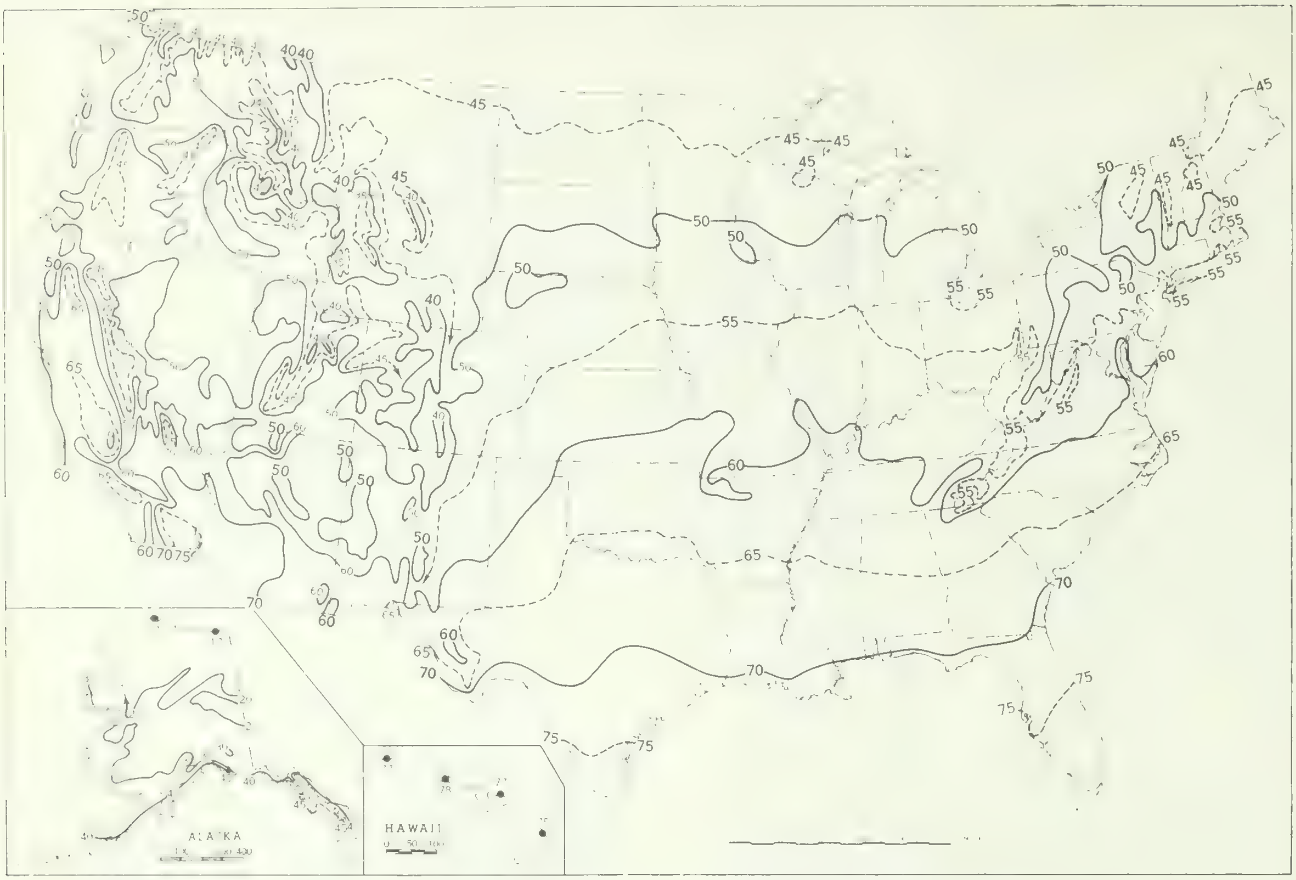
Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O₃
												Data not received in time for publication.																				

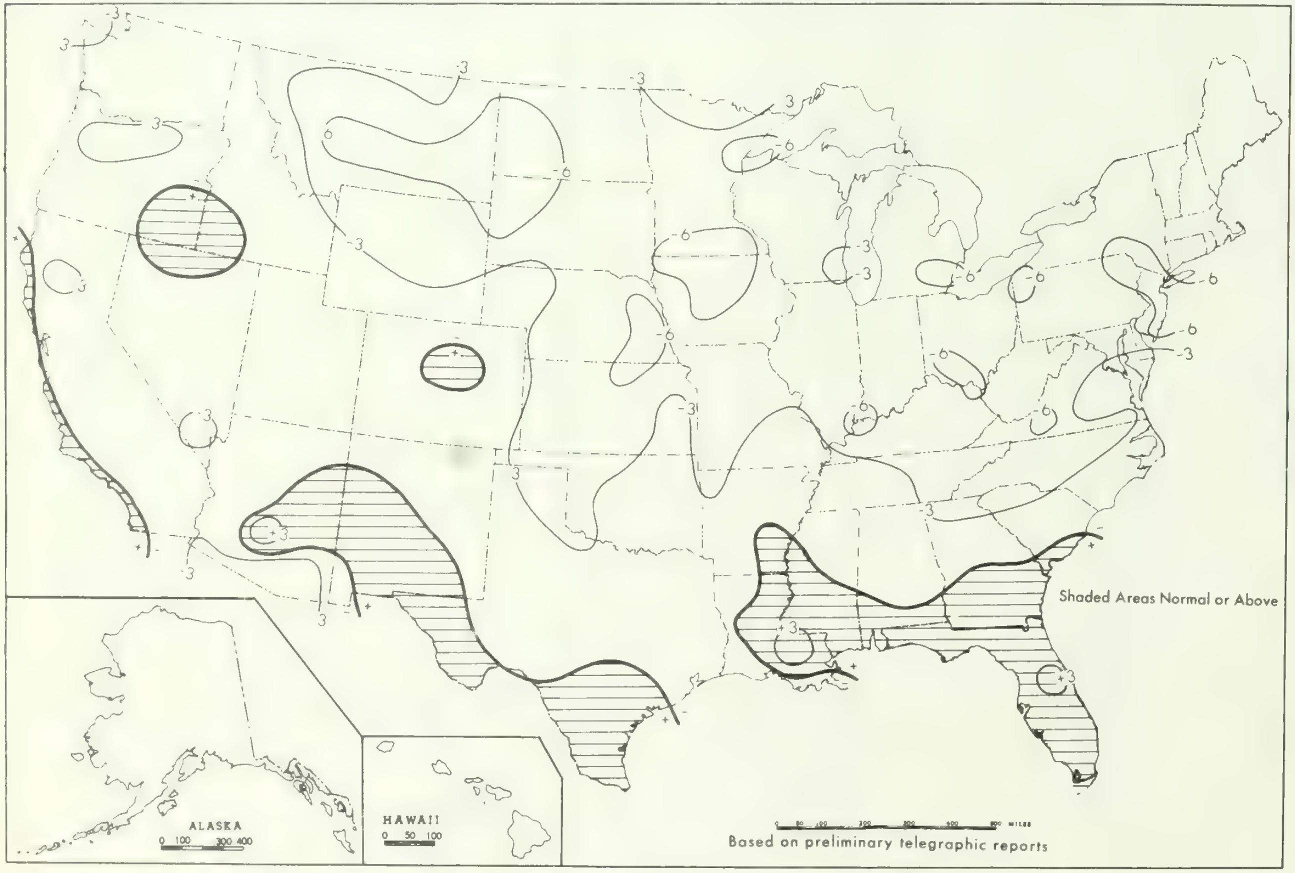
[illegible] the total amount of ozone in the atmosphere, i.e., [illegible] expressed in terms of a thickness of a layer of [illegible] standard temper- [illegible]

[illegible]

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), October



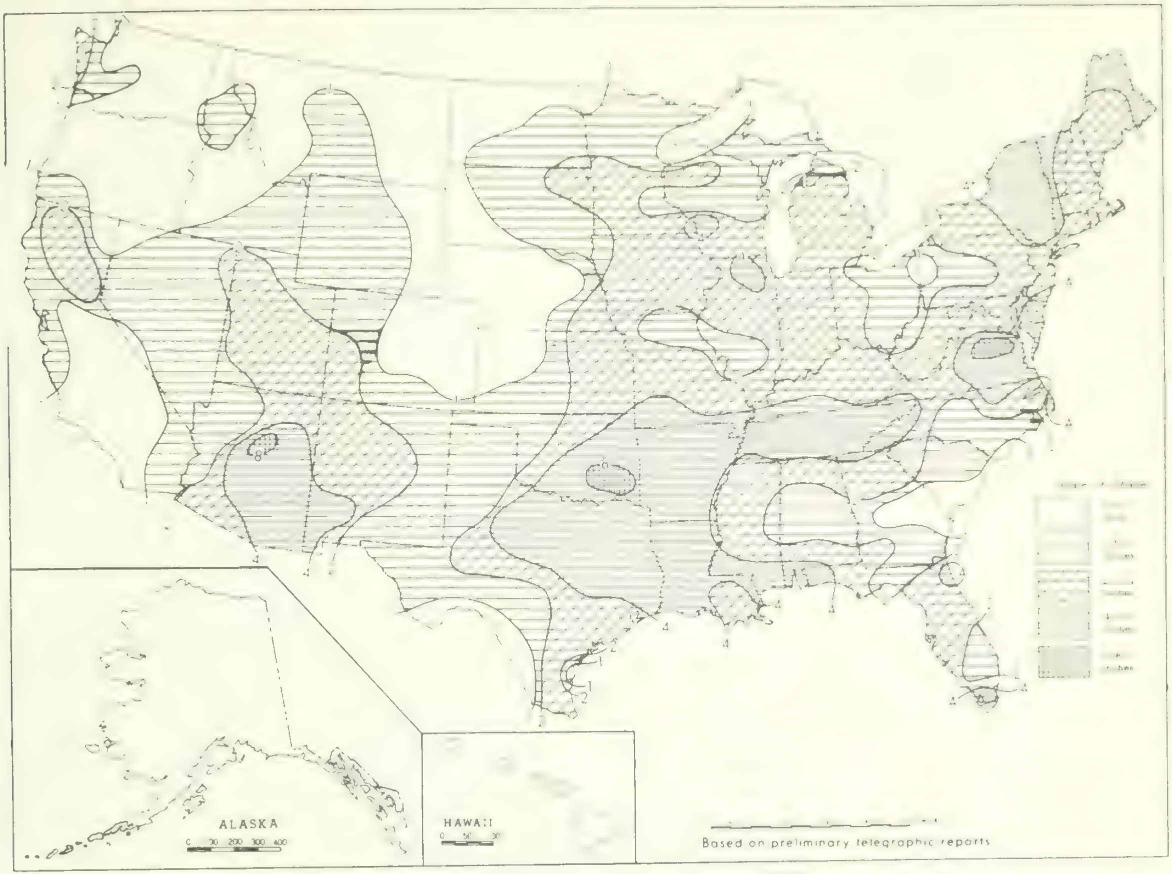
B. Temperature Departure from 30 - Year Mean (°F 1931-60), October 1972



Shaded Areas Normal or Above

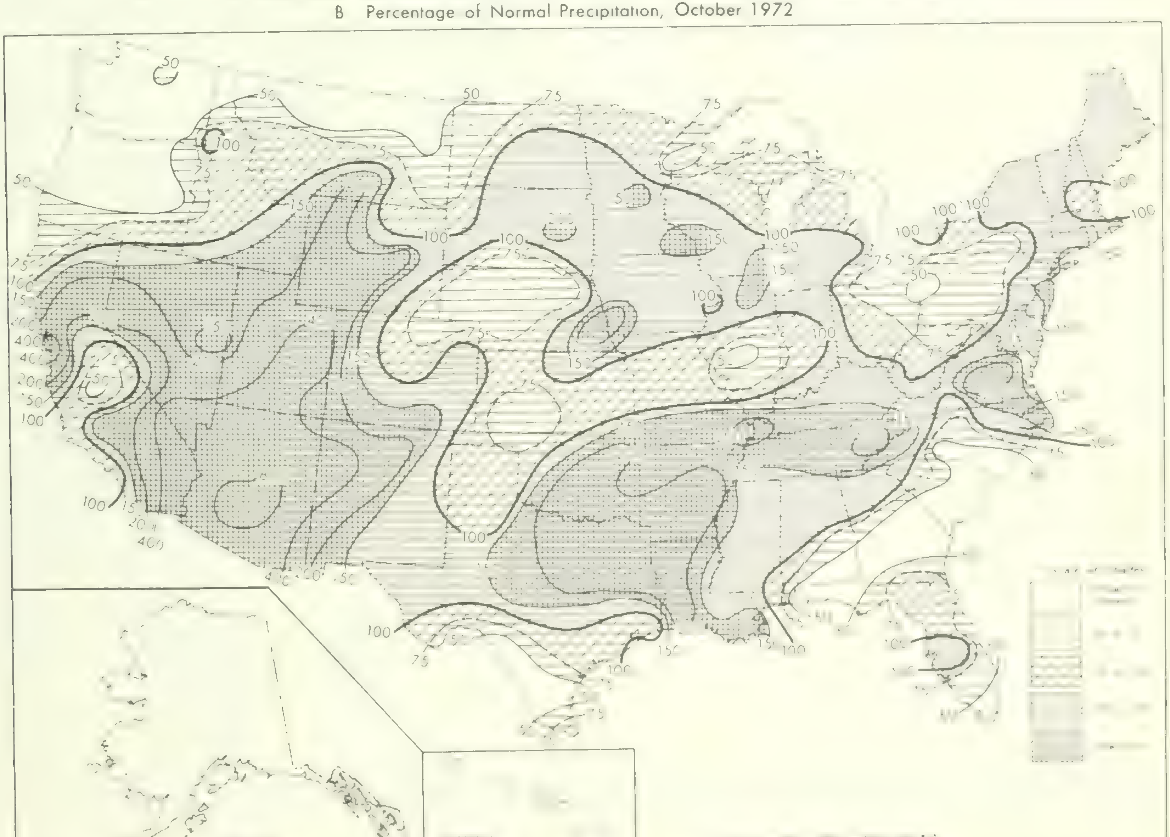
Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), October 1972



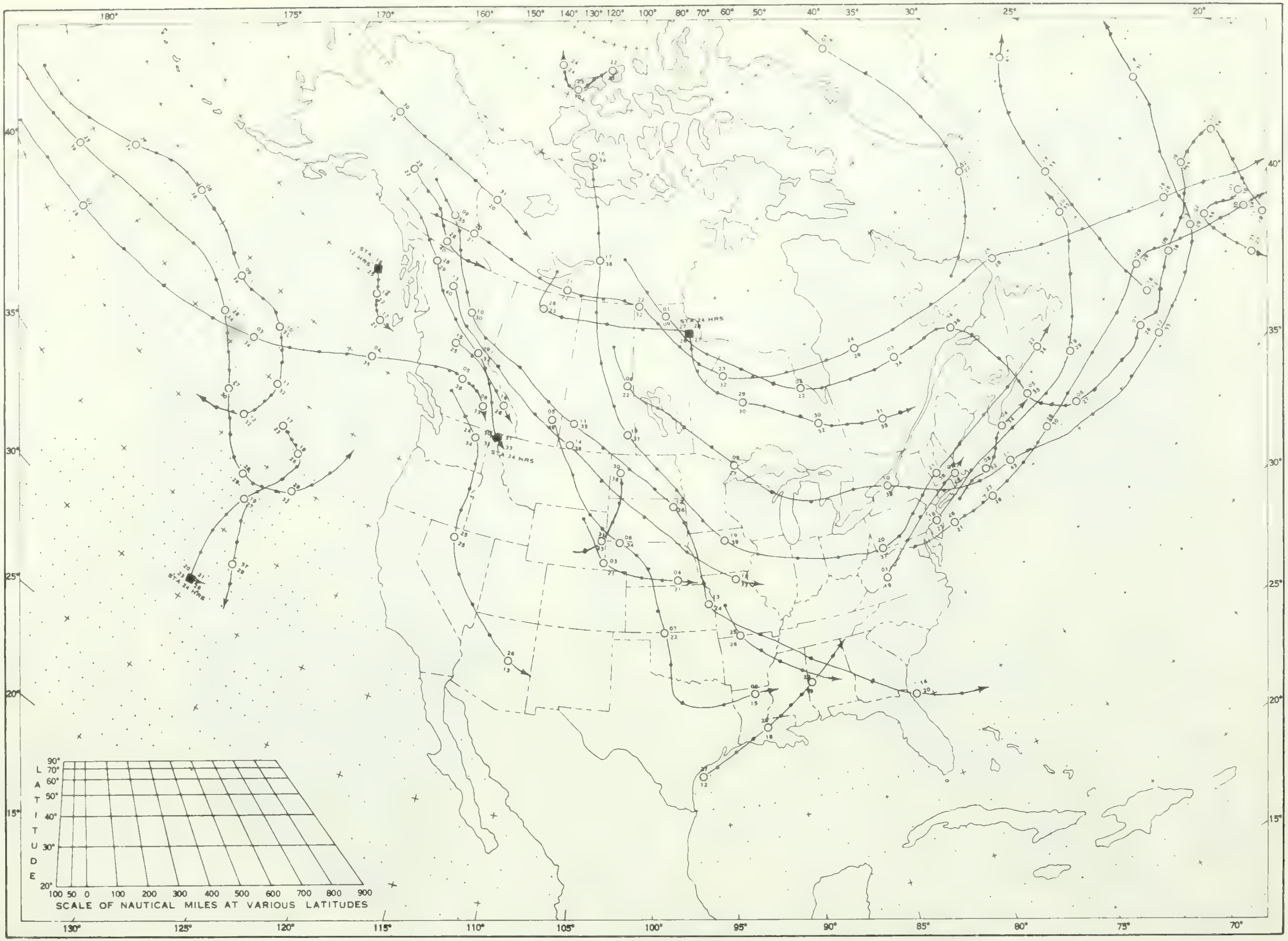
Based on preliminary telegraphic reports

B Percentage of Normal Precipitation, October 1972



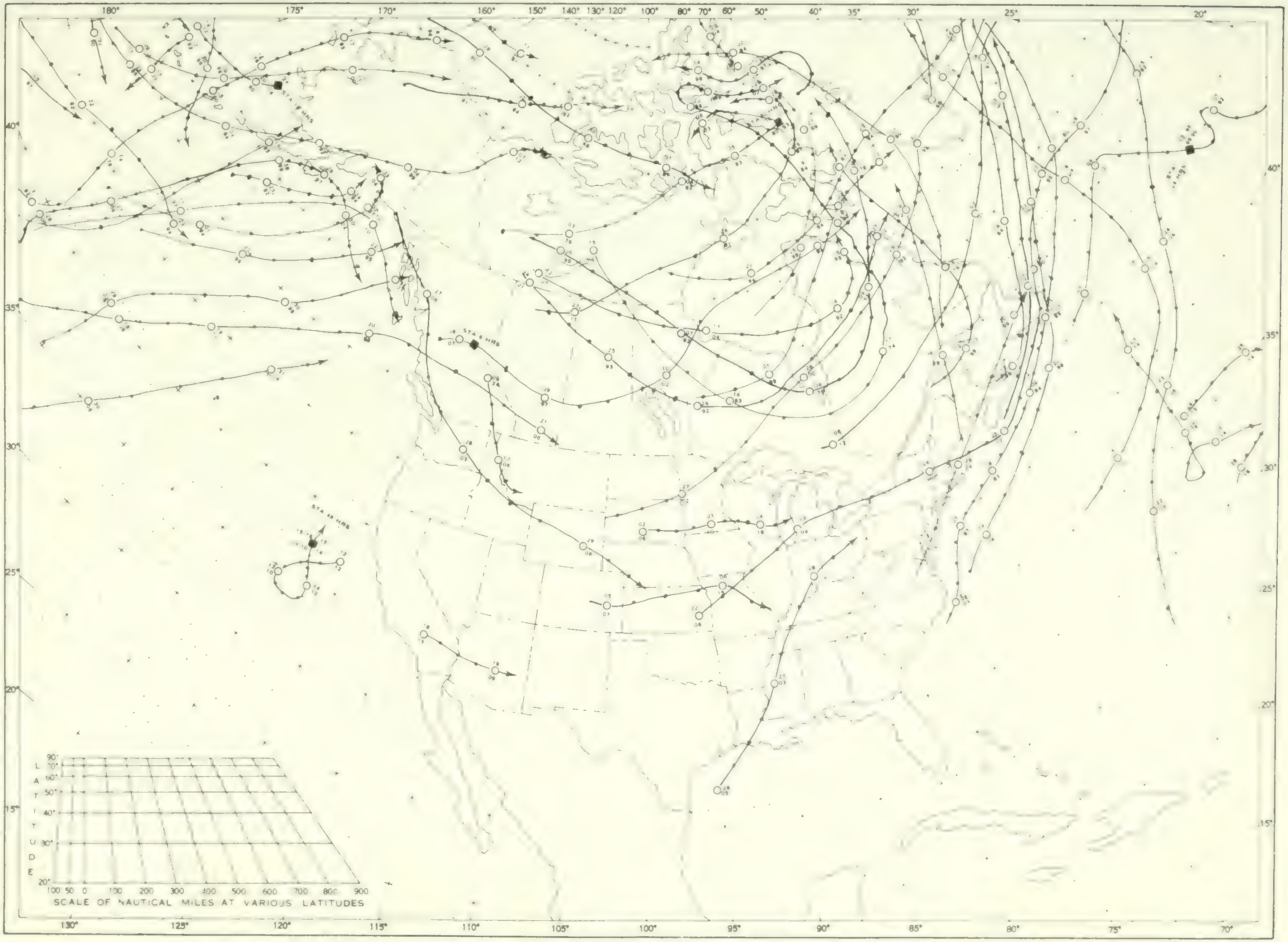
Based on preliminary telegraphic reports

Chart III. Tracks of Centers of Anticyclones at Sea Level, October 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, October 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
Director, National Climatic Center

NOTICE

Effective with the July 1972 issue of this publication, the Climatological Data tables in English Units are discontinued.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$° F. = \frac{9}{5} x ° C + 32$

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

Snowfall, sunshine, solar radiation, and pressure surface maps are also discontinued. See the explanatory page "Description of Charts," which appears in the July 1972 issue, and will be carried subsequently in the January and July issues.

Effective with the September 1972 issue, the Solar Radiation Totals Table is discontinued.

CLIMATOLOGICAL DATA

NATIONAL SUMMARY
NOVEMBER 1972

GENERAL SUMMARY OF WEATHER CONDITIONS
Lucius W. Dye, Climatologist

HIGHLIGHTS:

1. November was a stormy month.
2. It was colder than normal over most of the Nation.

TEMPERATURE--November temperatures averaged slightly above normal along the Canadian Border from Washington to Minnesota and along the Atlantic Coast from Norfolk, Va., to Key West, Fla. The rest of the Nation was colder than normal in November. A large area from the central and southern Rocky Mountains to the Mississippi River averaged 4° to 9° colder than normal. Cold weather prevailed over the Rocky Mountains and Great Plains throughout the month except for brief warming over the Great Plains shortly before midmonth and over the northern Border States in the fourth week. Subzero weather occurred over the northern Rockies and northern Great Plains late in November, and temperatures over the Gulf States dropped to near or below freezing.

PRECIPITATION--November, in general, was a stormy month. Most of the Nation received above normal precipitation. The main exception was the northwest. Severe thunderstorms occurred over the middle and lower Mississippi River Valley early in the month. Several storms were in progress at midmonth. One whitened the central Great Plains and the Great Lakes Region before continuing to New England. The second lashed the Pacific Coast before crossing the Rocky Mountains, the Great Plains, and the middle Mississippi River Valley. The third brought rain to central California, heavy snow from central New Mexico to the central Great Plains, freezing drizzle or sleet from the central Great Plains to the Lower Mississippi River Valley, and scattered thunderstorms over the southern Great Plains. Later in the month, a vigorous storm centered off the northern Atlantic Coast produced heavy rain along the coast and snow in northeastern New York and northern New England. A storm in the southwest crossed the central and southern Rocky Mountains and dumped heavy snow on the eastern slopes of the Rockies. More snow fell from the Great Lakes to Tennessee and spread eastward to the northern Appalachians. A variety of precipitation fell from the Mississippi River to the Atlantic Ocean in the last weekend in November. The last few days of the month brought rain and drizzle to the Pacific Coast, snow from the Upper Mississippi River Valley to the northern Appalachians, and rain or drizzle along the Gulf and southern Atlantic Coasts.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

NOVEMBER 1972

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	87	2+	Russellville 2	11	2+	Talladega	7.30	Calera 2 SW	2.63
Alaska	Barorka	56	23	Central No 2	-35	30	Little Port Walter	D30.73	[illegible]	T
Arizona	Casa Grande	89	4	Hawley Lake	- 4	23+	[illegible]	4.09	Yuma Proving Ground	.12
Arkansas	Hope 3 NE	85	1	2 Stations	15	29	Bismarck 2 SE	11.46	[illegible]	4.51
California	Canoga Park Pierce Col	88	26	Bodie	-14	23	Vollmers	17.35	Eagle Mountain	.25
Colorado	Rye	73	6	2 Stations	-33	28+	Karval	4.65	Rangely	.17
Connecticut	2 Stations	68	3	Falls Village	6	23	Bridgeport WSO AP	10.22	Cream Hill	4.02
Delaware	2 Stations	74	3+	Milford 2 WSW	18	23	[illegible]	8.31	[illegible]	5.43
Florida	Archbold Biologic Sta	96	5	Tallahassee WSO AP	27	27	[illegible]	10.96	2 Stations	.00
Georgia	Jesup 8 S	90	3	Blairsville Exp Sta	15	24	Dahlonega	8.08	Ashburn 3 ENE	1.90
Hawaii	Lualualei 804, Oahu	94	25+	Mauna Loa Slope Obs, Hawaii	31	19+	Puohokamoa 2 343, Maui	49.20	3 Stations	.00
Idaho	2 Stations	64	3	Island Park Dam	-15	28	Sandpoint Exp Station	3.41	Fort Hall Indian Agncy	.31
Illinois	Cairo WSO CI	80	1	Mount Carroll	8	15	Belleville So Ill Univ	10.92	Rockford 6 ENE	1.03
Indiana	4 Stations	77	2	LaGrange Sewage Plant	14	16+	Shelbyville Sewage Pl	7.59	Rensselaer	2.67
Iowa	3 Stations	68	3	Grinnell 3 SW	[illegible]	15	Boone	4.66	Waukon	.27
Kansas	Syracuse 2 W	74	5	Winona	1	14	Oswego 1 N	6.29	[illegible]	1.16
Kentucky	Mayfield Radio WNGO	82	1	Falmouth 5 WNW	14	29	Taylorsville	7.83	[illegible]	2.91
Louisiana	2 Stations	89	2	Ashland 2 S	26	23	Quarantine	11.31	Lake Charles 2 N	2.78
Maine	3 Stations	60	26+	Clayton Lake 2	-14	23	Saco	9.31	Clayton Lake 2	2.71
Maryland	La Plata 1 W	79	3	4 Stations	15	23	Towson	9.99	Cumberland	5.03
Massachusetts	Chester 2	70	3	Chester 2	- 3	23	Franklin	10.73	Chatham WSMO	4.98
Michigan	4 Stations	71	2	2 Stations	- 4	29	Grosse Pointe Farms	4.62	[illegible]	.89
Minnesota	7 Stations	60	6+	Angus 1 N	-12	29	Lake City	2.25	Pelican Rapids	.01
Mississippi	3 Stations	89	2+	Tupelo 2 WNW	17	24	Sledge	13.32	[illegible]	3.52
Missouri	3 Stations	81	2+	Vandalia	11	23	Hazlegreen 2 W	10.17	Kirksville FAA AP	2.24
Montana	Mildred	64	4	West Yellowstone	-20	28	Hebgen Dam	2.42	10 Stations	.00
Nebraska	Greeley	70	4	2 Stations	- 3	29	Geneva	D 5.01	Harrison	.32
Nevada	Logandale Fn Exp Farm	78	6	Mountain City RS	- 7	23	Mount Rose-Sky Tavern	3.84	[illegible]	.03
New Hampshire	Windham 3 NW	63	26	Mount Washington	- 6	22	Mount Washington	15.28	North Stratford	3.01
New Jersey	Belleplain St Forest	73	3	High Point Park	11	24+	Long Valley	12.46	Cape May 1 NW	6.18
New Mexico	Tucumcari FAA AP	88	4	Eagle Nest	-12	22	Brazos Lodge	3.46	2 Stations	T
New York	N Y Kennedy WSO AP	70	3	Wanakena Ranger School	-12	23	Slide Mountain	12.73	[illegible]	1.92
North Carolina	3 Stations	87	4+	2 Stations	9	24	Lake Toxaway 2 SW	9.92	Hot Springs 2	2.55
North Dakota	Hankinson R R Station	58	24	Wishek	-13	29	Epping	.45	[illegible]	.00
Ohio	Ironton	77	2	Barnesville Water Wks	10	29	Chilo Meldahl Dam	8.00	Akron-Union Depot	3.51
Oklahoma	Waurika 2 NNW	79	6	2 Stations	2	22	Signal Mountain Tower	11.40	Hobart FAA AP	1.22
Oregon	Riddle 2 NNE	67	2	Seneca	5	24+	Tillamook 13 ENE	13.72	Bend	.08
Pennsylvania	Uniontown 1 NE	74	3	Clermont 4 NW	4	30	Neshaminy Falls	11.51	Mercersburg	2.33
Puerto Rico & VI	Arecibo 2 SE, P. R.	96	16	Adjuntas Substation, P.R.	56	14	Pico Del Este, P.R.	17.87	Santa Isabel 1 N, P.R.	.22
Rhode Island	2 Stations	66	3	North Scituate 4 W	10	23	North Scituate 4 W	10.35	Newport	7.85
South Carolina	4 Stations	87	4	Kingstree 1 SE	18	24	Caesars Head 1 NE	8.41	Clark Hill Dam	3.15
South Dakota	Scenic	68	4	Deerfield 4 NW	-16	29	[illegible]	3.80	Ludlow	T
Tennessee	Celina	83	2	2 Stations	10	24	Savannah	8.89	Sevierville 1 SE	2.59
Texas	5 Stations	95	13+	Perryton 5 NNE	1	29+	Houston-Westbury	9.21	2 Stations	.00
Utah	2 Stations	72	4	Scofield	-15	23	New Harmony	4.53	Wendover WSO AP	.07
Vermont	Vernon	62	27	Enosburg Falls	- 6	22	Searsburg Station	8.88	Canaan	2.95
Virginia	Holland 1 E	88	4	Burkes Garden	8	24	Montebello 3 NE	8.19	Parramore Beach L B S	1.67
Washington	2 Stations	65	3+	2 Stations	9	29+	Quinault Ranger Sta	18.04	Priest Rapids Dam	.44
West Virginia	3 Stations	79	3	2 Stations	5	24	Pickens 1	7.96	Gary	2.86
Wisconsin	Newald	60	6	Long Lake Dam	- 2	29	Gurney	3.16	Viroqua	.55
Wyoming	2 Stations	65	5+	Kendall	-23	28	Foxpark	2.23	Dillinger	T

+ And also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation, ground	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
ALABAMA	M	Mb	Mb	C.	C	C	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	994.9	1017.9	14.1	4.6	9.4	-2.4	23.9	2	-5.0	24	0	6	5.6	76	114	24	32	10	1	0	0	0.4	34	11.2	SW	26	5	6	19	7.6	38
HUNTSVILLE	190	994.6	1018.1	12.8	3.4	8.2	-2.3	24.4	1	-5.6	24	0	7	4.4	80	129	36	33	9	2	T	0	0.5	35	11.6	13	6	5	6	19	7.5	
MOBILE	64	1009.1	1017.3	18.8	8.8	13.8	-1.2	30.0	1	1.1	17	0	0	9.4	78	144	59	32	14	2	0	0	1.7	2	10.3	16	25	4	4	22	7.8	
MONTGOMERY	56	1010.5	1017.7	16.7	6.2	11.4	-0.9	29.4	2	-1.7	27+	0	4	7.2	76	94	18	30	11	1	0	0	1.0	33	13.9	W	26	4	6	20	7.8	25
ALASKA												B															B					
ANCHORAGE	35	999.7	1004.8	-2.8	-9.2	-5.9	-0.5	1.1	28+	-19.4	30	0	30	-7.2	87	19	-7	12	9	0	272	229	1.0	2	8.9	19	28	5	3	22	7.7	42
ANNETTE	34	1004.7	1008.9	7.9	2.9	5.4	0.8	11.1	4	-2.8	18	0	6	2.2	82	257	-115	61	20	0	T	0	2.4	12	17.9	12	21	1	2	27	9.1	
BARROW	9	1016.6	1017.3	-14.6	-19.5	-17.0	1.2	-1.7	3	-31.7	20	0	30	-18.9	85	11	5	4	7	0	124	254	5.0	8	17.9	25	1					
BARTER ISLAND	12	1013.9	1015.9	-14.7	-19.9	-17.3	0.4	-5.6	1	-29.4	26	0	30	-18.9	84	4	-6	2	6	0	74	330	4.0	8	20.6	26	1					
BETHEL	38	996.6	1002.3	-4.4	-11.0	-7.7	0.5	3.3	27	-18.3	10	0	30	-9.4	84	5	-22	1	10	0	152	0	2.6	7	16.5	12	27	4	1	25	8.4	
BETTLES	196	986.8	1012.6	-15.1	-21.2	-18.2		-9.4	29	-30.6	5	0	30	-20.6	79	17		5	10	0	173	610	2.4	32	8.0	35	13	8	7	15	6.5	
BIG DELTA	386			-8.8	-16.3	-12.5		-2.2	22	-27.8	13	0	30			2			4	0	89											
COLD BAY	29	994.9	998.6	3.9	-1.4	1.3	-0.1	7.8	5	-8.9	23	0	19	-1.1	84	177	81	87	20	0	102	51	2.1	19	28.2	16	26	1	5	24	8.3	
FAIRBANKS	133	991.5	1009.3	-9.3	-18.6	-13.9	1.7	-2.8	17	-27.2	13	0	30	-19.4	62	12	-4	4	11	0	310	254	1.1	36	6.3	34	20+	6	4	20	7.2	
GULKANA	479			-10.8	-19.6	-15.2		0.6	22	-28.9	30	0	30			10		3	8	0	157	152			10.3	18	22	4	7	19	7.4	
HOMER	20	1000.0	1003.5	2.3	-4.6	-1.1		6.1	19	-11.1	4	0	30	-3.9	80	48	-21	13	12	0	165	76	1.8	4	13.0	5	16	7	3	20	7.1	
JUNEAU	4	1007.5	1008.2	3.7	-0.9	1.4	0.1	7.2	21+	-6.7	27	0	20	-0.6	87	85	-69	20	16	0	71	51	2.2	10	14.8	12	25	2	3	25	9.0	11
KING SALMON	15	999.3	1001.0	0.2	-7.6	-3.7	1.9	6.1	19	-18.9	26+	0	26	-5.0	87	34	-3	23	11	0	203	76	1.8	8	17.4	9	27	2	7	21	8.2	
KOTZEBUE	3	1007.8	1008.3	-10.3	-14.4	-12.3	1.3	-3.9	29	-19.4	10	0	30	-15.6	77	8	-2	2	10	0	170	203	5.0	8	17.9	10	27+	3	5	22	8.3	
MC GRATH	105	993.9	1007.1	-9.0	-17.8	-13.4	1.4	0.6	28	-26.1	26	0	30	-16.7	72	13	-15	3	10	0	229	178	0.1	22	8.0	17	28	5	6	19	7.4	
NOME	4	1003.4	1004.0	-3.5	-9.6	-6.5	2.1	2.2	16	-22.2	26	0	30	-8.9	82	35	5	20	14	0	411	203	3.6	7	16.5	11	27	3	0	27	8.7	21
ST. PAUL ISLAND	7	994.2	995.0	3.1	-1.8	0.7	0.2	6.1	12	-11.7	23	0	20	-1.1	87	64	0	10	25	0	170	76	2.6	15	25.9	16	12	0	9	21	8.6	
SHEMYA	37	993.6	997.4	2.5	-1.6	0.4	-1.7	5.6	8+	-9.4	22	0	20	-2.8	78	77	8	15	27	0	249	76	3.5	29	25.9	24	8	0	9	21	8.0	
SUMMIT	732	917.7	1008.8	-7.3	-14.4	-10.8		0.6	21	-22.8	30+	0	30	-13.3	78	20		8	8	0	505	533	4.2	4	15.6	9	25	4	7	19	7.5	
TALKEETNA	105			-2.4	-12.9	-7.6	-0.3	1.1	22+	-25.6	13	0	30			14	-31	4	9	0	351	279			7.6	2	28+	6	1	23	7.5	
UNALAKLEET	5	1004.1	1004.7	-6.2	-10.8	-8.5		0.0	28	-16.1	25+	0	30	-12.2	75	9		3	10	0	124	127	6.9	10	21.5	12	27	3	8	19	7.6	
YAKUTAT	9	1004.1	1005.1	4.2	-1.6	1.3	0.3	8.9	20	-10.0	30	0	21	-0.6	89	326	-81	54	22	0	315	127	1.7	9	15.6	25	25+	4	4	22	8.1	
ARIZONA																																
FLAGSTAFF	2135	785.6	1018.1	6.0	-8.7	-1.3	-3.6	15.0	3	-17.8	21	0	30	-11.7	48	59	34	28	9	2	589	279	0.5	23	10.3	SW	14	11	10	9	4.6	66
PHOENIX	340	976.3	1015.4	21.3	7.7	14.5	0.0	28.9	7	2.8	30	0	0	3.3	53	26	13	15	2	2	0	0	1.0	13	14.8Y	SW	17	17	8	5	3.2	83
TUCSON	788	926.2	1015.0	18.7	4.6	11.7	-2.8	25.6	7+	0.0	1	0	1	2.2	59	33	17	20	4	2	0	0	1.2	16	14.3	NW	8	18	10	2	3.0	87
WINSLOW	1492	851.3	1017.9	12.0	-0.9	5.6	0.4	21.1	4	-6.1	30	0	18	-2.2	65	15	6	11	3	0	T	T	1.1	23	14.8	29	5	13	10	7	4.2	
YUMA	59	1008.1	1015.6	22.3	8.6	15.4	-1.1	27.2	4	4.4	24	0	0	2.8	48	5	2	4	3	0	0	0	1.4	36	12.5	S	11	22	4	4	2.1	88
ARKANSAS																																
FORT SMITH	136	1001.7	1018.6	10.9	1.5	6.2	-3.8	19.4	5	-6.1	29	0	9	2.2	78	168	88	77	12	5	43	0	0.7	36	12.1	NW	13	8	6	16	6.7	41
LITTLE ROCK	78	1008.5	1018.3	13.1	3.8	8.5	-1.2	27.8	1	-3.9	24	0	4	2.8	68	187	83	99	10	4	T	0	0.8	32	11.6	NW	7	8	4	18	6.9	60
CALIFORNIA																																
BAKERSFIELD	145	1001.0	1018.8	15.4	7.5	11.4	-1.8	22.8	3+	2.8	30+	0	0	7.2	80	39	27	14	8	0	0	0	0.5	2	11.6	18	15+	5	7	18	6.9	
BISHOP	1252	874.4		14.2	-2.1	6.1	-1.6	22.2	26	-6.7	23	0	25			17	4	12	3		T	0										
BLUE CANYON	1609			7.5	0.9	4.2	-3.4	17.8	30	-2.8	20	0	18			297	125	96	15		1318	610			10.3	21	7	12	2	16	6.1	
EUREKA U	13			14.3	7.7	11.0	0.3	17.8	2	4.4	22	0	0			137	20	45	14		0	0			13.9	SE	12	4	11	15	6.9	48
FRESNO	100	1007.1	1018.9	13.8	6.3	10.1	-2.0	23.9	3	1.7	24	0	0	7.2	86	89	65	25	9	0	0	0	0.4	9	11.6	SE	11	3	6	21	7.9	30
LONG BEACH	8	1015.2	1016.7	21.5	8.6	15.1	-1.2	27.2	26	5.0	24	0	0	7.8	66	100	74	41	5	2	0	0	0.6	26	13.9	27	11	17	4	9	3.8	
LOS ANGELES	30	1012.5	1016.0	20.6	10.7	15.7	-0.5	26.1	29	6.7	24	0	0	7.8	65	80	52	32	7	0	0	0	0.4	25	20.1Y	W	11	19	1	10	3.7	
LOS ANGELES U	82			22.6	10.9	16.8	-0.3	30.0	26	6.7	24	0	0			83	55	31	5		0	0			11.2	SW	16	19	3	8	3.4	68
MT SHASTA R	1080	892.7	1018.7	8.3	-0.6	3.9	-1.6	15.0	26	-5.6	23	0	20			148	47	50	14		239	25										
OAKLAND	2	1018.0	1018.2	14.8	9.4	12.2	-0.4	19.4	2	6.7	30+	0	0	9.4	84	133	89	29	13	0	0	0	0.9	16	13.4	16	13	10	10	10	5.4	
RED BLUFF	104	1005.1	1018.0	14.2	4.9	9.6	-2.9	20.6	2	1.1	25+	0	0	5.6	82	131	73	46	15	1	0	0	0.3	19	14.3	SE	3	8	5	17	6.8	48
SACRAMENTO	5	1017.3	1018.1	13.6	6.0	9.8	-1.8	20.6	3	1.7	28	0	0	7.2	85	131	94	30	14	2	0	0	0.9	16	11.6	SE	13+	5	4	21	7.6	42
SANDBERG R	1377	862.5		10.6	3.1	6.9	-2.6	20.6	3	-0.6	23+	0	4	-2.2	62	99	76	39	9		48	T			16.1	31	14	14	4	12	4.8	
SAN DIEGO	4	1015.2	1016.3	20.0	10.9	15.4	-1.1	24.4	29	8.3	25	0	0	7.8	62	80	57	43	7	0	0	0	0.9	29	13.0	SE	14	19	7	4	3.2	77
SAN FRANCISCO	2	1017.6	1018.3	15.3	8.2	11.8	-0.9	19.4	2	3.3	30	0	0	8.9	82	131	91	46	11	1	0	0	0.4	23	13.0	17	15	10	8	12	5.6	
SAN FRANCISCO U	16			15.2	10.3	12.7	-1.4	20.6	2	6.1	30	0	0			163	112	62	11		0	0			12.5	SE	13					54
SANTA MARIA	72			17.9	5.1	11.5	-1.9	24.4	30+	0.6	21	0	0			109	83	30	8		0	0						17	7	6	3.5	
STOCKTON	7	1018.0	1019.1	13.8	6.1	10.0	-1.7	22.8	3	1.7	24	0	0	7.2	84	158	128	53	11	1	0	0	1.4	16	13.0	16	15	4	6	20	7.7	
COLORADO																																
ALAMOSA	2297	769.7		1.3	-16.2	-7.4	-6.1	6.7	6+	-23.3	22	0	30			25	18	8	7		503	305						8	11	11	5.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb	Mb.	C.	C	C	C	C.		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
COLORADO																																
COLORADO SPRINGS	1873	808.7	1018.8	4.2	-6.7	-1.2	-4.3	12.8	26	-18.3	28	0	30	-7.8	63	27	17	24	6	0	417	305	2.6	1	15.6	32	26+	8	7	15	6.4	
DENVER	1610	834.1	1016.2	6.9	-6.0	0.5	-2.7	15.6	8	-17.8	29	0	30	-6.7	62	43	25	24	9	0	493	330	0.8	21	16.5	NW	26	7	7	16	6.6	52
GRAND JUNCTION	1476	852.4	1018.3	7.1	-1.4	2.8	-0.9	13.9	4	-9.4	29	0	18	-2.2	74	18	3	6	9	0	33	51	1.3	9	11.6	NW	27	5	5	20	7.5	44
PUEBLO	1428	854.4	1017.7	6.6	-6.7	-0.1	-4.5	16.7	26+	-20.0	28	0	29	-3.9	80	38	24	23	7	0	399	305	1.2	36	15.6	W	26+	7	7	16	6.7	61
CONNECTICUT																																
BRIDGEPORT	2	1016.6	1017.3	8.9	1.9	5.4	-1.5	20.0	3	-8.9	23	0	12	1.7	77	260	157	78	14	0	T	T	2.6	35	20.6	[illegible]	8	7	6	17	7.0	
HARTFORD	52	1010.5	1017.2	7.8	-0.3	3.7	-1.4	17.8	26	-11.1	23	0	14	-0.6	76	217	119	52	13	0	53	25	1.9	33	14.8	NE	8	6	3	21	7.6	41
DELAWARE																																
WILMINGTON	23	1014.9	1017.9	11.7	2.9	7.3	-0.1	21.7	3	5.6	23	0	10	1.7	69	199	109	62	10	0	T	T	1.5	34	13.4	30	8	8	6	16	6.6	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1006.1	1018.1	11.0	0.1	5.6		22.2	3	-8.3	25+	0	17	2.2	82	180		49	11	1	15	T	1.2	31	13.9	30	8	6	7	17	6.7	
WASHINGTON NATIONAL	3	1015.6	1017.9	12.6	3.8	8.2	-0.5	24.4	3	-3.3	25+	0	6	1.7	67	154	82	41	10	1	T	T	1.4	32	13.9	NW	9	7	8	15	6.6	41
FLORIDA																																
APALACHICOLA U	4			20.1	12.7	16.4	0.1	27.2	4+	3.9	17	0	0			132	66	40	11	2	0	0			13.9	SE	19	5	9	16	7.1	72
DAYTONA BEACH	9	1015.2	1016.8	24.3	14.9	19.6	1.1	30.6	4	7.2	27+	0	0	15.0	75	278	219	131	10	2	0	0	0.0	9	11.2	36	6	6	10	14	6.5	
FORT MYERS	5	1015.9	1016.3	27.2	16.4	21.8	1.2	32.2	13	8.9	23	1	0	17.2	80	98	67	47	10	3	0	0	0.7	7	8.9	31	26	7	14	9	6.1	
JACKSONVILLE	8	1016.3	1017.1	22.2	10.7	16.4	-0.1	29.4	4+	1.1	27	0	0	12.8	80	107	64	39	9	3	0	0	0.7	35	[illegible]	NE	6	2	13	15	7.4	36
KEY WEST	1	1014.9	1015.5	28.1	23.1	25.6	2.2	30.6	2	18.9	24	0	0	20.6	76	52	-19	25	8	4	0	0	2.3	8	13.4	[illegible]	[illegible]	2	17	11	6.3	71
LAKELAND U	65			24.5	15.0	19.8	0.4	30.6	4+	6.7	23	0	0			88	48	30	9		0	0						8	8	14	6.6	38
MIAMI	2	1015.6	1015.9	26.2	19.7	22.9	0.5	29.4	20+	12.2	23	0	0	18.9	80	70	-2	29	10	4	0	0	0.9	8	10.3	30	26	5	13	12	6.3	
ORLANDO	33	1012.2	1016.6	25.4	15.6	20.5	1.7	31.1	13+	8.3	23	0	0	16.1	77	104	65	39	10	3	0	0	0.2	33	8.9	29	30	7	7	16	6.6	
PENSACOLA	34	1012.9	1017.2	18.7	10.6	14.6	-0.7	28.3	2	3.3	23	0	0	10.0	74	144	62	62	10	4	0	0	1.8	2	15.6	21	13	4	9	17	7.6	
TALLAHASSEE	17	1014.9	1017.2	21.2	8.9	15.1	0.0	30.0	3	-2.8	27	0	2	11.7	80	250	188	106	9	4	0	0	1.0	1	9.8	17	19	3	10	17	7.3	
TAMPA	6	1016.6	1016.9	25.2	15.0	20.1	0.8	31.7	2	6.7	23	0	0	15.6	77	90	53	25	9	3	0	0	0.8	4	9.4	27	25	6	9	15	7.0	42
WEST PALM BEACH	5	1015.2	1015.8	27.8	19.2	23.5	1.0	31.1	11+	10.6	23	0	0	17.8	71	177	105	140	13	3	0	0	0.7	12	11.2	22	14	3	12	15	7.0	
GEORGIA																																
ATHENS	244	988.5	1017.6	15.8	5.3	10.6	-0.3	27.2	2	-3.9	24	0	2	5.6	75	91	16	24	9	2	0	0	0.5	1	8.0	28	14	9	4	17	6.2	
ATLANTA	308	980.0	1017.3	14.6	4.9	9.8	-0.9	26.7	2	-2.2	24	0	5	5.0	74	101	25	23	9	1	0	0	0.7	3	12.5	W	26	6	4	20	7.2	46
AUGUSTA	41	1012.2	1017.3	18.3	5.3	11.8	-0.4	28.3	3	-3.3	24	0	6	5.6	70	71	15	39	8	0	0	0	0.8	33	10.7	27	26	8	9	13	6.1	
COLUMBUS	117	1003.4		17.4	7.3	12.4	0.1	28.3	2	-1.7	24	0	2			111	45	52	7	1	0	0	1.0	1	9.4	29	26	4	6	20	7.4	
MACON	108	1004.4	1017.5	18.7	6.2	12.5	-0.5	29.4	3+	-3.3	24	0	3	7.8	75	93	31	41	8	2	0	0	0.8	35	9.8	SW	26	5	8	17	7.2	42
ROME	194			14.5	4.1	9.3	-0.3	27.2	2	-6.7	24	0	8			102	15	22	12		0	0										
SAVANNAH	14	1015.9	1017.6	20.6	8.4	14.5	0.4	29.4	3	-2.2	24	0	1	9.4	76	125	73	70	6	1	0	0	0.7	35	11.2	W	26	4	10	16	7.1	40
HAWAII																																
HILO	8	1015.9	1017.2	26.8	19.1	22.9	0.1	28.3	24+	16.1	27	0	0	19.4	84	336	-4	94	22	0	0	0	0.3	18	7.6	NW	26+	1	11	18	7.8	25
HONOLULU	2	1016.3	1016.7	28.6	21.0	24.8	0.4	30.0	19+	14.4	27	0	0	17.8	67	15	-40	5	10	0	0	0	5.5	5	13.4	NE	15	8	16	6	5.3	63
KAHULUI	15	1013.9	1016.2	28.6	19.3	24.0	0.1	30.6	18+	12.8	28	0	0	18.3	74	10	-29	8	6	0	0	0	5.1	5	13.4	E	10	17	8	5	3.7	77
LIHUE	31	1013.2	1018.2	27.2	21.8	24.5	0.9	28.3	5+	15.0	30	0	0	19.4	77	35	-80	7	20	0	0	0	4.5	5	12.1	NE	12	3	15	12	6.5	47
IDAHO																																
BOISE	865	917.0	1018.8	8.6	0.8	4.7	1.1	16.1	3	-5.6	24	0	11	-0.6	70	28	-2	10	12	0	T	0	1.0	13	13.0	SE	6	4	2	24	8.2	28
LEWISTON	431			9.1	1.2	5.2	0.8	16.1	2	-4.4	22	0	9			24	-8	10	8		T	0			13.9Y		26	3	3	24	8.6	
POCATELLO	1358	863.5	1018.7	5.9	-1.5	2.2	0.6	13.3	4	-8.3	28	0	20	-3.9	65	11	-14	4	9	0	69	25	2.7	22	18.8	SW	26	0	5	25	8.9	25
ILLINOIS																																
CAIRO U	96			10.3	4.3	7.3	-1.5	26.7	1	-1.7	29+	0	4			129	31	49	14		T	T			13.9	SW	2	5	6	19	7.5	28
CHICAGO O HARE	201	992.2	1017.4	5.6	0.7	3.2	-0.2	16.1	2	-5.6	29+	0	13	0.0	80	77	22	38	12	0	23	T	1.0	27	13.9	W	13	2	4	24	8.7	
CHICAGO MIDWAY	185	994.6	1017.9	5.3	0.8	3.1	-1.3	16.1	2	-6.7	29	0	15	0.0	80	81	25	30	13	0	140	51	0.8	25	14.8	NE	13+	2	4	24	8.8	21
MOLINE	177	995.9	1017.9	5.8	0.0	2.9	-1.1	15.6	6	-9.4	15	0	16	1.7	73	70	20	29	9	0	170	76	0.7	27	14.3	NE	13	2	4	24	8.8	20
PEORIA	199	993.6	1018.1	5.1	-0.4	2.3	-1.9	15.6	2+	-8.3	29	0	18	-0.6	83	65	11	21	11	0	185	76	0.4	26	12.1	NW	13	0	4	26	9.0	17
ROCKFORD	221	993.2	1017.7	5.1	0.0	2.6	-0.3	12.8	2	-8.3	29+	0	15	-0.6	82	35	-25	14	9		112	25	1.0	31	13.0	W	18	1	4	25	9.0	
SPRINGFIELD	179	995.6	1018.3	6.4	0.6	3.5	-1.9	17.2	1	-6.7	29+	0	17	1.1	86	83	23	40	10	2	137	51	0.6	30	11.6	[illegible]	25+	2	4	24	8.8	20
INDIANA																																
EVANSVILLE	116	1003.7	1018.2	8.5	2.1	5.3	-1.8	23.9	1	-6.1	29	0	12	1.1	76	139	59	57	14	0	8	T	[illegible]	30	11.2	[illegible]	6	3	5	22	8.1	23

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No of days (sunrise to sunset): Clear, 0-3	No of days (sunrise to sunset): Partly cloudy 4-7	No of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C.				C	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s.		M.p.s							%
INDIANA																																
FORT WAYNE	241	987.1	1017.7	5.9	0.6	3.3	- 0.6	18.9	2	- 5.6	29	0	17	0.0	81	92	27	33	12	0	102	25	0.7	26	13.0	E	13	1	6	23	8.6	22
INDIANAPOLIS	241	988.2	1017.8	7.5	1.3	4.4	- 0.6	19.4	6	- 6.7	24	0	12	0.6	79	144	65	52	11	0	48	T	0.3	32	12.1	SW	2	1	6	23	8.7	24
SOUTH BEND	236	988.5	1017.2	5.8	0.9	3.4	- 0.6	17.8	2	- 8.3	15	0	13	1.1	83	74	6	26	14	0	320	51	1.2	23	12.5	22	2	2	5	23	8.7	
IOWA																																
BURLINGTON	211			5.8	- 0.6	2.6	- 1.5	15.6	5	- 8.3	15	0	18	- 1.1	80	77	29	30	11	0	86	25	0.7	29	9.4	36	14+	0	5	25	8.9	
DES MOINES	286	982.4	1018.2	4.3	- 2.2	1.1	- 1.8	17.2	5	-12.8	15	0	21	- 1.7	84	62	17	25	11	0	259	203	0.4	32	13.0	NE	13	2	7	21	8.3	28
DUBUQUE	322	978.0		3.3	- 2.5	0.4	- 1.2	13.3	5	-12.8	15	0	18		62	46	- 20	18	11		241	178						1	4	25	9.2	
SIOUX CITY	334	977.3	1018.2	6.1	- 1.3	2.4	0.1	18.9	5	- 7.2	29+	0	22	- 2.8	71	24	- 5	12	9	0	25	T	0.3	35	13.9	NW	25+	4	4	22	8.3	26
WATERLOO	265	985.4	1018.1	4.2	- 2.8	0.7	- 0.8	16.7	5	-14.4	15	0	19	- 2.8	76	50	4	23	7	0	244	203	0.5	32	12.5	4	13	1	6	23	8.9	
KANSAS																																
CONCORDIA	448	963.4	1017.4	7.2	- 0.6	3.3	- 1.9	18.9	5+	- 6.1	23	0	20	0.6	85	89	64	42	11	0	257	102	0.3	24	17.0	NE	13	5	6	19	7.8	39
DODGE CITY	787	924.5	1017.1	7.3	- 1.8	2.8	- 3.2	20.0	5	- 8.3	22+	0	21	- 2.8	72	58	42	25	9	0	160	102	1.2	25	16.5	N	25	7	5	18	7.0	48
GOODLAND	1114	886.9	1017.1	4.9	- 4.9	0.1	- 3.3	18.9	5	-15.0	14	0	30	- 2.8	84	40	27	26	10	1	284	178	2.3	28	13.9	34	13	6	6	18	7.1	
TOPEKA	267	985.8	1018.3	8.1	0.1	4.1	- 1.8	21.1	5	- 8.3	20	0	20	- 0.6	73	101	63	36	10	1	239	76	0.4	30	17.0	E	13	3	3	24	8.3	32
WICHITA	403	968.8	1017.6	8.5	0.2	4.3	- 2.6	18.3	5+	- 5.0	19	0	18	0.0	76	78	40	26	12	3	180	76	0.6	28	17.0	N	13	6	4	20	7.3	38
KENTUCKY																																
COVINGTON	265	985.4	1017.7	7.8	1.4	4.6	- 1.3	20.0	1	- 8.3	29	0	12	1.7	82	159	83	57	13	0	165	76	0.6	24	9.4	25	27+	4	2	24	8.5	
LEXINGTON	294	982.1	1018.0	10.4	3.4	6.9	- 0.1	24.4	1	- 4.4	24	0	7	2.8	77	107	23	33	16	0	43	T	0.4	20	10.3	24	26	2	4	24	8.6	
LOUISVILLE	145	999.7	1017.7	9.9	3.4	6.7	- 0.4	24.4	1	- 5.6	24	0	8	2.8	78	160	79	36	15	0	51	25	0.5	28	11.2	SW	2	4	2	24	8.5	22
LOUISIANA																																
ALEXANDRIA	28	1013.9	1018.3	15.8	5.8	10.8	- 2.8	28.3	6+	- 1.7	30	0	3	7.8	83	93	- 28	24	14	3	0	0	1.0	36	9.4	29	26	8	7	15	6.3	
BATON ROUGE	20	1014.9	1017.8	19.0	9.7	14.4	- 0.6	29.4	6+	3.3	23	0	0	8.9	73	121	17	41	9	1	0	0	1.4	4	11.2	21	27	4	8	18	7.2	
LAKE CHARLES	3	1016.6	1017.7	17.4	7.8	12.6	- 2.7	29.4	1	1.7	30	0	0	8.3	79	109	2	39	11	6	0	0	2.2	4	12.5	14	18+	8	5	17	6.6	
NEW ORLEANS	1	1016.6	1017.3	18.1	9.3	13.7	- 1.9	29.4	1	0.6	17+	0	0	10.6	83	215	130	74	11	3	0	0	2.1	2	10.7	6	18+	5	8	17	7.3	
SHREVEPORT	77	1008.8	1018.2	15.2	5.7	10.5	- 2.7	25.6	1	0.6	30+	0	0	5.6	74	135	28	43	10	5	0	0	0.7	35	11.6	30	7	9	5	16	6.1	50
MAINE																																
CARIBOU	190	993.2		0.7	- 6.2	- 2.7	- 1.7	7.8	26	-17.2	23	0	26			70	- 7	22	14		338	127						4	6	20	7.7	
PORTLAND	13	1014.9	1017.3	5.5	- 2.2	1.7	- 1.7	13.3	26	-13.3	17	0	15	- 2.2	76	200	94	64	12	0	396	254	1.6	35	16.1	S	26	5	5	20	7.4	39
MARYLAND																																
BALTIMORE	45	1012.2	1017.9	11.0	1.4	6.2	- 1.3	21.1	3	- 6.7	23	0	13	1.7	73	179	100	47	10	0	T	0	1.5	30	16.1	W	8	7	9	14	6.5	41
MASSACHUSETTS																																
BLUE HILL OBS R	192			6.7	0.0	3.3	- 2.2	15.6	26+	-10.6	23	0	13			233	118	88	15		51	51			25.9	SE	26					39
BOSTON	5	1015.9	1017.0	9.0	2.4	5.7	- 1.4	18.9	3	- 8.3	23	0	10	0.6	71	178	78	64	14	0	15	25	1.8	33	21.5	NE	8	7	5	18	7.1	35
WORCESTER	301	979.3	1017.2	4.9	- 1.8	1.6	- 2.4	15.0	26+	-12.8	23	0	18	- 2.2	77	264	156	76	13	0	155	51	1.7	33	13.9	5	8	7	4	19	7.1	
MICHIGAN																																
ALPENA	210	991.5	1017.4	4.0	- 1.4	1.3	- 0.2	12.2	6	-11.7	16	0	18	- 2.2	80	29	- 31	11	13	0	119	25	0.3	31	12.5	E	2	0	6	24	9.0	17
DETROIT	189			6.0	1.9	3.9	- 0.7	21.7	2	- 2.8	16	0	12	- 0.6	74	71	15	18	13	0	36		1.2	28	11.2	23	2					
DETROIT METRO	193	992.6	1017.1	5.3	0.7	3.0	- 1.1	21.7	2	- 4.4	29+	0	17	0.0	83	81	23	21	14	0	180	51	1.0	29	13.9	NE	14	1	3	26	9.1	13
FLINT	235	988.5	1017.0	4.9	0.6	2.7	- 0.7	18.3	2	- 8.3	16	0	15	- 0.6	78	59	4	16	18	1	226	51	0.6	26	11.2	1	8	1	2	27	9.0	
GRAND RAPIDS	239	987.5	1017.5	4.6	- 0.3	2.2	- 0.8	15.6	6+	- 8.9	16	0	18	- 0.6	82	52	- 11	16	13	0	279	102	0.7	22	15.6	NE	14	1	5	24	9.1	14
HOUGHTON LAKE	350	973.9	1017.2	3.6	- 1.8	0.9	- 0.3	11.1	6+	-10.0	16	0	22	- 1.7	84	25	- 35	14	10	0	104	51	0.6	26	10.3	20	28	0	5	25	9.2	
LANSING	256	984.8	1017.4	4.2	- 0.6	1.8	- 1.4	18.9	2	-12.2	16	0	18	- 1.1	80	69	13	17	15	1	300	127	1.0	24	13.0	W	2	1	5	24	8.9	13
MARQUETTE U	206			3.1	- 1.8	0.7	- 0.3	11.1	6	-11.1	29	0	20			86	3	47	9		165	76			13.4	S	30	3	1	26	8.8	17
MUSKEGON	191	994.2	1017.7	5.9	1.0	3.4	- 0.8	15.0	6	- 6.1	17	0	13	- 0.6	75	34	- 41	9	14	0	198	51	0.7	28	11.6	7	13+	0	2	28	9.5	
SAULT STE MARIE	220	989.5	1016.7	2.9	- 2.4	0.3	- 0.4	10.0	6	-10.0	29	0	21	- 1.7	86	76	- 8	30	13	0	257	51	0.4	9	11.2	W	28	2	3	25	8.8	30
MINNESOTA																																
DULUTH	435	964.4	1017.5	- 0.8	- 6.1	- 3.4	- 0.8	8.9	6	-16.1	28	0	28	- 5.0	88	35	- 10	23	11	0	170	51	0.9	27	13.9	NE	2	1	4	25	9.0	11
INTERNATIONAL FALLS	359	972.9	1017.5	- 0.3	- 6.9	- 3.6	0.9	10.0	6	-17.8	28	0	30	- 7.8	75	24	- 13	14	13	0	127	51	0.9	27	9.4	31	30	2	3	25	8.8	
MINNEAPOLIS	254	986.8	1017.9	2.9	- 2.7	0.1	0.6	14.4	5	-10.6	29	0	21	- 3.9	76	28	- 7	25	6	0	28	T	0.5	30	11.2	S	5	3	2	25	8.7	13
ROCHESTER	395	969.2	1018.2	3.1	- 3.9	- 0.4	- 0.1	14.4	5	-11.7	22	0	23	- 3.3	82	39	- 1	20	10	0	20	T	1.1	28	11.2	20	24	1	2	27	9.1	
ST CLOUD	313	980.0	1018.5	2.3	- 4.8	- 1.2	0.2	12.2	5	-15.6	29	0	24			19	- 15	18	2		10	T						2	4	24	8.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
MISSISSIPPI																																
JACKSON	94	1006.1	1018.1	16.2	5.9	11.1	- 1.9	30.0	1	- 0.6	30	0	2	7.2	78	89	- 10	25	10	2	0	0	0.6	1	10.7	SW	27	6	7	17	6.8	40
MERIDIAN	88	1006.8	1018.1	16.7	5.7	11.2	- 1.1	29.4	1	- 0.6	24	0	1	5.0	67	125	47	43	9	3	0	0	1.3	1	7.6	15	27+	4	6	20	7.6	
MISSOURI																																
COLUMBIA REGIONAL	270	985.4	1018.4	7.5	1.0	4.3	- 2.3	17.8	5+	- 5.0	22	0	15	1.7	87	134	76	55	14	0	163	152	0.5	27	13.0	SW	1	3	1	26	8.7	29
KANSAS CITY	309	982.0	1017.8	7.3	1.1	4.2	- 1.4	18.9	5	- 5.0	28	0	16	- 0.6	73	76	39	18	11	1	91	51	0.5	21	15.2	NE	13	3	4	23	9.2	36
ST JOSEPH	247			7.7	- 0.3	3.7	- 1.5	20.6	5	- 8.3	28	0	20			92	50		9				0.4	31	9.4	S	13	3	4	23	8.2	
ST LOUIS	163	997.3	1018.2	7.8	0.8	4.3	- 2.4	18.3	1	- 7.8	23	0	15	2.2	86	142	77	73	12	2	132	76	0.7	28	12.1	SW	1	2	4	24	8.5	24
SPRINGFIELD	386	971.9	1018.1	8.7	0.8	4.8	- 2.4	19.4	1	- 6.1	29	0	18	0.6	75	205	135	87	14	3	292	203	0.8	22	12.1	SE	13	5	3	22	7.9	30
MONTANA																																
BILLINGS	1087	890.4	1017.0	5.4	- 2.9	1.2	- 0.5	13.9	2	-11.7	28	0	25	- 4.4	70	26	10	25	2	0	T	T	2.6	26	19.2	W	10	7	5	18	6.9	33
GLASGOW	696	932.6	1016.6	5.2	- 4.3	0.4	2.6	12.8	23+	-11.1	28	0	28	- 4.4	73	1	- 11	T	2	1	8	T	0.4	7	16.1	31	29	4	8	18	7.9	
GREAT FALLS	1116	886.6	1016.7	7.1	- 2.3	2.4	1.1	14.4	4	-13.9	28	0	23	- 4.4	65	5	- 14	5	2	0	51	25	4.2	22	18.8	SW	10	6	7	17	6.9	49
HAVRE	788	922.1	1016.3	5.6	- 4.3	0.7	2.1	15.0	4+	-11.1	28	0	27	- 5.0	70	1	- 12	1	1	0	T	T	1.7	23	15.2	SW	10	3	10	17	7.3	35
HELENA	1167	880.5	1019.3	4.3	- 5.3	- 0.5	- 0.3	11.1	7+	-13.9	28	0	30	- 5.6	73	8	- 6	6	3	0	18	25	4.0	26	13.9	W	29	4	7	19	7.5	44
KALISPELL	904	912.0	1018.9	4.6	- 3.8	0.4	1.0	9.4	11+	-11.7	28	0	28	- 3.3	78	14	- 22	7	10	0	102	76	0.4	21	8.9	17	30	0	4	26	9.0	
MILES CITY	801	921.4	1016.5	5.3	- 3.8	0.8	0.4	13.3	4+	- 8.3	29+	0	28	- 3.9	76	4	- 7		4	0	T		0.9	26								
MISSOULA	972	905.2	1019.8	5.9	- 4.1	0.9	1.7	13.3	3	-13.3	28	0	25	- 2.8	80	10	12	7	8	0	114	51	0.4	30	12.1	NW	30	3	1	26	8.4	12
NEBRASKA																																
GRAND ISLAND	561	949.9	1017.7	5.6	- 2.3	1.7	- 1.2	18.3	5	- 9.4	23	0	24	- 2.8	74	61	42	39	10	0	292	178	0.8	29	13.4	1	13	6	6	18	7.2	
LINCOLN	360	973.9	1017.8	6.3	- 1.7	2.3	- 1.6	20.0	5	- 6.7	28+	0	24	- 1.7	76	91	69	44	8	1	218	178	0.5	32	12.5	SE	5	3	7	20	8.2	26
NORFOLK	471			5.9	- 2.3	1.8	- 0.3	18.9	5	-10.0	29	0	23			26	3	18	5		28	25						4	7	19	7.7	
NORTH PLATTE	846	917.7	1018.4	3.6	- 6.1	- 1.2	- 3.2	15.6	7	-12.8	29	0	29	- 4.4	80	28	16	17	4	0	203	127	1.0	32	14.8	NW	25	8	4	18	7.2	42
OMAHA	298	981.7	1017.9	6.3	- 0.7	2.8	- 1.0	19.4	5	- 6.7	28	0	22	- 0.6	80	83	51	31	9	0	246	203	0.3	31	12.5	NW	26+	3	4	23	8.5	21
SCOTTSBLUFF	1206	878.4	1018.2	4.6	- 6.7	- 1.1	- 3.2	16.1	8	-16.1	14	0	29	- 5.6	73	44	33	20	6	0	356	203	1.7	32	11.6	32	25	6	6	18	7.1	
VALENTINE	789			3.4	- 6.1	- 1.3	- 2.2	13.3	8	-11.1	29+	0	30			35	22	23	6		305	229			17.0	NW	26	6	9	15	6.7	43
NEVADA																																
ELKO	1539	844.7	1019.2	5.3	- 5.4	- 0.1	- 1.3	13.9	3	-15.6	23	0	27	- 6.1	66	25	3	9	8	0	185	51	0.3	24	9.4	32	26	5	5	20	7.2	
ELY	1906	807.7	1018.0	6.6	- 7.9	- 0.6	- 1.6	15.0	3	-16.1	23+	0	28	- 6.1	72	4	- 11	1	6	0	18	T	1.6	22	13.4	[illegible]	7	7	7	16	6.9	45
LAS VEGAS	659	941.1	1017.4	15.6	4.1	9.8	- 1.6	23.3	4	0.6	21	0	0	- 1.1	50	28	20	26	3	0	0	0	1.2	27	15.6	SW	4	13	9	8	4.5	70
RENO	1342	866.2	1018.2	10.2	- 3.6	3.3	- 0.2	16.7	3	- 9.4	23	0	27	- 3.3	66	25	11	13	7	0	T	0	0.3	23	13.4	W	4	10	7	13	5.9	66
WINNEMUCCA	1311	869.6	1019.4	8.5	- 3.7	2.4	0.3	13.9	2	-12.8	23	0	27	- 1.1	82	27	7	10	13	0	30	25	0.4	12	8.9	SW	26	4	7	19	7.4	28
NEW HAMPSHIRE																																
CONCORD	104	1004.7	1017.7	3.9	- 4.8	- 0.4	- 3.6	15.0	3	-18.3	23	0	25	- 2.2	86	167	72	38	13	0	328	178	1.3	32	14.3	NE	8	4	5	21	7.8	40
MT WASHINGTON	1909			- 3.9	-11.1	- 7.4	- 0.9	5.6	3+	-21.1	22+	0	30			388	220	84	21	1	2050	635			48.7+	SE	26	2	7	21	8.7	[illegible]
NEW JERSEY																																
ATLANTIC CITY	20	1014.6	1017.0	11.6	2.1	6.8	- 1.3	21.1	3	- 6.1	23	0	11	3.9	81	245	152	72	14	0	T	0	1.4	32	16.5	18	26	7	8	15	6.9	37
ATLANTIC CITY	3			11.4	4.6	8.0	- 1.1	21.1	3	- 3.9	23	0	7			192	96	55	15						22.8	W	8					
NEWARK	2	1015.9	1017.0	10.4	3.8	7.1	- 0.3	19.4	3	- 5.0	23	0	8	1.7	71	214	128	96	14	0	T	T	2.1	33	17.9	2	8	5	7	18	7.5	
TRENTON	17			9.9	3.4	6.7	- 1.0	18.9	3	- 5.0	23	0	9			197	116	74	16		5	T			14.8	1	14+	6	6	18	7.1	38
NEW MEXICO																																
ALBUQUERQUE	1619	837.4	1016.4	10.5	- 1.5	4.5	- 1.9	18.3	8	- 5.6	28+	0	24	- 3.9	59	18	8	7	9	0	74	51	1.5	36	17.9	NW	27	10	12	8	4.9	66
CLAYTON	1515			7.4	- 5.2	1.1	- 4.3	18.3	5	-15.0	22	0	28			27	18	11	8		343	152						10	9	11	5.6	
ROSWELL	1101			13.8	- 1.7	6.1	- 1.7	24.4	6	- 7.2	23	0	25			12	4	7	5		66	25										
NEW YORK																																
ALBANY	84	1007.6	1018.3	5.9	- 2.5	1.7	- 2.2	14.4	3	-15.0	23	0	17	- 1.1	81	205	136	48	16	0	625	330	1.0	29	11.6	NW	24	2	3	25	8.5	14
BINGHAMTON	485	[illegible]	1017.3	3.5	- 1.8	0.9	- 2.4	12.8	3+	-10.6	23	0	16	- 1.1	86	191	127	68	17	0	409	203	0.7	24	13.9	W	26	[illegible]	5	25	9.2	[illegible]
BUFFALO	215	993.9	1017.3	4.8	- 0.4	2.2	- 1.7	17.2	2	- 8.9	17	0	18	- 0.6	84	199	17	28	19	1	480	178	0.8	25	18.4	NE	14	1	2	27	9.2	14
NEW YORK	4	[illegible]	1017.1	10.1	3.6	5.9	- 1.4	22.0	3	- 6.1	23	0	7	1.7	72	315	229	142	14	0	T	0	1.4	1	22.4	NE	8					35
NEW YORK KENNEDY	4	1016.6	1017.1	11.0	5.1	8.1	0.2	21.1	3	- 3.9	23	0	3	1.7	65	242	152	104	15	0	T	0	2.1	36	17.0	S	8	6	6	18	7.0	
NEW YORK LA GUARDIA	[illegible]	[illegible]	1017.1	8.7	4.6	6.6	- 2.4	17.8	3	- 5.0	23	0	6	1.1	70	252	161	113	12	1	T	0	2.0	36	25.5	NE	8	5	7	18	7.3	
ROCHESTER	167	997.0	1017.8	6.0	- 0.4	2.8	- 1.7	18.3	2	- 8.9	18+	0	15	- 0.6	80	123	59	34	18	0	429	203	0.9	25	11.6	NE	14	1	1	28	9.2	14
SYRACUSE	125	1002.0	1017.5	5.8	- 0.3	2.8	1.8	16.7	2	- 7.8	17	0	14	- 0.6	80	172	99	44	15	0	401	152	0.9	27	11.6	SW	27+	1	4	25	9.0	23

See footnotes at end of table.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NORTH CAROLINA	M	Mb	Mb	C	C	C.	C	C		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ASHEVILLE	652	940.7	1017.9	12.7	2.3	7.5	0.5	24.4	3+	- 5.6	24	0	10	3.9	80	112	42	33	10	1	15	25	1.0	33	14.8	34	8	10	7	13	5.9	56
CAPE HATTERAS R	2	1016.9	1017.4	17.6	9.9	13.7	0.3	25.0	4+	- 2.2	25	0	2	9.4	77	185	81	41	11	2	0	0	1.9	36	14.3	26	26	7	10	13	6.2	48
CHARLOTTE	224	989.8	1017.8	14.7	3.9	9.3	- 0.9	27.8	3	- 6.1	24	0	6	3.3	70	138	73	35	8	0	T	T	0.7	1	14.3	SW	26	11	8	11	5.5	62
GREENSBORO	273	985.8	1018.1	13.4	2.4	7.9	- 0.9	25.0	3	- 6.7	24	0	12	2.8	73	124	56	31	13	0	T	T	0.7	32	13.4	NW	8+	8	9	13	5.9	55
RALEIGH	132	1001.7	1017.9	14.8	3.1	8.9	- 1.1	25.0	2	- 6.7	24	0	10	3.3	71	152	82	46	12	2	T	0	0.7	33	12.1	26	26	9	9	12	5.8	54
WILMINGTON	9	1016.3	1017.5	19.3	6.6	13.0	0.0	29.4	3	- 2.8	24	0	3	8.3	77	200	121	61	13	0	0	0	0.9	35	13.4	E	30+	9	7	14	5.8	53
NORTH DAKOTA																																
BISMARCK	502	956.3	1018.1	1.6	- 6.6	- 2.4	- 0.7	11.1	23	-18.9	28	0	28	- 5.0	83	3	- 12	2	3	0	28	102	0.7	32	14.3	NW	27+	2	7	21	8.1	27
FARGO	273	984.4	1018.3	1.8	- 5.7	- 1.9	0.3	12.2	5	-20.0	29	0	28	- 5.0	81	6	- 16	4	5	0	43	25	0.4	34	13.0	NW	27+	1	4	25	8.9	14
WILLISTON	579	946.8	1017.4	2.1	- 5.9	- 1.9	0.5	12.2	23	-17.8	28	0	29	- 4.4	83	4	- 11	2	6	0	38	25	0.8	25	13.4	NW	27	4	2	24	8.4	19
OHIO																																
AKRON	368	971.9	1017.3	7.1	1.4	4.2	- 0.7	18.3	2	- 6.7	29	0	13	0.0	74	108	51	31	17	0	74	T	0.7	25	11.2	30	8	3	2	25	8.7	
CINCINNATI ABBE OB	232			8.2	2.5	5.3	- 1.7	20.6	2	- 4.4	29	0	11			146	71	42	13		147	102			8.5	W	7					12
CLEVELAND	237	987.8	1017.7	6.6	1.9	4.2	- 0.9	21.7	2	- 5.0	29	0	10	1.1	80	116	50	30	17	0	198	51	1.3	21	13.0	N	14	1	3	26	9.2	13
COLUMBUS	247	987.1	1017.8	7.7	1.8	4.7	- 0.4	18.3	2	- 6.1	29	0	10	0.6	74	112	48	31	14	0	160	102	0.4	29	13.0	SW	26	2	3	25	8.7	17
DAYTON	305	981.0	1017.7	7.5	0.4	3.9	- 1.5	22.2	2	- 7.2	24	0	16	0.6	80	127	59	31	14	0	64	25	0.5	25	10.3	E	13	1	5	24	8.8	15
MANSFIELD	395			6.7	0.6	3.7	- 1.6	21.7	2	- 6.1	29	0	17	1.1	85	109	41	32	14	0	112	25	1.3	25	11.2	24	26+	3	1	26	9.0	
TOLEDO	204	991.9	1017.5	6.0	0.3	3.2	- 0.5	21.7	2	- 5.6	29	0	20	- 1.1	74	90	38	27	12	0	127	51	1.0	27	13.4	NE	14	1	5	24	8.9	19
YOUNGSTOWN	359	973.6	1017.2	5.1	0.1	2.6	- 1.4	16.7	2	- 5.6	29	0	18	0.6	87	109	38	30	17	0	208	25	0.8	23	11.2	33	8	1	4	25	8.9	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1018.4	10.6	2.1	6.3	- 2.8	21.1	6+	- 2.8	23+	0	9	1.1	74	58	18	19	9	2	191	51	0.7	30	16.5	NW	13	10	4	16	6.2	44
TULSA	198	993.6	1018.4	10.5	2.4	6.4	- 2.2	20.0	5+	- 3.3	23	0	8	2.2	77	127	69	70	9	2	142	51	0.7	23	13.4	NE	13+	5	6	19	7.2	42
OREGON																																
ASTORIA	2	1014.9	1015.6	12.1	4.8	8.5	0.6	15.6	3	- 1.1	15	0	2	6.1	86	175	-109	56	18	0	0	0	1.7	14	11.2	18	7	2	3	25	8.4	
BURNS U	1265	873.4	1018.8	6.7	- 3.2	1.8	- 0.5	12.2	4	-11.1	24+	0	25	- 1.1	83	33	4	10	14		30	25	0.5	28				2	3	25	8.6	
EUGENE	109	1003.1	1016.6	11.9	4.8	8.3	0.8	17.2	2	0.0	27+	0	2	6.7	91	96	- 47	37	16	0	0	0	1.9	16	9.8	17	18	0	6	24	8.9	
MEACHAM	1234	876.1	1018.1	4.7	- 1.3	1.7	0.3	9.4	4	- 6.7	22	0	22			85	- 21	47	13		127	51			10.3	34	26	1	2	27	8.8	
MEDFORD	396	969.9	1018.3	11.8	2.4	7.1	1.3	17.2	11	- 1.7	27+	0	9	4.4	85	38	- 28	12	9	0	0	0	0.3	6	10.7	14	13	2	2	26	8.8	
PENDLETON	452	963.1	1017.7	10.1	1.7	5.9	0.7	16.1	2	- 5.0	22	0	10	0.6	73	18	- 18	6	7	0	T	0	0.5	19	10.3	27	26	2	4	24	8.5	
PORTLAND	6	1015.6	1016.9	12.8	5.2	9.0	1.7	17.2	3+	- 1.1	27	0	1	6.1	83	96	- 39	22	17	1	0	0	1.9	14	12.1	E	15	2	6	22	8.3	25
SALEM	60	1009.1	1016.4	12.2	3.8	8.0	0.7	17.2	2	- 3.3	27	0	6	5.6	86	96	- 49	26	20	0	0	0	1.7	18	9.4	20	9+	2	3	25	8.5	
SEXTON SUMMIT R	1169	882.8	1017.0	7.1	1.6	4.3	- 1.7	16.7	30	- 1.1	19	0	8			84	- 27	29	19		117	127	3.7	17	16.1	16	6	3	8	19	7.9	
PACIFIC AREA																																
GUAM TAGUAC R	110			29.2	23.4	26.3	0.1	30.0	26+	21.7	21+	0	0			123	-139	17	25	0	0	0			10.7	E	15					45
JOHNSTON	2	1013.2	1013.8	27.9	24.6	26.2	- 0.2	28.9	3+	22.2	29+	0	0	21.7	75	40	- 13	11	12	0	0	0	8.7	8	18.8	E	9	6	18	6	5.8	64
KOROR R	29	1006.1	1009.7	31.6	24.3	27.9	0.6	32.2	26+	22.2	7	10	0	23.9	84	253	- 75	46	26	1	0	0	2.6	7	9.8	S	14	0	5	25	8.9	58
KWAJALEIN	2	1008.5	1009.3	30.4	25.6	28.0	0.6	31.7	15	23.9	3	0	0	23.9	79	94	-214	30	19	0	0	0	4.6	7	12.5	5	29	3	5	22	8.1	
MAJURO	3	1009.8	1010.0	29.6	25.6	27.6	0.7	30.6	22+	23.3	3	0	0	23.9	81	115	-289	39	14	0	0	0	3.7	6	13.0	E	30	1	12	17	7.6	78
PAGO PAGO	4	1010.5	1010.8	29.2	25.0	27.1		32.2	30	22.2	21	1	0	23.3	81	165		64	17	1	0	0	6.3	10	13.0	E	14	1	11	18	7.8	55
PONAPE R	37	1003.4	1008.7	31.6	23.0	27.3	0.7	32.8	24+	21.1	2+	9	0	23.9	83	185	-243	69	19	1	0	0	1.8	8	8.5	NE	30	2	13	15	7.5	85
TRUK MOEN ISLAND	2	1009.1	1009.4	30.5	25.2	27.8	0.7	31.1	26+	23.9	2+	0	0	24.4	82	190	-124	40	21	3	0	0	3.0	6	14.8	E	24	0	9	21	8.7	51
WAKE	3	1014.6	1014.8	29.8	24.2	27.0	0.1	30.6	22+	22.2	18+	0	0	21.1	74	45	- 33	11	16	0	0	0	7.8	7	16.5	E	18	11	13	6	4.9	56
YAP R	13			30.4	24.0	27.2	- 0.3	31.7	1	22.2	27+	0	0			237	- 46	66	20	3	0	0			10.3	SE	10	1	15	14	7.2	76
PENNSYLVANIA																																
ALLENTOWN	118	1003.4	1017.7	8.3	0.5	4.4	- 1.1	17.2	3	- 7.8	23	0	15	- 0.6	71	246	162	86	14	1	58	51	1.3	34	12.5	32	9+	7	3	20	7.5	
ERIE	223	989.8	1017.1	5.3	0.6	2.9	- 1.3	18.3	2	- 5.6	17	0	17	0.0	81	85	0	28	18	0	168	76	1.3	20	13.0	4	14	0	4	26	9.4	
HARRISBURG	103	1004.7	1017.7	9.1	1.8	5.4	- 0.9	19.4	3	- 6.7	23	0	13			183	108	52	15	0	150	102	1.0	32	13.9	NW	9+	7	3	20	7.1	37
PHILADELPHIA	2	1016.3	1017.3	10.3	2.6	6.4	- 0.4	20.6	3	- 4.4	23	0	11	2.2	74	230	144	78	15	0	T	T	1.5	34	14.8	W	26+	7	6	17	6.7	41
PITTSBURGH	347	972.6	1017.5	7.2	0.9	4.1	- 0.8	19.4	2	- 7.2	29	0	14	0.0	78	119	62	21	15	0	155	76	1.1	29	12.1	25	26	4	2	24	8.3	22
SCRANTON	283	982.4	1017.3	5.3	- 0.9	2.2	- 2.0	14.4	3	-10.6	23	0	15	- 1.1	79	195	121	74	17	0	201	152	0.7	32	13.0	SW	26	2	6	22	8.6	25
WILLIAMSPORT	160	998.6	1018.1	6.2	0.2	3.2	- 1.9	15.6	3	- 7.8	23	0	15	- 0.6	76	205	118	59	15	0	325	229	1.1	30	10.3	24	27	3	5	22	8.3	
RHODE ISLAND																																
BLOCK ISLAND	34			9.3	3.7	6.5	- 0.8	18.3	3	- 6.1	23	0	7			200	106	58	12		T	0										
PROVIDENCE	16	1014.9	1017.2	8.9	0.9	4.9	- 1.2	18.9	3	-10.0	23	0	11	0.0	72	215	110	59	14	0	8	T	1.7	36	14.3	14	26	6	5	19	7.1	37

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C.	C	C.	C		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.9	1017.8	20.2	7.4	13.8	0.5	30.6	3	-4.4	24	0	3	8.9	75	187	134	97	8	1	0	0	0.8	34	19.2Y	SW	14	7	7	16	6.4	40
CHARLESTON U	3			19.0	10.9	14.9	0.2	29.4	4+	3.3	24	0	0			142	93	55	7		0	0			14.3	SE	14					
COLUMBIA	65	1009.8	1017.9	18.4	5.4	11.9	-0.1	28.9	3	-2.8	24	0	7	6.1	72	143	83	43	8	0	0	0	0.6	35	9.8	31	7	9	10	11	5.7	56
GRNVLLE-SPRTNBRG	292	982.7	1017.8	14.9	4.2	9.6	-1.1	27.2	3	-5.0	24	0	5	4.4	74	135	63	39	9	1	T	0	1.0	1	12.5	SW	14	13	6	11	5.3	56
SOUTH DAKOTA																																
ABERDEEN	396	969.5	1018.0	3.0	-4.9	-0.9	0.0	12.8	5	-18.3	29	0	30	-3.3	85	7	-12	3	7	0	107	51	0.7	36	11.2	34	25	3	6	21	8.2	
HURON	390	969.9	1017.6	3.0	-3.6	-0.3	0.2	15.6	5	-12.8	14	0	29	-3.9	79	62	45	51	9	0	277	102	0.5	32	11.2	S	15	3	7	20	8.0	25
RAPID CITY	964	903.8	1017.5	4.6	-5.7	-0.6	-2.3	16.1	4	-12.8	29	0	28	-6.1	70	10	-1	6	4	0	91	76	2.2	34	18.8	NW	26	5	11	14	7.1	43
SIOUX FALLS	432		1018.1	3.6	-3.7	-0.1	-0.4	16.1	5	-12.2	29	0	25	-3.3	80	48	23	41	8	0	64	25	0.3	31	10.7	2	13	2	6	22	8.4	
TENNESSEE																																
BRISTOL	459	962.8	1017.5	12.9	2.7	7.8	0.1	25.6	2	-6.1	24	0	10	2.8	73	72	9	20	11	0	53	51	0.7	31	12.5	26	14	7	4	19	7.1	
CHATTANOOGA	210	992.6	1017.6	12.6	3.0	7.8	-1.9	24.4	2	-5.6	24	0	9	3.3	74	97	4	21	11	1	T	0	0.7	34	10.3	SW	26	5	6	19	7.4	30
KNOXVILLE	299	982.4	1017.9	12.7	4.5	8.6	-0.7	25.0	2	-3.9	24	0	4	3.9	73	85	3	24	14	0	T	0	1.1	33	13.4	SW	2	6	5	19	7.4	37
MEMPHIS	79	1007.8	1018.3	11.6	3.4	7.5	-2.6	26.7	1	-6.1	24	0	6	2.8	71	204	93	92	10	4	T	T	0.7	34	13.0	30	6	4	8	18	7.3	40
NASHVILLE	180	995.9	1017.8	12.9	4.1	8.5	-0.7	25.0	1	-7.2	24	0	4	5.0	80	133	49	34	13	2	T	T	0.7	29	12.5	S	7+	5	4	21	8.0	27
OAK RIDGE R	276			12.6	4.1	8.3	-0.2	22.8	2	-5.0	24	0	6			128	32	36	12		10	T			15.2Y		26	4	5	21	7.7	
TEXAS																																
ABILENE	544	954.6	1018.5	13.7	2.2	8.0	-3.7	25.6	6	-5.0	22	0	13	2.8	73	9	-19	3	5	2	T	T	0.4	19	18.8	W	12	16	3	11	4.3	65
AMARILLO	1098	890.6	1016.5	8.3	-2.8	2.7	-5.1	20.6	5	-11.1	22	0	23	-2.8	72	30	13	10	8	0	251	51	1.4	23	21.9	NW	13	11	4	15	5.9	55
AUSTIN	182	995.9	1018.1	16.3	6.8	11.6	-3.3	28.9	12	0.6	30	0	0	5.0	69	67	13	28	13	2	0	0	2.1	2	12.5	W	12	10	7	13	5.7	50
BROWNSVILLE	6	1015.6	1016.0	21.7	12.9	17.3	-2.5	30.6	12+	3.3	26	0	0	13.3	78	32	-2	11	9	1	0	0	1.9	34	13.4	S	27	5	9	16	7.0	46
CORPUS CHRISTI	12	1015.2	1016.9	20.8	11.1	15.9	-1.9	31.7	6	1.1	26	0	0	11.7	79	63	19	20	11	1	0	0	3.5	2	15.6	SE	12	7	7	16	6.6	49
DALLAS	147	1000.7	1018.4	15.1	5.8	10.4	-2.3	26.7	9	-0.6	22	0	1	4.4	71	81	12	27	8	4	10	T	0.7	1	14.3	NW	25	14	4	12	5.2	53
DEL RIO	313	981.0	1017.4	20.0	6.6	13.3	-1.6	29.4	6	0.0	26	0	1	4.4	60	18	2	17	4	2	0	0	1.1	9	15.6	35	12	16	7	7	4.3	
EL PASO	1194	882.2	1015.5	17.2	1.4	9.3	-1.3	23.9	8	-4.4	30	0	11	-0.6	54	8	0	6	4	0	0	0	1.3	31	17.0	SW	1	20	7	3	2.6	86
FORT WORTH	164	998.0	1018.7	14.9	5.1	10.1	-2.6	26.1	9	-0.6	22	0	1	4.4	73	60	-3	20	8	5	T	0	0.9	34	16.1	32	12	15	3	12	5.1	
GALVESTON U	2			18.1	11.7	14.9	-2.3	27.2	1	5.0	23+	0	0			160	70	75	11		0	0			14.8	NW	13					31
HOUSTON INTERCON	29	1014.2	1018.1	18.2	7.0	12.6	-2.3	30.0	6	0.0	30	0	1	8.3	78	165	66	71	9	5	0	0	1.6	3	16.5	33	13	5	11	14	6.8	44
LUBBOCK	992	933.8	1016.9	11.8	-0.3	5.8	-3.1	22.2	5	-6.7	28	0	20	0.0	72	25	11	13	6	1	150	76	0.6	21	16.5	32	9	15	4	11	4.5	
MIDLAND	869	917.1	1016.7	14.8	1.2	8.0	-3.4	23.9	5	-2.8	19	0	13	1.1	69	6	-6	3	4	0	15	25	0.4	16	18.3	30	12	16	6	8	3.8	
PORT ARTHUR	5	1017.3		17.2	7.3	12.2	-3.2	30.0	1	0.6	30+	0	0	8.9	83	155	67	46	13	6	0	0	2.1	3	13.4	E	18	8	6	16	6.7	44
SAN ANGELO	580	950.2	1017.6	17.1	3.3	10.2	-2.4	27.8	6	-3.3	26	0	7	3.3	69	8	-12	5	6	1	T	0	0.3	25	20.6	29	12	16	5	9	4.0	
SAN ANTONIO	240	989.8	1018.0	18.8	5.7	12.2	-3.1	28.9	12	-2.8	30	0	2	6.1	69	60	25	20	12	4	0	0	2.0	1	15.6	NW	12	10	6	14	5.6	49
VICTORIA	32	1013.2	1017.3	19.2	8.9	14.1	-2.8	30.6	6	1.1	26	0	0	8.9	75	56	-4	20	11	3	0	0	2.8	2	17.9Y	N	13	8	5	17	6.3	
WACO	153	1000.0	1018.4	14.9	5.9	10.4	-3.3	26.7	9	0.0	22	0	1	6.1	77	73	17	34	8	4	T	0	1.1	34	13.4	33	25	12	6	12	5.3	
WICHITA FALLS	303	980.7	1018.2	13.4	1.9	7.7	-3.7	26.7	6	-3.3	23+	0	10	2.8	75	47	11	16	7	3	53	T	0.8	32	17.4	28	9	14	5	11	5.3	
UTAH																																
MILFORD	1533	846.3		7.3	-4.1	1.6	-0.7	15.6	4	-11.1	24	0	28			24	11	7	9		178	51			12.5	SW	14	2	7	21	7.8	38
SALT LAKE CITY	1286	872.3	1018.6	8.2	0.0	4.1	1.5	16.7	4	-6.7	29	0	12	-2.2	66	35	2	19	10	1	28	25	2.0	17	13.9		7	1	5	23	8.3	25
WENDOVER	1291	871.7	1019.0	7.4	-1.2	3.1	0.0	16.7	26	-7.8	23	0	16	-2.2	69	2	-6	1	3		T	T						6	4	20	7.1	
VERMONT																																
BURLINGTON	104	1004.7	1017.7	3.4	-3.4	0.1	-1.8	12.8	3	-16.7	23	0	22	-2.2	85	104	38	32	17	1	310	102	0.3	22	14.3		27	2	2	26	9.1	15
VIRGINIA																																
LYNCHBURG	279			12.3	2.3	7.3	-1.1	24.4	2	-8.9	24	0	11			147	81	55	12		13	T			14.8	NW	8	7	14	9	5.7	47
NORFOLK	7	1016.6	1017.5	15.2	6.6	10.9	0.1	26.7	3	-3.3	24	0	3	6.7	75	138	61	35	12	1	T	0	1.5	34	17.0	SE	25	7	9	14	6.2	51
RICHMOND	50	1011.2	1017.8	14.0	3.6	8.8	-0.3	26.7	3	-6.7	24	0	7	3.3	73	148	71	43	13	0	15	T	0.6	34	15.6	SE	26	6	13	11	6.1	52
ROANOKE	350	975.3	1018.0	12.5	2.4	7.4	-0.7	23.3	3	-5.0	25	0	11	1.1	69	143	74	44	10	0	T	T	1.4	30	15.6	30	8	6	11	13	6.3	
WALLOPS ISLAND	3			13.5	4.8	9.2		24.4	3	-3.3	24+	0	6			131		48	11		T	T			21.5Y	WNW	8					
WASHINGTON																																
OLYMPIA	59	1008.8	1016.1	10.4	1.8	6.1	-0.4	13.3	10+	-2.8	12+	0	13	4.4	90	106	-89	21	22	0	0	0	1.4	17	13.4	16	7	2	5	23	8.4	
QUILLAYUTE	55	1007.1	1014.6	10.9	2.9	6.9	-0.1	14.4	16+	-2.8	27+	0	9	5.0	89	276	-62	39	20	1	0	0	1.5	13	11.6	SE	3	3	6	21	7.8	26
SEATTLE-TACOMA	122	999.3	1015.9	11.0	5.3	8.2	1.6	13.9	2	0.6	17	0	0	3.9	77	86	-50	19	15		T	0	1.2	13	10.3	SW	30	4	4	22	9.0	31
SPOKANE	718	932.1	1017.2	6.7	0.3	3.5	1.4	13.3	4	-5.0	28	0	15	0.0	80	22	-35	7	6	0	T	T	0.6	14	9.4	W	26	2	4	24	8.5	31
STAMPEDE PASS R	1206	877.4		1.7	-3.9	0.4	0.7	5.6	11	-5.6	27	0	25			182	-137	60	17		777	330						0	2	28	9.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile (1 6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10		
	M	Mb	Mb	C	C	C	C	C		C.				C	%	Mm.	Mm.	Mm			Mm	Mm.	M p.s.		M p.s							%
WASHINGTON																																
WALLA WALLA U	289			10.2	2.5	6.3	0.6	17.8	2	- 2.2	22	0	7			21	- 23	6	9		0	0			7.6	[illegible]	30	0	4	26	9.0	33
YAKIMA	321	978.7	1018.0	9.7	0.2	4.9	1.9	13.3	5	- 5.6	2	0	15	1.1	79	18	- 6	6	9	0	T	0	0.8	28	9.4	31	26	1	5	24	8.7	
WEST INDIES																																
SAN JUAN P.R.	4	1012.2	1014.7	30.2	24.3	27.3	1.6	31.7	15	23.3	27+	0	0	21.7	73	71	- 94	23	17	2	0	0	3.0	12	11.2	SE	30+	7	18	5	5.1	46
WEST VIRGINIA																																
BECKLEY	763	927.5	1017.7	8.6	0.6	4.6	- 1.1	22.2	2	- 8.3	24	0	14	1.1	81	100	32	22	19	0	91	51	1.0	20	13.4	14	25+	4	3	23	8.2	
CHARLESTON	286	982.7	1017.5	10.8	1.9	6.3	- 1.1	24.4	2	- 5.0	25+	0	13	1.7	73	134	63	42	16	0	175	76	0.8	26	9.8	24	26+	2	4	24	8.4	
ELKINS	594	945.5		9.7	- 0.9	4.4	- 0.4	26.1	2	-10.6	25	0	20			148	78	32	18		188	51						2	6	22	8.4	
HUNTINGTON	252	987.1	1017.9	9.8	2.3	6.1	- 1.4	24.4	2	- 6.1	24	0	10	2.8	81	111	49	31	14	0	91	25	0.9	26	10.3	26	2	3	1	26	8.7	
PARKERSBURG U	187			9.5	2.7	6.1	- 1.0	23.3	2	- 3.3	29	0	10			100	40	24	15		99	25			11.6	W	8					30
WISCONSIN																																
GREEN BAY	208	991.2	1017.5	4.8	- 1.5	1.7	0.4	13.9	6	-10.6	28	0	18	- 1.7	82	29	- 19	22	10	0	18	T	1.3	29	16.5	NE	13	2	4	24	8.5	21
LA CROSSE	198	993.6	1018.7	4.3	- 1.7	1.3	0.1	13.9	5	- 7.8	15	0	20	- 1.7	81	37	- 12		9	0	20		0.5	28								
MADISON	262	985.4	1017.6	4.6	- 1.7	1.4	0.3	12.2	5	- 9.4	29+	0	18	- 1.7	80	22	- 33	14	9	1	33	T	0.9	27	13.0	E	1	2	4	24	8.6	22
MILWAUKEE	205	991.5	1017.5	4.6	0.1	2.3	0.2	12.8	2	- 9.4	29	0	16	- 1.7	76	34	- 21	12	12	0	86	51	1.6	28	16.1	NE	13	1	4	25	8.8	20
WYOMING																																
CASPER	1627	835.4	1017.3	4.4	- 6.1	- 0.8	- 1.7	11.1	5	-21.1	28	0	25	- 7.2	65	17	- 1	11	8	0	206	152	3.7	22	14.8	21	30	6	10	14	6.6	
CHEYENNE	1867	809.0	1017.4	3.8	- 6.6	- 1.4	- 2.6	12.8	4	-18.9	29	0	30	- 8.3	64	15	- 1	7	11	0	224	102	3.8	30	21.9	NW	26	5	10	15	6.8	43
LANDER	1696	827.3	1018.6	2.9	- 7.5	- 2.3	- 1.7	10.0	2	-24.4	29	0	30	- 6.7	76	23	- 1	8	7	0	384	127	0.4	24	8.9	N	5	6	6	18	7.2	37
SHERIDAN	1208	877.4	1017.6	7.0	- 5.5	0.8	0.0	13.9	30	-13.3	28	0	29	- 5.6	65	8	- 12	5	7	0	36	T	1.5	31	15.2	NW	26	6	5	19	7.2	48

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	486	630	462
HUNTSVILLE	544	749	565
MOBILE	284	317	254
MONTGOMERY	380	447	398
ALASKA			
ANCHORAGE	1308	3378	3192
ANNETTE	697	2109	2082
BARROW	1909	5699	6149
BARTER ISLAND	1927	5838	[illegible]
BETHEL	1399	3481	3801
BETTLES	1968	4521	
BIG DELTA	1659	3905	
COLD BAY	915	3151	3114
FAIRBANKS	1739	3901	4181
GULKANA	1808	4180	
HOMER	1145	[illegible]	
JUNEAU	907	2752	2768
KING SALMON	1177	3258	3346
KOTZEBUE	1651	3961	4527
MC GRATH	[illegible]	3750	4154
NOME	1334	3682	[illegible]
ST. PAUL ISLAND	947	3688	3581
SHEMYA	957	3247	3213
SUMMIT	1570	4430	
TALKEETNA	1396	3583	3484
UNALAKLEET	1439	3522	
YAKUTAT	913	[illegible]	2811
ARIZONA			
FLAGSTAFF	1155	1980	1740
PHOENIX	205	243	256
TUCSON	358	454	256
WINSLOW	681	934	962
YUMA	147	160	148
ARKANSAS			
FORT SMITH	648	839	589
LITTLE ROCK	530	[illegible]	601
CALIFORNIA			
BAKERSFIELD	362	421	319
BISHOP	654	1034	866
BLUE CANYON	755	1512	[illegible]
EUREKA U	389	1407	1528
FRESNO	437	547	417
LONG BEACH	169	200	208
LOS ANGELES	138	153	[illegible]
LOS ANGELES U	97	111	169
MT SHASTA R	775	1550	1284
OAKLAND	326	532	584
RED BLUFF	467	609	371
SACRAMENTO	451	572	456
SANDBERG R	613	1143	712
SAN DIEGO	149	178	181
SAN FRANCISCO	350	662	668
SAN FRANCISCO U	298	806	817
SANTA MARIA	363	709	704
STOCKTON	445	557	437
COLORADO			
ALAMOSA	1384	2364	2147
COLORADO SPRINGS	1049	1736	1447
DENVER	960	1521	1379
GRAND JUNCTION	832	1198	1129
PUEBLO	987	1403	1130
CONNECTICUT			
BRIDGEPORT	691	1161	988
HARTFORD	782	1373	1188
DIST.OF COLUMBIA			
WASHINGTON DULLES	686	1144	
WASHINGTON NATIONAL	543	829	769
DELAWARE			
WILMINGTON	586	962	909
FLORIDA			
APALACHICOLA U	172	183	169
DAYTONA BEACH	62	62	75
FORT MYERS	25	25	24
JACKSONVILLE	169	179	156
KEY WEST	0	0	0
LAKELAND U	76	76	57
MIAMI	3	3	0
ORLANDO	54	54	72
PENSACOLA	254	278	214
TALLAHASSEE	228	241	226
TAMPA	65	65	60
WEST PALM BEACH	5	[illegible]	6
GEORGIA			
ATHENS	420	536	532
ATLANTA	469	604	[illegible]
AUGUSTA	[illegible]	437	411
COLUMBUS	328	385	420
MACON	327	378	368
ROME	491	668	659
SAVANNAH	239	264	293
IDAHO			
BOISE	727	[illegible]	1339
LEWISTON	706	1317	1282
POCATELLO	[illegible]	[illegible]	1565
ILLINOIS			
CAIRO U	[illegible]	829	713
CHICAGO O HARE	811	1426	1317
CHICAGO MIDWAY	818	[illegible]	1160
MOLINE	824	[illegible]	1217
PEORIA	855	1431	[illegible]
ROCKFORD	845	1498	[illegible]
SPRINGFIELD	795	1242	[illegible]
INDIANA			
EVANSVILLE	702	1089	[illegible]
FORT WAYNE	809	1417	1275
INDIANAPOLIS	746	1207	1129
SOUTH BEND	[illegible]	1440	1266
IOWA			
BURLINGTON	842	1385	1183
DES MOINES	925	1577	[illegible]
DUBUQUE	961	1724	[illegible]
SIOUX CITY	854	1474	1353
WATERLOO	945	[illegible]	[illegible]
KANSAS			
CONCORDIA	807	1304	[illegible]
DODGE CITY	831	1252	950
GOODLAND	980	1603	1278
TOPEKA	764	1170	999
WICHITA	750	1117	[illegible]
KENTUCKY			
COVINGTON	733	1156	1035
LEXINGTON	612	1009	902
LOUISVILLE	628	942	911
LOUISIANA			
ALEXANDRIA	412	505	[illegible]
BATON ROUGE	252	271	247
LAKE CHARLES	319	376	229
NEW ORLEANS	293	321	211
SHREVEPORT	419	517	[illegible]
MAINE			
CARIBOU	[illegible]	2474	2255
PORTLAND	893	1770	1575
MARYLAND			
BALTIMORE	649	1024	897
MASSACHUSETTS			
BLUE HILL OBS R	802	1481	1201
BOSTON	673	[illegible]	988
WORCESTER	897	1747	1411
MICHIGAN			
ALPENA	911	2077	1938
DETROIT	770	1486	1185
DETROIT METRO	822	1526	1298
FLINT	835	1622	1397
GRAND RAPIDS	867	1639	1436
HOUGHTON LAKE	933	2060	1867
LANSING	884	1785	1410
MARQUETTE U	950	2132	1843
MUSKEGON	797	1529	1322
SAULT STE MARIE	972	2269	2011
MINNESOTA			
DULUTH	1167	[illegible]	[illegible]
INTERNATIONAL FALLS	1180	2507	2483
MINNEAPOLIS	974	1929	1761
ROCHESTER	1005	2001	1724
ST CLOUD	1049	2187	1914
MISSISSIPPI			
JACKSON	400	475	361
MERIDIAN	401	485	420
MISSOURI			
COLUMBIA REGIONAL	751	[illegible]	966
KANSAS CITY	751	1144	984
ST JOSEPH	781	1244	1059
ST LOUIS	751	[illegible]	938
SPRINGFIELD	727	1042	868
MONTANA			
BILLINGS	915	1997	1591
GLASGOW	958	2081	2060
GREAT FALLS	856	1987	1803
HAVRE	947	[illegible]	2047
HELENA	1010	2411	1987
KALISPELL	959	2303	2144
MILES CITY	941	1936	1660
MISSOULA	[illegible]	[illegible]	2097
NEBRASKA			
GRAND ISLAND	894	1519	1329
LINCOLN	855	1478	1249
NORFOLK	884	[illegible]	[illegible]
NORTH PLATTE	1047	1822	1454
OMAHA	831	1438	1205
SCOTTSBLUFF	1041	1737	1473
VALENTINE	[illegible]	1885	1621
NEVADA			
ELKO	985	1920	1753
ELY	1019	2040	[illegible]
LAS VEGAS	453	561	465
RENO	803	1589	1625
WINNEMUCCA	855	1642	1656
NEW HAMPSHIRE			
CONCORD	1007	2034	1560
MT WASHINGTON OBS	1388	4312	4147
NEW JERSEY			
ATLANTIC CITY	612	1063	[illegible]
ATLANTIC CITY U	553	906	766
NEWARK	599	977	903
TRENTON	624	1053	897
NEW MEXICO			
ALBUQUERQUE	740	1001	883
CLAYTON	921	1427	1081
ROSWELL	660	889	793
NEW YORK			
ALBANY	890	1688	1374
BINGHAMTON	937	1865	1569
BUFFALO	860	1596	1414
NEW YORK	611	993	803
NEW YORK KENNEDY	549	891	848
NEW YORK LA GUARDIA	653	1083	778
ROCHESTER	833	1490	1328
SYRACUSE	833	1530	[illegible]
NORTH CAROLINA			
ASHEVILLE	578	893	981
CAPE HATTERAS R	257	318	[illegible]
CHARLOTTE	490	688	568
GREENSBORO	[illegible]	886	738
RALEIGH	504	751	635
WILMINGTON	299	380	365
NORTH DAKOTA			
BISMARCK	1116	2176	1944
FARGO	1089	2111	1965
WILLISTON	1089	2358	2058
OHIO			
AKRON	755	1350	1212
CINCINNATI ABBE [illegible]	696	1096	914
CLEVELAND	752	1391	1192
COLUMBUS	727	1317	1151
DAYTON	771	1298	1090
MANSFIELD	783	[illegible]	1106
TOLEDO	810	1551	1331
YOUNGSTOWN	842	1666	1328
OKLAHOMA			
OKLAHOMA CITY	[illegible]	[illegible]	677
TULSA	634	836	698
OREGON			
ASTORIA	525	1307	1422
BURNS U	888	1883	1641
EUGENE	536	1212	1148
MEACHAM	893	2231	1994
MEDFORD	599	1175	1128
PENDLETON	663	1259	1172
PORTLAND	497	[illegible]	[illegible]
SALEM	552	1321	[illegible]
SEXTON SUMMIT R	749	[illegible]	1442
PENNSYLVANIA			
ALLENTOWN	745	1342	1136
ERIE	820	[illegible]	1385
HARRISBURG	686	1107	1009
PHILADELPHIA	635	1035	972
PITTSBURGH	767	1369	1215
SCRANTON	860	1629	1347
WILLIAMSPORT	810	1497	1212
RHODE ISLAND			
BLOCK ISLAND	636	1106	995
PROVIDENCE	717	1272	[illegible]
SOUTH CAROLINA			
CHARLESTON	268	301	341
CHARLESTON U	219	249	244
COLUMBIA	350	448	429
GRNVLLE-SPRTNBRG	476	669	550
SOUTH DAKOTA			
ABERDEEN	1033	[illegible]	1807
HURON	997	1853	1708
SIOUX FALLS	1010	1969	1577
[illegible]	[illegible]	1881	[illegible]
TENNESSEE			
[illegible]	559	[illegible]	[illegible]
CHATTANOOGA	567	830	[illegible]
KNOXVILLE	522	[illegible]	[illegible]
[illegible]	583	767	595
[illegible]	533	711	683
[illegible]	536	787	762
TEXAS			
ABILENE	554	725	465
AMARILLO	833	[illegible]	793
AUSTIN	375	[illegible]	256
BROWNSVILLE	144	144	66
CORPUS CHRISTI	[illegible]	196	120
DALLAS	425	537	383
[illegible]	283	304	249
EL PASO	480	570	498
FORT WORTH	446	545	[illegible]
GALVESTON U	225	248	[illegible]
HOUSTON INTERCON	320	372	250
LUBBOCK	672	917	[illegible]
MIDLAND	551	728	468
PORT ARTHUR	340	397	229
SAN ANGELO	438	538	[illegible]
SAN ANTONIO	334	363	235
VICTORIA	264	278	[illegible]
WACO	426	519	313
WICHITA FALLS	571	772	480
UTAH			
MILFORD	898	[illegible]	1409
SALT LAKE CITY	761	1218	1349
WENDOVER	816	1324	1242
VERMONT			
BURLINGTON	982	1983	1730
VIRGINIA			
LYNCHBURG	[illegible]	925	814
NORFOLK	406	607	[illegible]
RICHMOND	513	815	745
ROANOKE	582	1017	[illegible]
WALLOPS ISLAND	492	756	
WASHINGTON			
OLYMPIA	651	1670	1395
QUILLAYUTE	608	[illegible]	1602
SEATTLE-TACOMA	544	1374	[illegible]
SPOKANE	[illegible]	[illegible]	1574
STAMPEDE PASS R	963	2678	2666
WALLA WALLA U	641	1171	1078
YAKIMA	717	1498	1434
WEST VIRGINIA			
BECKLEY	737	1331	[illegible]
CHARLESTON	[illegible]	1052	908
ELKINS	745	1368	1298
HUNTINGTON	[illegible]	1117	905
PARKERSBURG U	655	1063	[illegible]
WISCONSIN			
GREEN BAY	895	1772	1660
LA CROSSE	913	1699	[illegible]
MADISON	905	[illegible]	1643
MILWAUKEE	859	[illegible]	1611
WYOMING			
CASPER	1025	2026	1680
CHEYENNE	1056	[illegible]	[illegible]
LANDER	1105	2097	[illegible]
SHERIDAN	942	2001	[illegible]

[illegible]

U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

NOVEMBER 1972

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	8	1668	
HUNTSVILLE	2	1450	
MOBILE	46	2925	
MONTGOMERY	17	2288	
ALASKA			
ANCHORAGE	0	5	
ANNETTE	0	16	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	18	
BETTLES	0	89	
BIG DELTA	0	57	
COLD BAY	0	0	
FAIRBANKS	0	95	
GULKANA	0	5	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	15	
MC GRATH	0	24	
NOME	0	26	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	19	
UNALAKLEET	0	35	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	100	
PHOENIX	4	4094	
TUCSON	1	2713	
WINSLOW	0	1210	
YUMA	1	4111	
ARKANSAS			
FORT SMITH	0	1802	
LITTLE ROCK	3	2111	
CALIFORNIA			
BAKERSFIELD	0	2410	
BISHOP	0	1079	
BLUE CANYON	0	475	
EUREKA U	0	1	
FRESNO	0	1850	
LONG BEACH	0	1166	
LOS ANGELES	1	754	
LOS ANGELES U	21	1545	
MT SHASTA R	0	378	
OAKLAND	0	147	
RED BLUFF	0	1969	
SACRAMENTO	0	1262	
SANDBERG R	0	816	
SAN DIEGO	0	752	
SAN FRANCISCO	0	109	
SAN FRANCISCO U	0	63	
SANTA MARIA	0	83	
STOCKTON	0	1509	
COLORADO			
ALAMOSA	0	55	
COLORADO SPRINGS	0	407	
DENVER	0	562	
GRAND JUNCTION	0	1367	
PUEBLO	0	1013	
CONNECTICUT			
BRIDGEPORT	0	729	
HARTFORD	0	676	
DELAWARE			
WILMINGTON	0	1063	
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	909	
WASHINGTON NATIONAL	2	1186	
FLORIDA			
APALACHICOLA U	75	2818	
DAYTONA BEACH	138	2970	
FORT MYERS	222	4010	
JACKSONVILLE	73	2517	
KEY WEST	398	4900	
LAKELAND U	159	3295	
MIAMI	261	3953	
ORLANDO	179	3722	
PENSACOLA	62	2914	
TALLAHASSEE	62	2543	
TAMPA	168	3378	
WEST PALM BEACH	296	4187	
GEORGIA			
ATHENS	9	1563	
ATLANTA	7	1453	
AUGUSTA	10	1810	
COLUMBUS	14	2190	
MACON	18	2009	
ROME	9	1498	
SAVANNAH	38	2272	
HAWAII			
HILO	256	3071	
HONOLULU	357	3982	
KAHULUI	312	3432	
LIHUE	341	3691	
IDAHO			
BOISE	0	817	
LEWISTON	0	810	
POCATELLO	0	341	
ILLINOIS			
CAIRO U	8	1704	
CHICAGO O HARE	0	820	
CHICAGO MIDWAY	0	888	
MOLINE	0	1020	
PEORIA	0	902	
ROCKFORD	0	711	
SPRINGFIELD	0	1145	
INDIANA			
EVANSVILLE	4	1160	
FORT WAYNE	0	718	
INDIANAPOLIS	0	979	
SOUTH BEND	0	582	
IOWA			
BURLINGTON	0	955	
DES MOINES	0	909	
DUBUQUE	0	689	
SIOUX CITY	0	979	
WATERLOO	0	664	
KANSAS			
CONCORDIA	0	1186	
DODGE CITY	0	1234	
GOODLAND	0	789	
TOPEKA	0	1204	
WICHITA	0	1548	
KENTUCKY			
COVINGTON	0	912	
LEXINGTON	4	900	
LOUISVILLE	4	1287	
LOUISIANA			
ALEXANDRIA	12	2375	
BATON ROUGE	46	2966	
LAKE CHARLES	18	2684	
NEW ORLEANS	48	2703	
SHREVEPORT	1	2595	
MAINE			
CARIBOU	0	127	
PORTLAND	0	196	
MARYLAND			
BALTIMORE	0	1058	
MASSACHUSETTS			
BLUE HILL OBS R	0	414	
BOSTON	0	671	
WORCESTER	0	394	
MICHIGAN			
ALPENA	0	165	
DETROIT	0	684	
DETROIT METRO	0	550	
FLINT	0	427	
GRAND RAPIDS	0	503	
HOUGHTON LAKE	0	245	
LANSING	0	373	
MARQUETTE U	0	189	
MUSKEGON	[illegible]	419	
SAULT STE MARIE	0	79	
MINNESOTA			
DULUTH	0	113	
INTERNATIONAL FALLS	0	262	
MINNEAPOLIS	0	572	
ROCHESTER	0	507	
ST CLOUD	0	400	
MISSISSIPPI			
JACKSON	15	2597	
MERIDIAN	21	2318	
MISSOURI			
COLUMBIA REGIONAL	0	1344	
KANSAS CITY	0	1575	
ST JOSEPH	0	1298	
ST LOUIS	0	1417	
SPRINGFIELD	0	1426	
MONTANA			
BILLINGS	0	453	
GLASGOW	0	378	
GREAT FALLS	0	394	
HAVRE	0	489	
HELENA	0	163	
KALISPELL	0	187	
MILES CITY	0	592	
MISSOULA	0	228	
NEBRASKA			
GRAND ISLAND	0	984	
LINCOLN	0	936	
NORFOLK	0	901	
NORTH PLATTE	0	645	
OMAHA	0	1045	
SCOTTSBLUFF	0	583	
VALENTINE	0	684	
NEVADA			
ELKO	0	242	
ELY	0	191	
LAS VEGAS	0	3071	
RENO	0	385	
WINNEMUCCA	0	731	
NEW HAMPSHIRE			
CONCORD	0	301	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	[illegible]	853	
ATLANTIC CITY U	0	626	
NEWARK	0	1121	
TRENTON U	0	965	
NEW MEXICO			
ALBUQUERQUE	0	1182	
CLAYTON	0	655	
ROSWELL	[illegible]	1616	
NEW YORK			
ALBANY	0	421	
BINGHAMTON	0	400	
BUFFALO	0	450	
NEW YORK U	0	1064	
NEW YORK KENNEDY	0	968	
NEW YORK LA GUARDIA	0	801	
ROCHESTER	0	637	
SYRACUSE	0	570	
NORTH CAROLINA			
ASHEVILLE	1	722	
CAPE HATTERAS R	17	1492	
CHARLOTTE	10	1321	
GREENSBORO	7	1071	
RALEIGH	6	1155	
WILMINGTON	19	1726	
NORTH DAKOTA			
BISMARCK	0	462	
FARGO	0	574	
WILLISTON	0	342	
OHIO			
AKRON	0	545	
CINCINNATI ABBE OB	0	996	
CLEVELAND	0	529	
COLUMBUS	0	591	
DAYTON	[illegible]	831	
MANSFIELD	0	723	
TOLEDO	0	528	
YOUNGSTOWN	0	394	
OKLAHOMA			
OKLAHOMA CITY	0	2085	
TULSA	0	2120	
OREGON			
ASTORIA	0	59	
BURNS U	0	333	
EUGENE	[illegible]	358	
MEACHAM	0	207	
MEDFORD	0	735	
PENDLETON	0	911	
PORTLAND	0	531	
SALEM	0	307	
SEXTON SUMMIT R	0	376	
PACIFIC AREA			
GUAM TAGUAC R	440	4578	
JOHNSTON	436	2216	
KOROR R	528	5682	
KWAJALEIN	528	5739	
MAJURO	506	5455	
PAGO PAGO	480	5074	
PONAPE R	493	5229	
TRUK MOEN ISLAND	519	5490	
WAKE	477	4888	
YAP R	488	5460	
PENNSYLVANIA			
ALLENTOWN	[illegible]	719	
ERIE	0	322	
HARRISBURG	0	950	
PHILADELPHIA	[illegible]	1074	
PITTSBURGH	0	589	
SCRANTON	0	514	
WILLIAMSPORT	0	551	
RHODE ISLAND			
BLOCK ISLAND	[illegible]	428	
PROVIDENCE	[illegible]	583	
SOUTH CAROLINA			
CHARLESTON	30	2000	
CHARLESTON U	42	2183	
COLUMBIA	14	1749	
GRNVLLE-SPRTNBRG	9	1307	
SOUTH DAKOTA			
ABERDEEN	0	639	
HURON	0	605	
RAPID CITY	0	401	
SIOUX FALLS	0	619	
TENNESSEE			
BRISTOL	[illegible]	862	
CHATTANOOGA	4	1118	
KNOXVILLE	2	1205	
MEMPHIS	[illegible]	1991	
NASHVILLE	6	1573	
OAK RIDGE R	2	1137	
TEXAS			
ABILENE	1	2296	
AMARILLO	0	1212	
AUSTIN	16	3104	
BROWNSVILLE	95	3801	
CORPUS CHRISTI	68	3780	
DALLAS	6	3060	
DEL RIO	18	3148	
EL PASO	0	1963	
FORT WORTH	4	2859	
GALVESTON U	48	3264	
HOUSTON INTERCON	17	2744	
LUBBOCK	[illegible]	1552	
MIDLAND	0	1945	
PORT ARTHUR	17	2572	
SAN ANGELO	7	2591	
SAN ANTONIO	12	2997	
VICTORIA	37	3395	
WACO	6	2939	
WICHITA FALLS	2	2507	
UTAH			
MILFORD	0	659	
SALT LAKE CITY	[illegible]	1058	
WENDOVER	0	1149	
VERMONT			
BURLINGTON	0	358	
VIRGINIA			
LYNCHBURG	3	949	
NORFOLK	10	1241	
RICHMOND	8	1171	
ROANOKE	2	844	
WALLOPS ISLAND	3	974	
WASHINGTON			
OLYMPIA	0	88	
QUILLAYUTE	0	74	
SEATTLE-TACOMA	[illegible]	212	
SPOKANE	0	430	
STAMPEDE PASS R	0	59	
WALLA WALLA U	0	914	
YAKIMA	0	549	
WEST INDIES			
SAN JUAN P.R.	490	5516	
WEST VIRGINIA			
BECKLEY	[illegible]	379	
CHARLESTON	0	827	
ELKINS	0	317	
HUNTINGTON	3	841	
PARKERSBURG U	3	890	
WISCONSIN			
GREEN BAY	[illegible]	495	
LA CROSSE	0	685	
MADISON	[illegible]	465	
MILWAUKEE	0	417	
WYOMING			
CASPER	0	304	
CHEYENNE	0	151	
LANDER	0	297	
SHERIDAN	0	294	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

NOVEMBER 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS
Alabama	1	1			5							4																	
Alaska												4																	
Arizona*																													
Arkansas*																													
California																										2		6	5
Colorado												2						1											
Connecticut												5																4	
Delaware*																													
Florida	1	1			2						3	5																	
Georgia	1	1			3							4																	
Hawaii																										6	1	3	
Idaho*																													
Illinois										1		5																°6	C
Indiana																													6
Iowa																				6	6								
Kansas																								5	7				
Kentucky*																													
Louisiana	5	2		3	5							5				5													
Maine												5								4								5	
Maryland												4																	
Massachusetts										1	2	5								5								5	
Michigan																												7	?
Minnesota*																													
Mississippi	2	1			5						1	?			1													5	5
Missouri																			29	4						1		5	6
Montana												4																4	
Nebraska																		3	?	7	7			?	?				
Nevada*																													
New Hampshire											1	5								5								4	
New Jersey																												5	
New Mexico*																													
New York										1	2	5																5	
North Carolina*																													
North Dakota*																													
Ohio												7	?																
Oklahoma												4				3				?	?							5	?
Oregon																										1	1		
Pacific Area*																													
Pennsylvania*																													
Puerto Rico & V I*																													
Rhode Island												4																4	
South Carolina																											12	3	
South Dakota																				4				4					
Tennessee																												°5	C
Texas	7	2	2	5	6					2	26	6																	
Utah*																													
Vermont												4								5								3	
Virginia*																													
Washington																										3	3	3	
West Virginia*																													
Wisconsin												5																	
Wyoming*																													

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
NOVEMBER 1972

Elmer R. Nelson, Office of Hydrology

The most damaging floods during November were the floods in the White and Lower Mississippi Basins in Arkansas. Major flooding occurred on the Black, Cache, and White Rivers.

Flash floods in southern Missouri resulted in two deaths when automobiles were washed off the roads by swollen creeks. Another life was lost in the Lower Meramec Basin when a woman left her stranded car to get help and drowned. Numerous homes in southern Missouri and central Illinois were evacuated due to local flash flooding.

Only flood events resulting in loss of life and/or flood damage during the month are summarized. They are listed by drainage basins below:

Date (November)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	ST. LAWRENCE DRAINAGE		
2-5 8-2 14-20	Lake Erie--Flooding occurred in the Maumee River Basin in Indiana and Ohio. Flooding was confined mainly to the headwaters. The heaviest flooding was reported on the St. Marys River where crests ranged up to 3.6 feet above flood stage.	0	N.A.
	ATLANTIC SLOPE DRAINAGE		
8-9	Moderate to heavy rainfall on the 8th caused overflows in north eastern New Jersey and southeastern Pennsylvania. Evacuations were required in portions of northeastern New Jersey. Defense Civil Preparedness Agency reported 60 families were evacuated from the Fort Washington area along a branch of the Wissahickon Creek. Rainfall on the 14th caused additional flooding on some of these streams. Precipitation during November was record to near record over most of the Delaware Valley and New Jersey.	0	N.A.
15-16	Minor flooding occurred in the lower James Basin. The maximum departure above flood stage was at Columbia, Va., where the crest exceeded flood stage by around 3.8 feet.	0	N.A.
	MISSISSIPPI SYSTEM		
Oct. 30- Nov. 6	Upper Mississippi Basin--Heavy rain beginning over much of southern Missouri and southern Illinois during the night of Oct. 30 and continuing into Nov. 2 caused localized flash flooding. Rainfall amounts up to 6 to 7 inches and general amounts of 3 to 4 inches in 24 hours were reported. Two deaths occurred when automobiles were washed off	2	N.A.

NOVEMBER 1972

Date (November)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	MISSISSIPPI SYSTEM - Continued the roads by swollen creeks in Polk and St. Francis Counties in Missouri. In central Illinois and southern Missouri numerous homes were evacuated due to local flash flooding. The Meramec, Gasconade and Big Rivers reached flood stage within 48 to 72 hours.		
14-1/	General rains of 3 to 4 inches on the 13th caused streams in southern Missouri and central Illinois to exceed flood stage by up to 4.5 feet. One death was reported in the lower Meramec Basin when a woman left her stranded car to get help and drowned. Most flooding of farmlands was caused by the heavy rainfall rather than flooding of streams. Loss of crops especially corn and soybeans in southern Illinois ran into the millions of dollars.	1	102
3-10	Ohio Basin--Minor flooding occurred in the Wabash and White River Basins in Indiana during the first and latter part of the month. Practically all flooding was in agricultural bottomlands. It caused long delays in the harvesting of corn and other crops. Rainfall over the Wabash Basin averaged about double the normal November amount. Damage was confined to crops not yet harvested.	0	N.A.
Oct. 29 - 1/	White Basin--Major flooding resulted on the Black, Cache, and White Rivers in Arkansas from the heavy rains on Oct. 30 to Nov. 2. Additional rain continued at 6-day intervals throughout the month, maintaining high stages and kept lowlands flooded in many areas. Heavy damage resulted to growing crops.	0	2,482
1-4 6-9 13-15 20	Arkansas Basin--The most severe flooding in the Arkansas Basin occurred on the Spring River at Carthage, Mo., and Quapaw, Okla., where the crests were 5 feet and 4.5 feet above flood stage. Bird Creek at Sperry, Okla., crested over 4 feet above flood stage. The Arkansas River at Van Buren, Ark., rose to above flood stage in response to three different storms. Most of the flooding occurred in lowlands where necessary precautions were taken.	0	126

Date (November)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	MISSISSIPPI SYSTEM - Continued		
Oct. 31-3	Red Basin--Heavy rain at the end of October caused flooding on Beaver Creek at Electra, Tex., and Wichita River at Wichita Falls, Tec. Beaver Creek crested nearly 5 feet above flood stage on the 1st.	0	N.A.
Oct. 31-18 20-25	Major flooding occurred along the Quachita and Saline Rivers. Flood damage to crops and highways was severe.	0	344
2-21	Lower Mississippi Basin--Heavy rain during the latter part of October and the first part of November caused nearly 2.5 feet of overflow on the St. Francis River at St. Francis, Ark. Considerable damage resulted to the soybean and cotton crop in Missouri. The damage in Arkansas was estimated at $1 million.	0	2,760

1/ Flooding continued at the end of the month.
N.A. Not Available.

FLOOD STAGE DATA

(All dates in November unless otherwise specified)

NOVEMBER 1972

River and station	Flood stage	Above flood stages -dates		Crest	
		From–	To–	Stage	Date
	Ft.			Ft	
ST. LAWRENCE DRAINAGE					
Lake Erie					
St. Marys: Decatur, Ind.	15	2 8 14	5 9 18	18.1 15.6 18.6	3 9 15
St Joseph: Montpelier, Ohio	10	14	18	11.9	16
Tiffin: Stryker, Ohio	10	8 14	12 20	10.8 12.3	9 17
Sandusky: Fremont, Ohio	10	16	17	10.3	17
ATLANTIC SLOPE DRAINAGE					
Saddle: Lodi, N. J.	5	8	8	6.2	8
Passaic: Chatham, N. J.	6	8 14	9 14	7.2 6.1	8 14
Millstone: Blackwells Mills, N.J.	7	8	9	9.7	9
Raritan: Manville, N. J.	12	8	9	16.5	9
Boundbrook, N. J.	8	8 14	9 14	12.5 8.15	9 14
Assunpink Creek:					
Trenton, N. J.	5	8 14	9 14	6.5 6.2	8 14
Neshaminy Creek:					
Langhorne, Pa.	9	8 14	9 14	15.0 10.5	9 14
Perkomen Creek:					
Graterford, Pa.	11	9 14	9 14	11.2 10.5	9 14
Perkiomen Creek:					
Graterford, Pa.	11	9 14	9 14	11.2 12.3	9 14
Brandywine Creek:					
Chadds Ford, Pa.	9	14	14	9.05	14
Rivanna:					
Palmyra, Va.	17	14	15	17.3	15
Susquehanna:					
Conklin, N. Y.	11	9	10	14.4	9
Vestal, N. Y.	18	9	9	19.7	9
Tunkhannock Creek:					
Dixon, Pa.	9	14	15	9.1	14
James: Bremo Bluff, Va.	19	15	15	19.0	15
Columbia, Va.	18	14	15	E21.8	15
State Farm, Va.	12	15	16	E14.3	15
Richmond,(Westham), Va.	12	15	16	13.5	15
Richmond,(City Locks), Va.	9	15	16	9.4	16
Dan: Danville, Va.	11	14	14	11.4	14
Roanoke:					
Randolph, Va.	21	15 21	16 21	22.4 21.6	15 21
Williamston, N. C.	10	Oct. 13 26	6 30	10.6 11.0	Oct. 30 30
Neuse: Neuse, N. C.	14	19	23	16.5	20
Smithfield, N. C.	13	9 18 26	11 26 30	13.9 18.6 14.7	11 22 28
Goldsboro, N. C.	14	23	30	17.9	28
Kinston, N. C.	14	27	30	15.5	30
Cape Fear:					
Lock No. 3, William O. Huske Lock & Dam, N. C.	42	22 28	23 28	43.7 42.4	22 28
Lock No. 2, Elizabethtown, N. C.	20	22 28	23 29	21.9 20.9	22 28
Lumber:					
Lumberton, N. C.	9	24	Dec. 12	10.0	27

River and station	Flood stage	Above flood stages -dates		Crest	
		From-	To-	Stage	Date
	Ft			Ft	
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Wapsipinicon:					
DeWitt, Iowa	10	3 6	3 13	10.0 10.1	3 11
Iowa: Marshalltown, Iowa	13	2 7	4 10	13.7 13.9	3 8
Illinois: Morris, Ill.	13	15	17	14.5	15
LaSalle, Ill.	20	15	21	22.4	[illegible]
Peoria, Ill.	18	19	21	18.0	19
Havana, Ill.	14	15	Dec. [illegible]	16.5	25
Beardstown, Ill.	14	18	Dec. [illegible]	15.4	25
Bourbeuse:					
Union, Mo.	15	16	17	16.6	16
Big: Byrnesville, Mo.	16	3 14	4 15	23.0 20.5	3 15
Meramec: Steelville, Mo.	12	14	14	14.1	14
Sullivan, Mo.	15	14	16	16.6	14
Pacific, Mo.	18	[illegible] 14	4 17	19.0 22.3	4 16
Eureka, Mo.	18	[illegible] 15	5 16	19.2 20.6	5 15
Valley Park, Mo.	16	[illegible] 15	6 18	19.7 18.9	5 16
Missouri Basin					
Little Platte:					
Smithville, Mo.	24	13	14	24.6	14
Black Vermillion:					
Frankford, Kansas	19	13	14	20.0	14
Stranger Creek:					
Easton, Kans.	15	14	14	17.05	14
Grand: Sumner, Mo.	26	14	16	29.4	15
Brunswick, Mo.	12	14	16	13.5	15
Lamine: Clifton City, Mo.	19	13	15	21.7	14
Blackwater:					
Valley City, Mo.	22	13	15	24.75	14
Blue Lick, Mo.	25	14	16	G	
Gasconade:					
Hazelgreen, Mo.	21	3	3	21.0	3
Jerome, Mo.	15	3	4	17.5	3
Ohio Basin					
Paint Creek:					
Bourneville, Ohio	10	14	14	10.6	14
Scioto:					
La Rue, Ohio	11	15	16	11.75	15
Circleville, Ohio	14	4 9 15	[illegible] 10 17	14.4 15.25 16.1	4 9 15
Piketon, Ohio	16	15	18	18.2	16
Embarrass:					
Lawrenceville, Ill.	11	3 14	5 21	12.95 13.75	4 16-18
Eel: Bowling Green, Ind.	17	3	3	18.6	3
East Fork White:					
Seymour, Ind.	14	16	17	14.6	17
White:					
Anderson, Ind.	10	3 15	3 15	10.7 11.3	3 15
Noblesville, Ind.	14	16	16	14.0	16
Ravenswood, Ind.	6	[illegible]	17	6.5	16
Centerton, Ind.	603	3	3	603.2	3
Spencer, Ind.	14	3 14	6 19	16.3 18.0	[illegible] 16

FLOOD STAGE DATA

(All dates in November unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM-Continued					
Ohio Basin-Continued					
White-Continued:					
Elliston, Ind.	18	3 14	8 25	21.95 22.35	6 17
Edwardsport, Ind.	15	4 15	10 23	18.6 19.3	8 19
Petersburg, Ind.	16	16	23	18.55	22
Little Wabash:					
Wilcox, Ill.	16	3 14	6 19	18.8 20.1	4 16
Wabash: Bluffton, Ind.	10	5 14	6 14	10.8 11.45	5 17
Wabash, Ind.	12	14	14	12.9	14
Lafayette, Ind.	11	3 8 14 29	4 10 23 29	12.3 11.7 16.45 11.6	4 9 16 29
Covington, Ind	16	4 15	5 23	16.1 20.3	4 17
Montezuma, Ind.	14	2 14	10 30	17.6 19.95	4 17
Terre Haute, Ind.	14	3 14	6 25	15.3 17.4	5 19
Hutonsville, Ind.	20	20	22	20.1	21
Riverton, Ind.	18	21	23	18.1	22
Vincennes, Ind.	16	21	24	16.3	23
Mt. Carmel, Ind.	17	20	25	18.2	23
White Basin					
Black: Pocahontas, Ark.	17	3	23	21.1	9
Black Rock, Ark.	14	1	27	22.1	8
Cache: Patterson, Ark.	7	Oct. 29	1/	10.0	9
White: Clarendon, Ark.	26	11	Dec. 3	27.5	25
St. Charles, Ark.	25	17	Dec. 7	25.8	25
Arkansas Basin					
Elk: Tiff City, Mo.	15	1	2	17.6	2
Little Caney:					
Copan, Okla.	21	13	14	22.0	14
Caney: Ramona, Okla.	27	14	14	27.2	14
Bird Creek:					
Sperry, Okla	21	1 13	2 14	21.75 25.1	2 14
Owasso, Okla.	25	13	15	26.75	14
Spring: Carthage, Mo.	12	1	2	17.0	1
Quapaw, Okla.	20	1	3	24.5	2
Grand: Commerce, Okla.	15	1 13	3 15	17.4 17.7	2 14
Illinois: Tahlequah, Okla.	11	13	3	12.5	2
Poteau: Poteau, Okla.	24	6	7	27.2	6
Panama, Okla.	24	2 6	2 8	24.3 29.1	2 7
Fourche La Fare:					
Houston, Ark.	25	2 7	4 9	26.5 27.0	3 8
Petit Jean:					
Danville, Ark.	20	1	4	24.0	2
Arkansas: Van Buren, Ark.	22	1 6 20	4 6 20	23.6 22.0 22.2	2 6 20

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM - Continued					
Red Basin					
Wichita: Wichita Falls, Tex.	18	1	3	19.2	3
Beaver Creek:					
Electra, Tex.	24	Oct. 31	2	28.8	1
Blue: Blue, Okla.	21	Oct. 31	2	29.5	Oct. 31
Clear Boggy:					
Caney, Okla.	19	Oct. 31	1	E 23.0	Oct. 31
Kiamichi:					
Belzoni, Okla.	28	7	9	32.0	7
Glover:					
Glover, Okla.	16	Oct. 31	1	U	Oct. 31
Little:					
Idabel, Okla.	30	2	4	32.2	2
Sulphur:					
Hagansport, Tez.	44	Oct. 31 7	4 9	47.0 46.3	Oct. 31 7
Naples, Tex.	22	7	17	25.5	9
Saline: Benton, Ark.	20	Oct. 31	1	22.8	1
Quachita: Arkadelphia, Ark.	17	Oct. 31 7	2 8	23.6 21.2	1 7
Camden, Ark.	26	3 8 20	6 18 25	27.7 31.7 28.1	5 12 22
Lower Mississippi Basin					
St. Francis:					
St. Francis, Ark.	18	2	21	20.3	8
Atchafalaya Basin					
Atchafalaya:					
Morgan City, La.	7	25	25	7.3	25
WEST GULF OF MEXICO DRAINAGE					
Calcasieu:					
Lake Charles, La.	3	Oct. 29 5 9 12 25	4 8 11 14 26	3.6 3.7 3.6 3.9 3.6	1 6 9 13 25
Navasota:					
Bryan (nr.), Tex.	12	2	4	12.3	3

* Provisional

1/ Continued at the end of the month

E Estimated

[illegible]

[illegible]

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	-.1	-2.2	30	1.0
1000	24	179	-.1	-2.5	29	.9
950	30	562	-.3	-2.8	29	1.9
900	30	994	-2.0	-4.7	28	3.2
850	30	1,447	-2.9	-8.5	27	4.9
800	30	1,929	-2.5	-11.8	27	6.3
750	30	2,440	-3.8	-15.1	27	7.7
700	30	2,983	-5.9	-18.2	27	9.6
650	30	3,560	-8.7	-21.4	27	11.4
600	30	4,177	-11.9	-24.6	27	13.8
550	30	4,838	-15.7	-28.2	27	16.8
500	30	5,551	-20.3	-31.9	27	19.8
450	30	6,323	-25.7	-35.8	27	22.5
400	30	7,166	-31.9	-40.6	27	24.2
350	30	8,100	-38.5	-45.1	27	28.1
300	30	9,140	-45.5		28	29.2
250	30	10,338	-51.8		28	32.2
200	30	11,769	-55.7		28	33.7
175	30	12,618	-56.4		27	30.2
150	29	13,596	-56.4		27	25.6
125	29	14,749	-58.2		27	22.7
100	29	16,151	-59.4		27	18.4
80	29	17,545	-59.8		27	16.0
70	29	18,380	-59.7		28	12.3
60	28	19,340	-59.7		27	9.9
50	28	20,481	-59.1		28	10.7
40	28	21,881	-58.9		28	9.0
30	26	23,693	-57.9		29	8.5
25	24	24,842	-57.4		30	7.2
20	21	26,256	-56.1		29	9.2
15	21	28,089	-55.1		29	12.1
10	13	30,680	-52.6		29	11.2

ALBUQUERQUE, N. MEX. 837 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	.3	-4.4	35	1.3
1000						
950						
900						
850						
800	30	1,982	1.4	-7.5	31	2.8
750	30	2,499	-1.5	-9.3	30	5.4
700	30	3,046	-4.4	-13.2	29	7.8
650	30	3,628	-6.2	-18.5	29	10.1
600	30	4,251	-9.3	-23.6	29	12.4
550	30	4,918	-13.7	-28.7	29	15.2
500	30	5,636	-18.7	-31.9	28	16.7
450	30	6,413	-23.8	-36.4	28	19.2
400	30	7,264	-29.5	-42.9	28	21.8
350	30	8,206	-36.6	-49.1	27	23.5
300	30	9,255	-43.7		27	26.6
250	30	10,460	-50.7		27	30.2
200	30	11,896	-55.6		27	32.5
175	30	12,745	-56.7		27	30.9
150	30	13,718	-58.9		27	27.8
125	30	14,855	-61.8		27	25.6
100	30	16,231	-63.1		27	20.8
80	28	17,607	-63.6		27	13.5
70	28	18,430	-62.3		27	9.4
60	27	19,382	-61.2		27	7.8
50	27	20,518	-60.1		27	5.9
40	27	21,913	-59.1		28	6.5
30	26	23,722	-58.0		30	5.4
25	23	24,873	-56.9		29	5.2
20	20	26,304	-55.2		31	4.0
15	16	28,158	-53.7		29	4.2
10						

AMARILLO, TEXAS 891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	-.4	-3.5	23	2.0
1000						
950						
900						
850	30	1,474	1.9	-4.3	25	4.0
800	30	1,962	.8	-7.1	27	6.0
750	30	2,480	-.8	-10.6	27	7.8
700	30	3,029	-3.2	-14.7	28	9.0
650	30	3,612	-5.7	-19.3	27	10.7
600	30	4,236	-9.0	-23.0	27	13.0
550	30	4,905	-12.9	-27.2	27	15.3
500	30	5,625	-17.8	-32.5	27	18.5
450	30	6,405	-22.9	-36.4	27	20.9
400	30	7,258	-29.0	-41.1	27	22.4
350	30	8,203	-35.7	-46.5	26	25.7
300	30	9,255	-43.2	-49.6	26	31.6
250	30	10,464	-50.5		26	34.0
200	29	11,904	-55.6		26	36.0
175	29	12,751	-57.5		26	38.3
150	29	13,721	-59.1		26	30.9
125	28	14,858	-61.4		26	31.0
100	28	16,237	-63.0		26	24.3
80	28	17,606	-63.8		27	17.1
70	28	18,427	-62.9		27	13.7
60	27	19,377	-62.4		27	10.6
50	24	20,508	-61.3		27	7.4
40	24	21,899	-60.0		28	7.3
30	23	23,699	-58.8		28	7.3
25	22	24,848	-57.4		28	7.3
20	20	26,262	-55.7		28	7.9
15	11	28,100	-55.1		27	11.6
10	6	30,700	-53.4			

• ANCHORAGE, ALASKA 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	-5.0	-7.6	[illegible]	[illegible]
1000	17	[illegible]	-4.5	-8.2	02	1.7
950	30	446	-2.6	-8.9	03	2.0
900	30	875	-3.4	-9.9	12	1.9
850	30	1,325	-5.7	-11.8	14	3.3
800	30	1,799	-8.2	-14.7	14	3.7
750	30	2,297	-11.1	-18.2	15	4.3
700	30	2,824	-14.2	-22.1	17	4.8
650	30	3,383	-17.5	-24.4	18	4.9
600	30	3,978	-21.1	-28.1	18	5.5
550	30	4,615	-25.6	-32.7	18	6.6
500	30	5,299	-30.3	-38.1	18	6.8
450	30	6,040	-35.7	-41.3	18	7.0
400	30	6,849	-41.5	-46.1	19	7.5
350	30	7,746	-47.4		19	8.0
300	30	8,752	-52.2		21	7.9
250	30	9,926	-53.8		22	10.1
200	30	11,367	-51.0		23	10.8
175	30	12,237	-50.4		23	10.8
150	30	13,242	-50.8		23	11.7
125	30	14,431	-50.3		24	11.1
100	30	15,888	-50.1		24	10.6
80	29	17,350	-50.6		24	9.4
70	29	18,219	-51.2		24	8.3
60	29	19,221	-51.6		24	7.3
50	28	20,398	-51.8		24	6.9
40	28	21,845	-51.9		25	5.4
30	28	23,707	-52.3		25	5.0
25	28	24,887	-52.3		25	4.2
20	26	26,334	-52.0		26	2.9
15	19	28,213	-52.2		29	2.5
10	11	30,893	-51.1		30	4.2

• ANNETTE, ALASKA [illegible]005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	4.6	[illegible]	[illegible]	[illegible]
1000	23	102	4.5	[illegible]	[illegible]	[illegible]
950	30	496	3.1	[illegible]	[illegible]	[illegible]
900	30	933	.4	-1.6	16	[illegible]
850	30	1,389	-2.3	-4.0	18	[illegible]
800	30	1,869	-4.6	-8.4	20	[illegible]
750	30	2,375	-7.2	-13.2	21	[illegible]
700	30	[illegible]	-9.5	-17.2	22	[illegible]
650	30	3,480	-12.9	-20.2	22	[illegible]
600	30	[illegible]	-16.4	-22.7	22	[illegible]
550	30	4,736	-20.3	-26.8	22	9.9
500	30	5,435	-24.9	-31.5	23	[illegible]
450	30	6,193	-30.2	-35.8	23	[illegible]
400	30	7,021	[illegible]	-41.2	[illegible]	[illegible]
350	30	7,937	-43.0		[illegible]	[illegible]
300	30	8,957	-50.3		[illegible]	[illegible]
250	29	10,140	-55.2		[illegible]	[illegible]
200	29	11,559	-55.7		[illegible]	[illegible]
175	29	12,413	-54.0		[illegible]	[illegible]
150	29	13,404	-53.5		26	9.8
125	29	14,577	-53.7		27	9.3
100	29	16,011	-53.9		27	[illegible]
80	26	17,435	-54.5		[illegible]	[illegible]
70	26	18,290	-54.8		[illegible]	[illegible]
60	26	19,277	-54.5		29	[illegible]
50	26	20,444	-54.9		31	7.9
40	24	21,876	-54.4		34	[illegible]
30	22	23,719	-54.1		01	2.3
25	20	24,888	-54.1		02	[illegible]
20	18	26,326	-53.9		[illegible]	[illegible]
15	12	28,186	-53.3		02	[illegible]
10	7	30,807	-52.9			

ATHENS, GEORGIA 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	7.2	4.5	03	.5
1000						
950	30	574	8.3	3.5	14	.8
900	30	1,021	7.2	2.6	23	3.1
850	30	1,491	6.5	-2.9	24	6.6
800	30	1,989	6.2	-6.8	25	9.2
750	30	2,517	4.4	-10.5	25	11.2
700	30	3,076	2.6	-14.2	26	14.4
650	30	3,673	-.4	-17.6	26	16.1
600	30	4,308	-4.2	-21.3	26	18.1
550	30	4,988	-8.8	-25.4	26	20.4
500	30	5,719	-13.8	-31.4	26	24.4
450	30	6,512	-19.2	-34.3	26	28.0
400	30	7,377	-25.4	-39.3	26	32.0
350	30	8,336	-32.2	-45.2	26	35.8
300	30	9,403	-40.4	-47.8	26	38.8
250	30	10,623	-48.7		26	45.4
200	30	12,063	-56.9		26	43.5
175	29	12,896	-60.3		26	42.8
150	29	13,851	-63.1		26	37.4
125	29	14,964	-66.5		26	31.9
100	29	16,306	-68.6		26	24.2
80	29	17,645	-67.2		26	17.8
70	28	18,456	-64.8		27	12.1
60	28	19,400	-63.8		27	8.7
50	28	20,523	-61.9		26	8.8
40	28	21,910	-60.1		27	7.1
30	26	23,716	-57.9		27	7.9
25	25	24,873	-56.5		29	5.1
20	22	26,280	-55.5		28	7.1
15	18	28,121	-53.3		27	7.2
10	15	30,759	-49.9		26	15.6

• BARROW, ALASKA 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	[illegible]	-16.9	-18.7	07	4.5
1000	29	130	-16.5	-18.8	08	6.0
950	29	516	-16.5	-19.3	08	7.2
900	29	923	-16.7	-21.2	09	6.6
850	29	1,351	-17.2	-22.8	09	6.0
800	29	1,805	-18.0	-24.9	09	5.4
750	29	2,287	-18.7	-28.0	10	3.4
700	29	2,800	-20.6	-30.3	11	2.2
650	29	3,345	-23.0	-33.0	19	1.6
600	29	3,928	-25.9	-35.7	19	1.8
550	28	4,552	-29.7	-37.9	22	2.9
500	28	5,225	-34.2	-42.0	23	3.8
450	28	5,955	-39.1	-43.2	23	5.9
400	28	6,753	-44.9		23	7.5
350	28	7,637	-50.7		24	9.8
300	28	8,625	-55.7		25	12.1
250	28	9,782	-56.5		24	12.4
200	28	11,211	-52.7		24	10.7
175	28	12,075	-51.9		24	10.5
150	27	13,080	-51.3		24	10.9
125	26	14,265	-51.2		24	12.0
100	25	15,715	-50.9		24	12.9
80	23	17,170	-51.0		25	13.3
70	21	18,037	-51.2		24	13.9
60	18	19,032	-51.9		24	15.3
50	15	20,206	-51.8		24	16.4
40	13	21,664	-52.5		25	16.9
30	8	23,562	-51.9			
25						
20						
15						
10						

BARTER IS., ALASKA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	15	-16.9	-19.1	09	3.7
1000	26	127	-15.5	-18.3	09	4.4
950	27	509	-16.2	-18.9	09	5.3
900	27	917	-15.1	-19.0	09	5.0
850	27	1,349	-15.1	-19.7	09	3.7
800	27	1,808	-14.9	-20.6	09	2.0
750	27	2,295	-16.0	-22.4	28	.8
700	27	2,813	-18.2	-24.7	26	2.9
650	27	3,364	-20.6	-27.4	26	4.4
600	27	3,952	-23.9	-30.1	26	6.1
550	27	4,583	-27.7	-34.2	26	7.5
500	27	5,262	-32.2	-39.2	26	9.3
450	27	5,998	-37.1	-41.7	26	11.1
400	27	6,802	-43.1		27	12.1
350	27	7,692	-49.4		27	14.0
300	27	8,686	-55.0		27	15.7
250	27	9,844	-56.5		27	13.8
200	26	11,276	-52.5		26	12.8
175	26	12,142	-51.1		26	11.4
150	26	13,146	-50.7		26	11.6
125	23	14,332	-50.3		26	10.8
100	23	15,790	-50.1		26	11.2
80	22	17,246	-50.6		26	11.7
70	22	18,116	-50.9		26	10.6
60	21	19,123	-51.4		27	12.2
50	21	20,307	-51.6		27	12.0
40	21	21,753	-52.0		27	13.4
30	21	23,617	-52.3		27	14.1
25	21	24,795	-52.9		27	14.9
20	20	26,226	-52.7		28	15.8
15	15	28,103	-52.8		27	17.0
10	5	30,714	-52.5			

BETHEL, ALASKA 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	-7.5	-9.9	07	2.6
1000	12	99	-7.8	-10.1	03	.7
950	30	417	-4.8	-8.5	11	3.9
900	30	842	-5.9	-10.8	14	3.6
850	30	1,289	-7.9	-12.5	17	4.5
800	30	1,758	-10.4	-15.2	18	4.7
750	30	2,253	-13.0	-19.3	18	4.5
700	30	2,775	-16.0	-24.5	18	4.3
650	30	3,330	-19.1	-27.4	18	5.0
600	30	3,922	-22.9	-30.5	17	6.1
550	30	4,554	-27.1	-34.6	18	7.0
500	30	5,235	-31.5	-39.7	18	8.1
450	30	5,974	-36.3	-42.1	19	8.5
400	30	6,781	-42.0	-44.2	19	11.5
350	30	7,676	-48.0		19	14.2
300	30	8,678	-52.8		19	14.4
250	30	9,851	-53.4		21	11.7
200	30	11,296	-50.6		22	11.1
175	30	12,167	-50.1		22	11.4
150	30	13,176	-49.5		22	12.3
125	30	14,371	-49.2		23	11.2
100	30	15,835	-49.4		22	11.4
80	29	17,298	-49.9		23	11.0
70	29	18,170	-50.3		23	10.0
60	29	19,176	-50.7		23	8.8
50	27	20,368	-50.7		23	8.5
40	27	21,821	-51.0		23	7.3
30	27	23,691	-51.4		24	7.1
25	27	24,875	-51.7		24	5.4
20	25	26,335	-51.7		24	4.3
15	20	28,181	-51.8		23	4.4
10	9	30,905	-51.8			

• BISMARCK, N. DAK. 956 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	533	-4.3	-6.1	02	.4
1000						
950	25	573	-4.2	-6.7	33	.2
900	30	983	-2.9	-7.6	29	3.2
850	30	1,437	-2.7	-11.3	30	4.7
800	30	1,916	-3.8	-13.7	30	[illegible]
750	30	2,424	-5.9	-16.6	30	[illegible]
700	30	2,962	-8.8	-20.8	30	[illegible]
650	30	3,533	-11.5	-23.8	30	[illegible]
600	30	4,142	-15.2	-27.7	30	[illegible]
550	30	4,794	-19.3	-32.1	30	[illegible]
500	30	5,496	-24.2	-35.2	30	[illegible]
450	30	6,256	-29.9	-39.5	30	[illegible]
400	30	7,084	-36.3	-44.4	30	[illegible]
350	30	8,000	-43.2	-48.7	30	[illegible]
300	30	9,019	-50.5		30	[illegible]
250	30	10,192	-56.0		29	[illegible]
200	30	11,609	-55.9		28	[illegible]
175	30	12,461	-54.8		28	[illegible]
150	30	13,447	-55.1		28	[illegible]
125	30	14,612	-55.2		28	[illegible]
100	30	16,033	-56.0		28	[illegible]
80	29	17,452	-56.5		28	[illegible]
70	29	18,299	-56.6		28	[illegible]
60	25	19,285	-56.9		28	[illegible]
50	24	20,440	-56.8		28	[illegible]
40	23	21,856	-56.9		31	[illegible]
30	20	23,684	-56.6		34	[illegible]
25	18	24,849	-55.7		[illegible]	[illegible]
20	17	26,273	-55.5		[illegible]	3.9
15	13	28,104	-55.8		[illegible]	[illegible]
10	8	30,713	-53.7			

BOISE, IDAHO 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	871	3.4	-1.2	13	1.3
1000						
950						
900	30	1,020	3.9	-1.7	13	1.1
850	30	1,484	1.6	-3.7	22	1.1
800	30	1,970	-1.2	-6.0	26	2.8
750	30	2,482	-3.9	-10.3	27	4.3
700	30	3,024	-6.7	-14.3	28	5.4
650	30	3,600	-9.8	-17.7	28	6.7
600	30	4,214	-13.1	-22.5	29	8.3
550	30	4,872	-17.0	-27.0	30	9.2
500	30	5,581	-21.8	-31.1	30	10.6
450	30	6,348	-27.3	-37.1	30	12.2
400	30	7,185	-33.9	-43.1	30	13.3
350	30	8,110	-41.2	-47.2	30	14.0
300	30	9,137	-48.8		30	15.5
250	30	10,316	-55.4		30	18.6
200	30	11,729	-57.8		30	19.6
175	28	12,573	-56.8		29	18.5
150	27	13,558	-56.0		30	16.4
125	26	14,713	-57.9		30	13.9
100	24	16,097	-58.5		29	11.9
[illegible]	23	17,497	-59.0		30	9.5
70	23	18,334	-59.4		30	7.0
60	23	19,299	-59.5		30	6.2
50	23	20,442	-58.5		31	4.1
40	22	21,846	-58.1		29	2.7
30	21	23,658	-57.2		01	1.8
25	19	24,815	-56.8		03	1.9
20	19	26,233	-55.7		04	3.1
15	13	28,066	-55.1		07	3.6
10	10	30,689	-53.5			

BOOTHVILLE, LA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	1	14.0	11.0	02	2.3
1000	26	144	14.2	10.7	03	2.7
950	26	576	11.9	9.2	07	1.7
900	26	1,030	12.6	2.4	25	2.7
850	26	1,510	12.4	-2.5	26	5.8
800	26	2,018	11.0	-3.3	26	8.5
750	26	2,553	8.5	-5.7	26	10.0
700	26	3,121	5.7	-8.5	26	12.4
650	25	3,724	2.6	-13.5	26	14.6
600	24	4,365	-1.4	-18.2	26	15.8
550	24	5,053	-5.9	-21.8	26	16.8
500	24	5,793	-10.8	-25.8	26	19.3
450	24	6,594	-16.4	-29.1	25	22.0
400	24	7,470	-22.3	-34.5	25	25.3
350	24	8,441	-28.8	-39.5	26	26.5
300	24	9,523	-37.2	-46.3	26	30.7
250	24	10,758	-46.6		26	35.2
200	22	12,209	-55.9		26	37.5
175	22	13,050	-60.5		26	40.4
150	20	14,002	-65.8		26	35.7
125	19	15,097	-70.3		26	29.5
100	18	16,415	-72.5		26	20.1
80	13	17,735	-71.2		26	11.5
70	13	18,531	-68.1		26	7.8
60	13	19,468	-63.7		26	5.4
50	13	20,593	-61.4		28	1.9
40	12	21,993	-59.2		26	4.5
30	12	23,809	-56.4		26	5.3
25	12	24,970	-55.0		26	6.4
20	11	26,402	-53.4			
15	9	28,268	-51.4			
10	7	30,915	-47.7			

• BROWNSVILLE, TEXAS 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	15.6	13.0	33	1.6
1000	30	128	17.0	14.8	36	1.9
950	30	568	17.1	13.1	11	2.2
900	30	1,029	15.6	7.2	17	2.9
850	30	1,513	13.9	3.9	21	3.9
800	30	2,023	12.4	3.0	22	5.9
750	30	2,564	10.7	-2.5	24	6.8
700	30	3,136	7.9	-7.1	25	8.6
650	30	3,743	4.0	-10.6	26	10.4
600	30	4,388	-.4	-15.3	26	[illegible]
550	30	5,079	-4.7	-21.5	26	13.2
500	30	5,822	-9.7	-28.1	[illegible]	15.6
450	30	6,627	-14.9	-32.0	[illegible]	18.9
400	30	7,508	-20.9	-36.9	25	22.8
350	30	8,484	-27.7	-43.0	25	26.4
300	30	9,570	-36.0	-49.6	26	31.2
250	30	10,812	-45.1		26	[illegible]
200	30	12,268	-55.8		26	40.5
175	30	13,107	-61.7		26	[illegible]
150	30	14,048	-67.6		26	38.4
125	30	15,129	-73.2		26	32.7
100	29	16,427	-76.1		26	21.3
80	24	17,719	-74.2		25	[illegible]
70	23	18,506	-70.3		26	6.8
60	22	19,436	-65.4		28	4.1
50	22	20,554	-62.8		23	2.6
40	20	21,934	-60.9		26	2.1
30	20	23,736	-57.4		26	3.4
25	17	24,892	-56.3		26	5.4
20	17	26,315	-54.8		27	7.2
15	14	28,164	-52.7		28	9.2
10	10	30,810	-45.3		27	14.6

BUFFALO, N. Y. 99[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	1.2	-1.0	22	.9
1000						
950	30	560	.6	-2.5	25	2.5
900	30	992	-1.7	-5.1	27	4.0
850	30	1,446	-2.7	-9.0	27	5.5
800	30	1,926	-3.5	-12.1	27	6.7
750	30	2,435	-4.9	-14.9	27	8.0
700	30	2,975	-7.3	-18.3	27	9.0
650	30	3,551	-9.7	-20.2	27	10.8
600	30	4,165	-13.2	-24.0	26	12.6
550	30	4,823	-17.3	-27.1	26	14.4
500	30	5,531	-22.1	-30.8	26	17.0
450	30	6,298	-27.1	-35.9	26	19.7
400	30	7,137	-32.9	-42.4	26	22.1
350	30	8,067	-39.3	-46.1	26	25.0
300	30	9,105	-46.0		26	27.8
250	30	10,301	-52.2		26	29.4
200	30	11,732	-55.2		27	31.0
175	30	12,584	-56.2		27	27.8
150	30	13,561	-56.9		26	24.2
125	29	14,711	-57.8		27	20.2
100	26	16,114	-59.2		27	18.5
80	26	17,513	[illegible]		27	13.5
70	26	18,350	-59.2		27	12.7
60	26	19,316	-59.5		27	10.8
50	24	20,459	-59.2		27	9.0
40	23	21,866	-58.7		27	8.7
30	23	23,677	-58.2		27	7.6
25	21	24,828	-57.3		[illegible]	6.7
20	18	26,247	[illegible]		31	8.3
15	[illegible]	28,076	[illegible]		31	9.4
10	[illegible]	30,656	[illegible]			

CAPE HATTERAS, N. C. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	12.5	[illegible]	01	2.1
1000	29	[illegible]	12.7	8.2	36	2.5
950	30	574	10.6	[illegible]	29	2.3
900	30	[illegible]	8.7	[illegible]	26	3.7
850	30	1,495	7.2	[illegible]	26	6.3
800	30	1,993	5.6	[illegible]	28	8.3
750	30	[illegible]	4.7	[illegible]	26	10.6
700	30	3,080	1.9	-13.0	26	13.4
650	30	3,675	-1.0	-15.8	[illegible]	15.7
600	30	[illegible]	-4.5	-18.9	26	17.5
550	30	[illegible]	-8.6	-23.1	26	19.9
500	30	[illegible]	-13.3	-27.9	26	22.5
450	30	6,515	-19.0	-32.3	26	24.6
400	30	7,381	-25.2	-37.1	26	28.4
350	30	[illegible]	-32.0	-41.6	26	32.4
300	30	9,409	-39.8	[illegible]	26	[illegible]
250	30	10,632	-48.6		26	41.3
200	30	12,073	-56.6		27	41.9
175	30	12,914	-59.7		27	40.0
150	28	13,861	-62.9		27	38.5
125	28	14,976	-65.5		27	33.6
100	28	16,326	-66.9		27	[illegible]
80	28	17,677	-65.7		27	17.6
70	28	18,491	-64.3		27	13.1
60	28	19,438	-62.6		27	10.5
50	27	[illegible]	-61.3		27	9.1
40	[illegible]	[illegible]	-59.8		28	7.8
30	25	[illegible]	-57.8		28	7.3
25	24	[illegible]	-56.8		28	7.0
20	19	[illegible]	-55.3		28	9.1
15	18	[illegible]	-53.0		28	10.3
10	7	[illegible]	-50.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	-4.4	-7.1	31	1.4
1000	9	218	-4.9	-7.8		
950	30	547	-4.7	-7.3	30	2.7
900	30	971	-6.2	-9.1	29	3.6
850	30	1,418	-6.8	-13.4	29	4.9
800	30	1,891	-7.3	-17.0	28	6.0
750	30	2,393	-8.3	-19.5	28	7.6
700	30	2,927	-10.5	-22.7	28	8.9
650	30	3,495	-12.9	-25.1	27	10.6
600	30	4,101	-16.2	-26.9	28	12.4
550	30	4,751	-20.2	-29.6	27	14.3
500	30	5,451	-24.5	-32.7	27	16.0
450	30	6,212	-29.2	-38.1	27	17.9
400	30	7,044	-34.4	-42.8	27	21.0
350	30	7,969	-40.7	-46.4	26	23.2
300	30	9,000	-47.6		26	25.1
250	30	10,190	-52.3		26	26.8
200	29	11,622	-53.9		27	26.9
175	28	12,484	-53.9		27	25.0
150	28	13,473	-54.5		27	23.2
125	28	14,638	-55.7		26	20.8
100	28	16,055	-57.0		27	17.6
80	28	17,467	-57.4		27	13.6
70	27	18,313	-57.6		27	12.2
60	26	19,291	-58.8		27	10.1
50	26	20,437	-58.3		27	9.5
40	26	21,840	-58.5		28	9.2
30	26	23,649	-58.6		28	8.6
25	26	24,796	-58.3		29	9.5
20	26	26,202	-57.8		29	11.4
15	25	28,020	-57.2		29	12.4
10	23	30,601	-55.3		29	15.1
7	18	32,850	-54.0		29	20.1
5	11	35,085	-50.1			

CHARLESTON, S. C. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	10.2	7.7	34	1.7
1000	30	145	12.0	8.3	01	1.7
950	30	576	12.1	6.9	36	.7
900	30	1,028	10.5	4.0	25	3.5
850	30	1,503	9.3	-2.3	25	7.4
800	30	2,006	8.8	-7.5	26	9.7
750	30	2,538	6.7	-9.5	26	11.4
700	30	3,102	4.0	-12.5	26	13.1
650	30	3,701	.9	-16.1	26	14.1
600	30	4,339	-3.0	-20.9	26	16.6
550	30	5,023	-7.3	-24.9	26	19.0
500	30	5,759	-11.9	-27.6	26	22.4
450	30	6,557	-17.2	-31.1	27	24.6
400	30	7,430	-23.4	-36.3	26	28.0
350	30	8,397	-30.1	-40.7	26	32.5
300	30	9,473	-38.1	-46.7	26	37.0
250	30	10,703	-47.6		26	41.0
200	30	12,147	-56.7		27	44.7
175	30	12,986	-60.6		27	42.8
150	30	13,938	-63.7		27	39.3
125	29	15,045	-67.8		26	33.0
100	29	16,379	-69.8		26	23.9
80	28	17,713	-67.6		26	16.3
70	28	18,521	-65.2		27	11.5
60	27	19,466	-62.8		26	9.7
50	27	20,594	-60.9		27	8.5
40	24	21,995	-59.1		27	8.3
30	23	23,813	-56.6		28	8.7
25	23	24,973	-55.2		28	8.7
20	22	26,399	-53.8		28	8.7
15	20	28,272	-50.8		28	8.8
10	9	30,979	-48.4			
7						
5						

CHATHAM, MASS. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	16	5.6	2.1	04	1.5
1000	28	147	5.1	1.3	02	1.7
950	30	553	2.5	-.3	35	1.0
900	30	989	.7	-4.3	28	2.0
850	30	1,447	-.2	-8.0	26	4.6
800	30	1,932	-1.2	-12.7	26	7.1
750	30	2,446	-2.5	-15.5	27	9.2
700	30	2,991	-4.8	-18.1	27	12.2
650	29	3,575	-7.1	-21.0	27	14.7
600	29	4,196	-10.4	-23.1	27	15.7
550	29	4,861	-14.2	-26.9	27	18.6
500	29	5,577	-19.3	-32.9	27	20.3
450	29	6,353	-24.5	-37.4	27	22.4
400	29	7,200	-30.6	-43.1	27	25.2
350	29	8,139	-37.1	-46.5	27	28.5
300	29	9,186	-44.0	-49.2	27	32.7
250	29	10,391	-51.1		27	34.6
200	29	11,824	-56.1		27	37.3
175	29	12,670	-57.6		27	35.2
150	29	13,641	-58.6		27	29.8
125	28	14,781	-59.4		27	25.4
100	27	16,168	-61.5		27	20.2
80	27	17,552	-61.2		27	15.4
70	26	18,381	-61.4		27	12.8
60	24	19,338	-61.1		27	11.0
50	23	20,471	-60.7		27	9.2
40	23	21,864	-59.8		28	7.7
30	23	23,666	-58.9		28	8.3
25	21	24,808	-57.9		29	7.9
20	17	26,217	-56.2		29	8.5
15	16	28,054	-55.2		29	10.4
10	14	30,656	-53.1		29	13.4
7	7	32,927	-52.8			
5						

CHIHUAHUA, MEXICO 857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	4.3	.0	23	.3
1000						
950						
900						
850	29	1,492	6.7	.7	27	.5
800	30	1,992	9.0	-2.7	23	2.7
750	30	2,524	6.5	-6.4	24	7.3
700	30	3,089	5.0	-13.8	25	11.3
650	30	3,690	2.1	-18.1	26	12.0
600	30	4,331	-1.8	-21.7	26	14.6
550	30	5,018	-6.0	-25.8	26	16.7
500	30	5,756	-11.4	-30.3	26	19.3
450	30	6,555	-17.2	-34.5	26	19.7
400	30	7,427	-23.9	-39.1	26	21.3
350	30	8,391	-31.1	-44.6	26	25.2
300	30	9,462	-39.2	-48.8	26	29.3
250	30	10,689	-47.6		26	33.8
200	30	12,137	-55.5		27	32.3
175	30	12,980	-59.8		27	33.2
150	29	13,937	-64.4		26	29.6
125	28	15,043	-67.9		26	23.3
100	27	16,373	-70.0		27	14.7
80	25	17,700	-69.5		27	9.6
70	24	18,499	-66.7		27	6.6
60	24	19,439	-63.5		27	3.2
50	24	20,568	-61.0		26	3.2
40	24	21,957	-60.0		26	1.5
30	22	23,764	-57.7		29	2.0
25	22	24,917	-56.9		28	2.9
20	21	26,337	-55.4		28	3.6
15	20	28,177	-53.7		27	8.1
10	10	30,821	-49.2			
7						
5						

* COLD BAY, ALASKA 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	30	1.0	-1.6	18	3.1
1000	9	122	1.5	-4.0		
950	26	406	-.5	-4.2	18	2.6
900	26	836	-3.5	-6.8	20	4.2
850	26	1,285	-6.2	-9.5	20	4.7
800	26	1,757	-9.0	-13.5	22	4.5
750	26	2,254	-12.1	-17.3	22	5.6
700	26	2,778	-15.7	-22.0	22	6.1
650	26	3,334	-18.9	-25.8	22	7.1
600	26	3,926	-22.8	-30.5	23	7.5
550	26	4,559	-26.9	-34.3	24	9.4
500	26	5,240	-31.3	-37.9	24	10.0
450	26	5,979	-36.1	-40.5	25	9.3
400	26	6,787	-41.3	-41.9	24	9.8
350	26	7,687	-46.3		23	11.7
300	26	8,699	-50.4		23	13.1
250	26	9,883	-51.9		23	15.9
200	26	11,336	-49.4		23	14.5
175	26	12,211	-49.3		23	14.4
150	26	13,222	-49.4		23	13.8
125	26	14,416	-49.8		23	13.3
100	26	15,877	-49.8		23	12.0
80	26	17,334	-50.5		23	10.1
70	25	18,205	-50.8		23	8.1
60	23	19,208	-51.3		23	7.3
50	23	20,393	-51.3		22	5.6
40	21	21,840	-51.9		22	4.6
30	19	23,706	-52.0		17	2.3
25	17	24,893	-51.9		17	2.4
20	13	26,360	-52.3		10	3.4
15	9	28,256	-51.6			
10						
7						
5						

DAYTON, OHIO 982 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	299	2.4	.8	12	.4
1000						
950	30	566	2.1	.1	22	1.6
900	30	1,002	.5	-2.5	26	4.1
850	30	1,460	.1	-6.7	26	5.9
800	30	1,945	-1.1	-11.7	26	7.1
750	30	2,459	-2.5	-14.8	26	8.7
700	30	3,005	-4.5	-18.5	26	10.3
650	30	3,585	-7.2	-21.3	26	11.9
600	30	4,205	-10.5	-25.3	26	14.0
550	30	4,870	-14.7	-29.3	26	15.2
500	29	5,586	-19.7	-33.6	26	16.3
450	29	6,360	-25.0	-36.7	26	19.1
400	29	7,206	-30.9	-42.0	26	22.5
350	29	8,144	-37.6	-46.6	26	25.5
300	29	9,188	-44.9		26	31.0
250	29	10,390	-50.9		25	36.7
200	28	11,832	-55.2		26	37.1
175	28	12,681	-56.9		26	35.9
150	27	13,640	-58.6		26	32.0
125	26	14,782	-60.0		26	26.5
100	24	16,161	-61.0		26	21.5
80	23	17,547	-61.2		26	17.5
70	22	18,379	-60.5		26	13.6
60	22	19,339	-60.6		27	11.3
50	22	20,476	-59.8		28	9.1
40	22	21,874	-58.9		27	6.8
30	21	23,688	-57.5		29	6.1
25	20	24,839	-56.6		28	5.9
20	18	26,263	-55.4		30	8.5
15	16	28,116	-53.3		30	7.4
10	10	30,717	-52.7			

DEL RIO, TEXAS 981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	8.9	4.8	08	1.4
1000						
950	30	582	9.8	4.0	13	1.9
900	30	1,031	9.0	1.8	20	1.4
850	30	1,504	8.6	-1.4	24	2.9
800	30	2,005	8.0	-4.7	25	5.7
750	30	2,537	7.4	-9.6	26	9.4
700	30	3,102	4.8	-14.5	26	11.6
650	30	3,702	1.4	-18.1	26	13.9
600	30	4,342	-2.5	-22.2	26	16.6
550	30	5,027	-6.7	-26.8	26	18.5
500	30	5,763	-11.9	-30.3	26	21.3
450	30	6,561	-17.4	-33.4	26	23.5
400	30	7,433	-23.8	-39.8	26	27.2
350	30	8,397	-30.8	-44.6	26	30.4
300	30	9,471	-38.7	-47.8	26	34.5
250	30	10,700	-47.1		26	40.1
200	30	12,151	-55.2		26	41.3
175	30	12,996	-59.6		26	41.2
150	30	13,949	-63.9		26	37.6
125	30	15,056	-67.9		26	31.7
100	28	16,387	-70.8		26	22.1
80	27	17,712	-69.3		26	14.5
70	27	18,514	-66.6		26	9.9
60	27	19,453	-63.9		26	7.8
50	26	20,573	-61.8		26	6.2
40	25	21,962	-59.7		26	5.9
30	23	23,766	-58.4		27	6.5
25	23	24,918	-56.7		28	5.8
20	22	26,338	-55.5		28	9.4
15	20	28,193	-52.8		28	9.1
10	15	30,843	-48.1		28	12.6

DENVER, COLO. 836 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	-3.1	-8.3	21	1.2
1000						
950						
900						
850						
800	30	1,957	-.4	-10.0	31	2.0
750	30	2,472	-2.4	-13.4	32	3.3
700	30	3,017	-5.3	-16.4	32	4.6
650	30	3,595	-8.7	-19.1	32	5.3
600	30	4,211	-12.6	-23.0	31	6.9
550	30	4,870	-16.8	-26.9	31	8.3
500	30	5,579	-21.3	-32.2	31	10.5
450	30	6,348	-26.9	-37.2	30	11.5
400	30	7,187	-33.4	-42.5	29	13.3
350	30	8,114	-40.4	-48.9	30	13.6
300	30	9,145	-47.8		29	16.2
250	30	10,331	-53.6		28	20.9
200	30	11,761	-55.2		27	22.9
175	29	12,616	-55.6		27	22.3
150	29	13,595	-56.6		27	21.6
125	29	14,749	-57.5		27	18.2
100	29	16,153	-59.4		27	15.9
80	29	17,549	-59.6		27	11.0
70	29	18,385	-59.6		27	9.7
60	29	19,348	-59.9		27	8.6
50	28	20,489	-59.5		28	6.1
40	24	21,891	-58.9		29	5.0
30	22	23,700	-57.3		30	3.9
25	20	24,851	-56.5		31	3.2
20	17	26,274	-56.3		33	2.5
15	10	28,131	-55.2		34	3.6
10						

DODGE CITY, KANS. 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	.2	-3.4	26	1.3
1000						
950						
900	30	1,003	1.8	-2.4	27	2.6
850	30	1,464	1.2	-5.9	29	4.3
800	30	1,951	.0	-9.4	28	5.2
750	30	2,467	-2.1	-12.2	29	6.2
700	30	3,012	-4.6	-18.2	29	7.1
650	30	3,593	-7.3	-22.0	28	7.8
600	30	4,213	-10.8	-25.7	27	8.9
550	30	4,876	-15.2	-29.3	27	10.6
500	30	5,589	-20.6	-33.7	27	12.2
450	30	6,360	-25.8	-37.9	27	14.1
400	30	7,204	-31.8	-44.0	27	17.0
350	30	8,138	-37.9	-48.9	27	21.5
300	30	9,183	-44.6		27	26.2
250	30	10,387	-50.7		27	31.0
200	29	11,833	-54.0		27	30.7
175	28	12,693	-55.3		26	30.1
150	27	13,670	-56.7		26	27.7
125	27	14,821	-58.6		26	23.7
100	25	16,216	-60.3		26	18.0
80	21	17,596	-60.3		26	14.1
70	21	18,429	-59.9		26	10.8
60	21	19,393	-59.7		27	7.7
50	20	20,536	-59.5		27	6.7
40	19	21,937	-58.4		28	6.0
30	18	23,745	-57.2		28	4.4
25	16	24,892	-56.5		30	4.6
20	14	26,311	-55.6		30	2.9
15	11	28,157	-53.7		31	3.4
10						

EL PASO, TEXAS 882 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	3.9	-2.1	32	.8
1000						
950						
900						
850	30	1,494	6.9	-5.5	29	1.1
800	30	1,991	4.9	-8.1	26	3.8
750	30	2,515	2.4	-12.5	26	7.3
700	30	3,070	.6	-16.8	26	9.8
650	30	3,661	-2.6	-22.6	27	12.1
600	30	4,292	-6.1	-25.4	27	14.7
550	30	4,968	-10.2	-29.5	27	16.8
500	30	5,695	-14.9	-33.7	27	20.1
450	30	6,484	-20.4	-38.0	27	22.6
400	30	7,345	-26.9	-43.5	27	25.9
350	30	8,297	-33.9	-48.1	27	28.9
300	30	9,357	-41.8	-51.4	26	31.2
250	30	10,572	-49.6		26	36.7
200	30	12,010	-56.3		26	39.1
175	30	12,854	-59.0		26	37.3
150	30	13,814	-61.8		26	34.7
125	30	14,934	-65.1		26	30.4
100	29	16,287	-66.8		27	23.4
80	26	17,639	-66.8		27	14.4
70	26	18,450	-64.7		27	10.2
60	25	19,392	-63.3		26	7.7
50	25	20,518	-61.0		26	4.6
40	24	21,912	-60.1		28	5.3
30	22	23,719	-58.4		29	5.1
25	21	24,874	-58.0		29	5.7
20	18	26,293	-55.8		29	8.5
15	13	28,130	-54.3		29	7.8
10						

ELY, NEV. 808 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	-4.9	-7.7	21	2.4
1000						
950						
900						
850						
800	26	1,997	-2.1	-7.2	21	2.3
750	30	2,495	-2.8	-9.1	26	.7
700	30	3,040	-5.2	-12.9	31	3.1
650	30	3,620	-7.7	-16.9	30	5.7
600	30	4,239	-11.2	-20.5	31	8.3
550	30	4,902	-14.9	-24.6	31	9.5
500	30	5,617	-19.8	-28.9	31	10.8
450	30	6,390	-25.3	-33.6	30	12.3
400	30	7,235	-31.7	-39.9	30	13.2
350	30	8,168	-38.9	-44.9	30	15.4
300	30	9,205	-46.8		30	19.5
250	30	10,395	-53.2		29	21.1
200	30	11,821	-56.1		29	21.9
175	30	12,668	-57.1		29	22.4
150	30	13,643	-57.2		29	19.9
125	30	14,793	-58.5		29	17.4
100	28	16,195	-60.3		29	13.9
80	28	17,584	-61.0		29	10.1
70	28	18,414	-60.8		29	8.1
60	28	19,374	-60.2		29	6.5
50	28	20,513	-59.8		28	5.0
40	24	21,918	-58.8		28	3.5
30	23	23,737	-57.3		30	3.3
25	23	24,891	-56.8		31	2.3
20	23	26,309	-55.5		33	1.4
15	18	28,145	-54.7		32	2.2
10	9	30,769	-52.1			

EMPALME, MEXICO 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	13.7	7.0	33	2.2
1000	30	116	17.8	5.6	34	2.9
950	30	555	17.8	2.2	35	3.8
900	30	1,015	15.1	.1	31	1.2
850	30	1,497	12.9	-6.4	24	2.0
800	30	2,004	11.2	-10.8	25	3.3
750	30	2,540	9.0	-14.7	26	4.0
700	30	3,108	6.2	-17.8	27	6.3
650	30	3,712	2.9	-20.4	27	9.4
600	30	4,355	-.7	-24.0	27	11.7
550	30	5,044	-5.4	-27.5	27	13.7
500	30	5,784	-10.8	-31.7	27	16.1
450	30	6,584	-16.7	-35.2	26	19.5
400	30	7,457	-23.7	-40.0	26	21.6
350	30	8,422	-30.5	-45.7	27	24.4
300	30	9,497	-38.5	-49.9	27	29.4
250	30	10,728	-46.6		27	34.2
200	30	12,181	-54.8		26	39.4
175	29	13,027	-58.9		26	39.2
150	29	13,984	-63.0		26	36.3
125	29	15,095	-67.0		26	30.4
100	29	16,431	-70.0		27	22.4
80	28	17,759	-69.3		27	16.4
70	28	18,561	-66.9		28	12.3
60	28	19,499	-64.1		28	9.0
50	28	20,623	-61.3		26	6.0
40	27	22,014	-59.5		26	3.8
30	26	23,827	-56.4		29	3.6
25	26	24,988	-55.1		28	5.6
20	26	26,417	-54.2		28	7.7
15	26	28,266	-52.9		29	9.6
10	18	30,907	-48.8			

* FAIRBANKS, ALASKA 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	-14.3	-20.0	34	.7
1000	6	169	-14.0	-16.9		
950	30	461	-9.7	-13.1	10	1.9
900	30	879	-8.7	-13.5	13	3.4
850	30	1,323	-8.0	-14.4	17	3.4
800	30	1,794	-9.0	-15.8	18	3.3
750	30	2,292	-11.1	-18.0	19	3.4
700	30	2,819	-13.9	-20.5	21	3.6
650	30	3,378	-17.3	-22.4	22	3.9
600	30	3,973	-21.2	-26.1	21	4.6
550	30	4,610	-25.5	-29.9	22	4.7
500	30	5,295	-30.4	-35.1	22	5.4
450	30	6,036	-35.9	-38.8	22	6.5
400	30	6,844	-41.9	-44.0	22	6.7
350	30	7,739	-47.9		22	7.1
300	30	8,741	-53.3		23	8.2
250	30	9,906	-55.9		24	9.7
200	30	11,337	-52.1		24	9.9
175	29	12,203	-51.3		24	9.9
150	29	13,206	-50.5		24	10.8
125	29	14,395	-50.3		24	11.4
100	29	15,852	-50.2		24	10.5
80	28	17,311	-50.6		25	10.5
70	26	18,183	-51.0		25	10.1
60	26	19,186	-51.0		25	9.5
50	23	20,381	-50.9		26	9.2
40	20	21,835	-51.2		26	8.4
30	18	23,718	-51.3		27	8.0
25	16	24,912	-51.3		28	8.1
20	13	26,379	-51.5		28	9.0
15	9	28,247	-52.7			
10	6	30,867	-52.1			

FLINT, MICH. 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	236	2.1	-.9	30	.4
1000						
950	30	555	.0	-2.3	27	1.6
900	30	988	-1.8	-4.9	28	3.0
850	30	1,442	-3.1	-9.9	28	3.5
800	30	1,921	-4.3	-14.6	28	4.1
750	30	2,428	-5.8	-18.4	28	6.2
700	30	2,967	-7.7	-21.5	28	8.4
650	30	3,541	-10.2	-24.8	28	9.8
600	30	4,154	-13.6	-28.4	27	10.8
550	30	4,811	-17.8	-32.0	27	12.1
500	30	5,517	-22.2	-35.5	27	14.3
450	30	6,284	-27.4	-40.0	27	16.8
400	30	7,121	-34.0	-43.1	26	19.0
350	30	8,046	-40.6	-45.8	26	21.5
300	30	9,078	-47.4		26	25.5
250	30	10,268	-52.8		26	28.2
200	30	11,698	-55.7		26	30.3
175	30	12,548	-55.9		26	30.0
150	30	13,529	-56.2		26	25.5
125	30	14,682	-57.9		26	21.4
100	30	16,085	-59.0		26	17.9
80	30	17,482	-59.4		27	14.1
70	29	18,322	-60.0		27	11.8
60	29	19,285	-59.8		27	9.2
50	27	20,427	-59.4		27	9.2
40	26	21,824	-58.7		29	7.0
30	25	23,634	-57.5		30	5.5
25	24	24,784	-56.8		30	6.5
20	22	26,202	-56.1		31	7.0
15	21	28,038	-54.7		31	7.7
10	11	30,671	-52.1			

FORT WORTH, TEXAS 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	6.3	2.2	33	.8
1000	12	204	4.3	.7	36	2.5
950	30	576	6.3	.2	32	1.3
900	30	1,018	5.1	-2.6	29	3.3
850	30	1,485	5.2	-6.4	28	6.1
800	30	1,981	5.3	-10.0	27	9.0
750	30	2,507	3.7	-12.8	27	12.1
700	30	3,064	1.1	-15.9	27	14.1
650	30	3,657	-1.7	-18.2	26	15.7
600	30	4,290	-5.4	-20.9	26	18.2
550	30	4,967	-9.4	-26.5	26	20.8
500	30	5,697	-14.0	-31.2	26	23.5
450	30	6,488	-19.8	-35.7	26	25.7
400	30	7,352	-26.1	-40.3	26	28.8
350	30	8,307	-32.9	-46.5	26	32.6
300	30	9,372	-40.6	-49.1	26	37.3
250	30	10,593	-48.3		26	41.7
200	30	12,039	-55.5		26	43.4
175	30	12,884	-58.9		26	43.0
150	29	13,837	-61.5		26	40.0
125	28	14,961	-64.8		26	32.6
100	26	16,305	-66.4		26	24.7
80	26	17,656	-65.6		26	16.6
70	26	18,470	-64.3		26	11.8
60	25	19,420	-62.5		26	9.7
50	25	20,552	-60.8		26	7.7
40	24	21,941	-59.9		27	6.8
30	23	23,748	-57.9		28	6.0
25	22	24,907	-56.7		27	6.4
20	19	26,329	-54.7		28	8.0
15	19	28,178	-53.1		28	6.1
10	8	30,778	-48.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT.
933 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	696	-2.2	-5.5	13	.5
1000						
950						
900	30	984	-.3	-4.4	28	2.5
850	30	1,441	-.8	-7.4	30	5.5
800	30	1,924	-2.4	-10.5	30	6.6
750	30	2,434	-5.2	-12.8	30	8.2
700	30	2,972	-8.6	-16.4	30	9.4
650	30	3,543	-11.8	-19.6	30	9.3
600	30	4,152	-15.5	-25.4	30	9.1
550	30	4,804	-19.6	-29.7	30	8.7
500	30	5,506	-23.9	-35.1	30	8.7
450	30	6,267	-29.4	-38.9	30	9.5
400	30	7,097	-35.8	-44.4	30	9.5
350	30	8,014	-42.8		30	10.3
300	30	9,034	-50.5		30	11.0
250	30	10,206	-56.5		29	11.0
200	30	11,619	-56.3		29	12.5
175	30	12,469	-55.2		29	11.8
150	30	13,436	-54.6		29	10.3
125	29	14,620	-55.0		30	10.2
100	29	16,045	-55.5		29	8.7
80	29	17,465	-55.9		30	8.1
70	27	18,316	-56.1		30	6.8
60	27	19,297	-56.0		30	6.1
50	27	20,457	-56.0		31	5.2
40	27	21,876	-56.1		32	4.1
30	26	23,706	-55.2		35	3.2
25	26	24,870	-55.0		36	3.2
20	26	26,299	-54.4		02	4.1
15	23	28,141	-54.6		02	4.5
10	9	30,801	-52.7			
7						

GRAND JUNCTION, COLO.
852 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,472	.1	-2.5	11	1.8
1000						
950						
900						
850	22	1,518	.1	-6.2	17	2.3
800	30	1,977	-.6	-7.4	17	2.6
750	30	2,491	-3.5	-9.3	18	1.2
700	30	3,033	-6.8	-12.7	26	2.6
650	30	3,609	-9.5	-16.8	28	4.5
600	30	4,224	-12.2	-21.6	29	6.7
550	30	4,885	-16.2	-25.5	29	8.8
500	30	5,595	-21.1	-30.4	29	9.9
450	30	6,366	-26.2	-35.6	29	11.0
400	30	7,207	-32.3	-40.6	29	13.5
350	30	8,138	-39.5	-44.7	29	14.7
300	30	9,173	-47.1		29	17.4
250	30	10,362	-53.4		28	21.8
200	30	11,791	-55.7		28	23.9
175	30	12,641	-56.1		28	22.7
150	30	13,620	-56.8		28	21.5
125	30	14,773	-58.1		28	17.8
100	30	16,174	-59.8		27	15.3
80	30	17,564	-60.4		27	11.4
70	30	18,397	-60.3		27	9.4
60	30	19,358	-60.1		27	8.0
50	30	20,497	-59.6		28	6.2
40	27	21,896	-58.7		28	4.4
30	22	23,713	-57.6		29	3.7
25	20	24,869	-57.1		32	3.2
20	20	26,284	-56.2		32	1.9
15	12	28,108	-55.2		34	1.7
10						
7						

• GREAT FALLS, MONT.
886 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,118	.0	-4.7	22	4.0
1000						
950						
900						
850	30	1,452	.7	-7.7	25	7.3
800	30	1,937	-1.7	-9.6	27	7.1
750	30	2,448	-4.3	-12.5	28	6.7
700	30	2,988	-7.7	-16.1	28	7.0
650	30	3,561	-11.2	-19.6	29	7.3
600	30	4,171	-15.1	-24.3	30	8.1
550	30	4,823	-19.4	-28.4	29	8.5
500	30	5,525	-24.2	-33.0	29	10.2
450	30	6,285	-29.5	-38.3	29	11.8
400	30	7,115	-35.7	-44.4	29	12.6
350	30	8,033	-42.5	-48.0	29	14.7
300	30	9,055	-49.9		29	15.7
250	30	10,229	-55.8		30	14.6
200	29	11,644	-56.2		29	12.7
175	29	12,494	-55.3		30	12.2
150	28	13,479	-55.0		30	11.4
125	28	14,643	-55.7		29	11.2
100	28	16,062	-56.6		30	9.4
80	28	17,478	-56.4		30	7.8
70	28	18,325	-56.7		30	6.2
60	28	19,302	-56.8		30	5.2
50	26	20,456	-56.4		30	4.0
40	25	21,872	-56.7		32	3.3
30	24	23,703	-55.7		01	2.7
25	23	24,864	-55.0		01	2.8
20	19	26,298	-55.1		05	3.6
15	14	28,154	-54.3		06	4.5
10	10	30,744	-53.5			
7						

GREEN BAY, WIS.
992 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	210	[illegible]	-2.3	[illegible]	[illegible]
1000						
950	30	552	-1.8	-4.[illegible]	29	2.2
900	30	9[illegible]1	-3.3	-5.9	28	2.6
850	30	1,433	-4.2	-9.6	27	2.[illegible]
800	30	1,910	-4.5	-13.3	[illegible]	3.9
750	30	2,417	-6.1	-16.5	28	5.5
700	30	2,9[illegible]5	-8.1	-20.8	28	6.6
650	30	3,528	-10.9	-23.7	28	7.1
600	30	4,139	-14.5	-27.7	27	8.[illegible]
550	30	4,[illegible]93	-18.4	-30.4	27	9.[illegible]
500	30	5,498	-23.2	-34.3	27	10.2
450	30	6,[illegible]	-28.6	-38.[illegible]	27	11.4
400	30	7,094	-35.0	-44.[illegible]	27	13.1
350	30	8,015	-42.0	-47.4	27	15.9
300	30	9,038	-49.4		27	19.2
250	30	10,218	-54.3		28	23.4
200	30	11,641	-55.7		28	26.3
175	30	12,493	-55.6		28	24.[illegible]
150	30	13,474	-56.1		28	22.3
125	30	14,633	-56.4		28	19.1
100	30	16,043	-57.9		27	15.5
80	30	17,448	-58.5		27	13.0
70	30	18,288	-58.5		27	10.8
60	29	19,257	-58.7		27	9.5
50	29	20,402	-59.0		28	7.0
40	29	21,802	-58.7		29	6.0
30	28	23,614	-57.5		30	5.7
25	26	24,770	-57.4		31	5.4
20	25	26,181	-56.5		32	6.1
15	23	28,012	-55.8		31	7.6
10	17	30,606	-54.2		31	11.6
7	5	32,895	-53.8			

GREENSBORO, N. C.
986 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	275	[illegible]	[illegible]	33	[illegible]
1000						
950	30	576	5.3	[illegible]	31	2.4
900	30	1,019	5.[illegible]	-.[illegible]	28	4.[illegible]
850	30	1,485	4.7	-5.[illegible]	27	7.2
800	30	1,980	4.3	-[illegible]	26	9.[illegible]
750	30	2,504	2.6	-1[illegible]	26	[illegible]
700	30	3,059	.5	-15.6	26	[illegible]
650	30	3,65[illegible]	-2.3	-2[illegible].8	26	[illegible]
600	30	4,282	-5.9	-2[illegible]	26	[illegible]
550	30	4,958	-10.5	-28.8	26	2[illegible]
500	30	5,6[illegible]4	-1[illegible].5	-33.6	27	[illegible]
450	30	6,4[illegible]	-2[illegible]	-36.7	27	2[illegible]
400	30	7,33[illegible]	-2[illegible]	-4[illegible].6	26	2[illegible].9
350	30	8,2[illegible]3	-33.3	-46.3	27	3[illegible]
300	30	9,34[illegible]	-40.8	-52.4	27	37.[illegible]
250	30	[illegible]	-48.6		27	39.7
200	2[illegible]	12,0[illegible]	-56.6		27	4[illegible]
175	2[illegible]	12,943	-58.9		27	4[illegible]
150	2[illegible]	13,8[illegible]	-6[illegible]		27	34.7
125	2[illegible]	14,93[illegible]	-64.[illegible]		27	3[illegible]
100	2[illegible]	16,29[illegible]	-66.[illegible]		27	[illegible]
80	2[illegible]	17,646	-65.2		28	[illegible]
70	2[illegible]	[illegible]8,463	-63.4		28	[illegible]
60	2[illegible]	[illegible]9,412	-62.4		27	9.[illegible]
50	2[illegible]	20,542	-61.0		28	[illegible]
40	2[illegible]	[illegible]	-59.6		28	[illegible]
30	2[illegible]	[illegible]3,743	-5[illegible].3		28	[illegible]
25	2[illegible]	[illegible]4,895	-56.3		28	9.[illegible]
20	2[illegible]	26,3[illegible]	-54.[illegible]		28	9.[illegible]
15	2[illegible]	28,[illegible]	-52.9		28	[illegible]
10	2[illegible]	[illegible]	-51.2		28	14.[illegible]
7						

GUADALUPE IS., MEXICO
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	23	16.3	12.5	34	4.0
1000	30	141	14.2	10.1	34	4.2
950	30	573	11.6	5.2	32	3.4
900	30	1,024	10.0	-1.2	32	3.2
850	30	1,497	8.4	-6.2	32	3.8
800	30	1,997	7.7	-12.1	33	4.4
750	30	2,527	6.0	-15.6	32	5.5
700	30	3,089	3.7	-18.7	31	6.8
650	28	3,688	.6	-20.9	30	8.5
600	28	4,325	-3.5	-24.1	30	9.6
550	28	5,007	-8.0	-27.5	29	10.7
500	28	5,740	-13.2	-31.5	29	11.5
450	28	6,534	-19.0	-35.9	29	14.3
400	28	7,399	-25.5	-41.0	29	13.5
350	28	8,357	-32.6	-46.5	28	12.7
300	28	9,423	-40.4	-51.9	27	15.2
250	28	10,644	-48.4			
200	28	12,086	-56.2			
175	28	12,928	-59.8			
150	28	13,883	-63.4			
125	27	14,993	-66.7			
100	26	16,333	-70.0			
80	25	17,656	-69.4			
70	25	18,458	-67.0			
60	25	19,394	-64.9			
50	25	20,511	-62.5			
40	25	21,896	-60.1			
30	25	23,707	-56.9			
25	25	24,863	-56.3			
20	22	26,284	-54.7			
15	22	28,127	-53.8			
10	16	30,752	-51.0			
7						

• GUAM, MARIANA IS.
1000 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	111	25.4	23.1	08	3.8
1000	13	114	25.6	23.0	08	4.7
950	30	559	23.0	20.8	08	10.8
900	30	1,030	20.3	16.5	08	10.5
850	30	1,523	18.0	11.1	08	9.4
800	30	2,041	15.8	6.5	09	8.3
750	30	2,587	13.4	2.2	09	8.2
700	30	3,165	10.4	-3.6	09	7.9
650	30	3,779	7.4	-10.6	09	8.2
600	30	4,434	4.0	-16.7	09	8.2
550	30	5,135	-.2	-20.9	09	8.8
500	30	5,891	-5.2	-23.0	09	9.3
450	30	6,711	-10.2	-27.1	09	9.5
400	30	7,608	-16.2	-33.6	09	9.4
350	30	8,603	-22.9	-39.5	09	8.2
300	30	9,710	-31.5	-45.6	09	5.9
250	30	10,974	-41.6	-52.2	08	2.5
200	30	12,448	-53.7		10	.4
175	30	13,294	-60.3		08	.7
150	30	14,238	-67.6		09	2.3
125	28	15,318	-74.8		09	4.4
100	27	16,592	-80.8		10	6.6
80	25	17,848	-80.5		09	8.3
70	22	18,613	-76.0		09	9.9
60	22	19,516	-71.0		09	11.3
50	21	20,610	-66.0		09	14.3
40	19	21,975	-62.2		09	17.5
30	19	23,778	-56.3		09	18.5
25	19	24,944	-53.1		09	16.8
20	16	26,399	-50.1		08	9.7
15	10	28,304	-45.2			
10	7	31,050	-41.5			
7						

HILO, HAWAII
1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	10	20.4	18.4	21	1.1
1000	30	151	21.4	17.5	13	.7
950	30	594	18.2	15.8	09	4.1
900	30	1,056	15.0	13.0	09	4.7
850	30	1,538	11.8	10.1	10	3.4
800	30	2,045	10.0	2.5	10	3.8
750	30	2,582	9.2	-7.6	09	3.9
700	30	3,151	7.5	-14.8	10	4.1
650	30	3,758	4.6	-19.6	10	3.6
600	30	4,405	.9	-22.4	09	2.5
550	30	5,098	-3.6	-25.5	08	1.4
500	30	5,844	-8.6	-30.2	32	.1
450	30	6,652	-14.1	-34.5	29	2.7
400	30	7,535	-20.5	-40.1	28	5.7
350	30	8,511	-27.7	-44.9	27	9.1
300	30	9,599	-35.3	-51.5	27	12.7
250	30	10,847	-43.7		27	18.5
200	30	12,313	-53.9		27	22.4
175	30	13,160	-59.5		27	21.5
150	30	14,110	-65.8		27	20.2
125	30	15,200	-72.2		27	16.0
100	30	16,497	-76.8		28	7.5
80	30	17,779	-76.2		24	2.7
70	30	18,555	-73.0		31	.9
60	30	19,470	-68.1		07	1.7
50	30	20,576	-64.3		09	4.3
40	30	21,951	-61.5		09	6.8
30	30	23,755	-57.0		09	8.5
25	29	24,915	-55.4		09	7.7
20	27	26,348	-52.9		09	7.2
15	27	28,212	-51.0		12	2.6
10	22	30,889	-45.9		27	10.3
7	12	33,265	-42.5			

HUNTINGTON, W. VA.
989 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	246	4.0	1.5	25	.8
1000						
950	29	570	4.8	.6	25	2.7
900	29	1,009	3.0	-1.9	26	5.6
850	29	1,472	1.3	-5.7	26	6.9
800	29	1,959	.0	-9.4	26	8.4
750	29	2,475	-1.1	-12.9	26	10.0
700	29	3,024	-3.0	-16.2	26	11.9
650	29	3,608	-5.8	-20.1	26	14.2
600	29	4,231	-9.0	-24.1	26	17.2
550	29	4,900	-13.2	-27.2	26	18.6
500	29	5,618	-18.1	-32.5	26	21.2
450	29	6,398	-23.2	-38.2	26	24.8
400	29	7,250	-29.1	-43.8	27	28.2
350	29	8,194	-36.0	-47.3	26	30.4
300	29	9,247	-42.6	-51.9	26	34.5
250	29	10,460	-49.5		26	37.1
200	29	11,902	-54.9		26	40.2
175	28	12,752	-57.2		26	37.8
150	26	13,730	-58.9		27	32.[illegible]
125	24	14,875	-61.1		26	28.6
100	21	16,255	-63.4		26	21.5
80	20	17,627	-62.1		26	15.3
70	20	18,453	-61.8		27	12.3
60	20	19,410	-60.8		27	9.7
50	20	20,547	-59.8		27	8.1
40	19	21,939	-59.0		28	7.7
30	18	23,754	-56.9		28	6.5
25	18	24,912	-56.0		29	6.8
20	18	26,336	-54.6		29	7.5
15	13	28,169	-53.5		30	7.4
10	12	30,786	-50.9		29	11.3
7						

• INTERNATIONAL FALLS, MINN.
973 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	359	-4.3	-7.2	26	1.[illegible]
1000						
950	30	544	-5.8	-7.2	29	1.7
900	30	98[illegible]	-7.3	-9.3	28	3.5
850	30	1,413	-6.6	-12.9	30	4.5
800	30	1,887	-6.7	-16.[illegible]	30	5.4
750	30	2,390	-8.1	-19.9	29	6.7
700	30	2,924	-10.4	-23.5	29	7.5
650	30	3,492	-13.0	-26.2	29	9.0
600	30	4,099	-16.3	-29.[illegible]	29	9.8
550	30	4,748	-20.5	-33.6	29	11.3
500	30	5,446	-25.4	-37.4	28	12.7
450	30	6,203	-30.8	-42.8	28	13.7
400	30	7,028	-36.9	-49.2	28	14.5
350	30	7,941	-43.9		28	15.4
300	30	8,957	-51.1		28	17.0
250	30	10,129	-55.7		28	16.8
200	30	11,549	-55.3		27	15.9
175	30	12,403	-54.3		28	15.5
150	30	13,393	-54.2		28	14.1
125	30	14,560	-54.9		28	12.4
100	29	15,984	-55.3		28	11.4
80	29	17,389	-55.9		28	9.[illegible]
70	25	18,239	-56.0		28	8.1
60	24	19,217	-56.0		29	6.7
50	2[illegible]	20,374	-55.8		30	6.0
40	20	21,791	-55.5		32	5.0
30	18	23,615	-56.3		32	4.5
25	16	24,767	-56.1		33	4.4
20	15	26,190	-55.5		33	[illegible]
15	13	28,019	-56.4		34	7.3
10	8	30,631	-54.4			
7	6	32,923	-53.3			

JACKSON, MISS.
1006 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	100	8.5	6.1	33	.8
1000	26	157	8.3	5.3	02	1.2
950	30	571	8.1	4.2	30	1.1
900	30	1,017	7.5	-1.2	27	3.6
850	30	1,489	8.3	-5.9	26	6.7
800	30	1,990	7.7	-6.7	25	9.6
750	30	2,520	5.7	-9.9	25	11.6
700	30	3,082	2.9	-14.5	26	13.2
650	30	3,679	-.1	-16.4	26	16.4
600	30	4,316	-3.5	-20.8	26	19.4
550	29	5,007	-7.4	-25.1	26	21.5
500	29	5,743	-12.1	-30.6	26	24.0
450	29	6,541	-17.6	-36.7	26	26.4
400	29	7,411	-24.2	-41.3	26	28.5
350	29	8,374	-31.2	-45.9	25	33.0
300	29	9,447	-38.7	-48.6	25	38.6
250	29	10,674	-48.0		26	43.0
200	29	12,116	-56.6		26	47.9
175	29	12,955	-60.6		26	46.1
150	28	13,910	-64.0		26	40.9
125	27	15,021	-67.0		26	33.8
100	25	16,350	-68.8		26	25.5
80	24	17,689	-67.8		26	16.3
70	23	18,490	-65.7		26	12.6
60	23	19,433	-63.4		26	9.7
50	23	20,558	-61.7		26	9.0
40	23	21,945	-60.3		27	8.5
30	22	23,749	-57.9		27	7.3
25	22	24,902	-56.7		27	7.9
20	21	26,326	-54.7		27	9.3
15	20	28,176	-53.0		26	10.5
10	14	30,812	-49.4		27	12.1
7	6	33,142	-44.8			

JOHN F. KENNEDY INT. AP NY
1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	5	5.8	.8	36	2.3
1000	28	154	5.0	.2	36	3.4
950	30	559	3.4	-.9	35	3.0
900	30	997	1.5	-3.5	29	1.9
850	30	1,457	.7	-7.8	27	4.6
800	30	1,944	-.1	-11.2	27	7.0
750	30	2,460	-1.2	-14.7	27	8.9
700	30	3,008	-3.3	-17.2	27	11.0
650	30	3,591	-6.1	-18.3	27	13.0
600	30	4,215	-9.2	-21.2	27	16.1
550	30	4,882	-13.6	-26.0	28	18.0
500	30	5,600	-18.4	-30.5	27	19.9
450	30	6,379	-23.6	-35.5	27	22.6
400	30	7,229	-29.8	-40.2	27	26.0
350	30	8,171	-36.4	-43.3	28	29.4
300	30	9,221	-43.8	-45.7	27	33.8
250	30	10,427	-50.8		27	36.5
200	28	11,866	-56.0		27	40.7
175	28	12,712	-57.6		27	38.1
150	27	13,682	-59.0		27	34.5
125	27	14,826	-59.5		27	28.8
100	26	16,211	-61.5		27	22.0
80	25	17,596	-61.2		27	15.4
70	25	18,426	-60.6		27	14.3
60	24	19,383	-60.2		27	12.4
50	24	20,520	-59.9		27	8.8
40	23	21,919	-58.7		28	7.9
30	21	23,734	-57.4		29	7.[illegible]
25	20	24,887	-56.6		29	7.7
20	19	26,304	-55.8			
15	17	28,148	-53.8			
10	11	30,748	-51.8			
7						

JOHNSTON IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	3	26.2	21.8	08	8.5
1000	30	124	25.0	20.8	08	9.4
950	30	573	20.9	18.9	08	10.3
900	30	1,040	17.7	14.5	08	10.8
850	30	1,527	14.6	9.9	08	9.9
800	30	2,039	12.6	3.2	08	7.8
750	30	2,580	11.7	-5.1	08	6.3
700	30	3,155	9.2	-9.8	08	5.8
650	30	3,765	6.0	-13.4	08	4.5
600	30	4,417	2.6	-17.9	07	3.5
550	30	5,115	-1.3	-22.[illegible]	0[illegible]	2.[illegible]
500	30	5,868	-6.1	-25.0	03	2.[illegible]
450	30	6,683	-11.7	-30.3	36	2.0
400	30	7,574	-17.9	-34.2	30	3.[illegible]
350	30	8,562	-24.9	-41.0	29	6.7
300	30	9,662	-32.8	-48.2	2[illegible]	10.0
250	30	10,920	-42.3		2[illegible]	14.2
200	30	12,391	-53.9		2[illegible]	1[illegible]
175	30	13,236	-60.4		27	15.6
150	30	14,180	-67.8		27	13.2
125	30	15,258	-74.8		28	9.3
100	30	16,535	-79.4		30	4.5
80	29	17,802	-78.3		07	2.4
70	29	18,572	-75.0		09	3.4
60	28	19,479	-69.9		09	4.[illegible]
50	28	20,577	-65.[illegible]		09	9.7
40	27	21,947	-61.4		09	14.[illegible]
30	25	23,759	-55.9		09	14.[illegible]
25	2[illegible]	24,926	-53.6		09	1[illegible]
20	25	26,367	-51.6		09	9.4
15	2[illegible]	28,244	-48.8		09	[illegible]
10	2[illegible]	30,943	-43.8		28	14.[illegible]
7						

KEY WEST, FLA.
1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	3	24.0	[illegible]	09	1.[illegible]
1000	30	129	23.8	20.3	[illegible]	1.[illegible]
950	30	576	20.4	18.0	[illegible]	2.[illegible]
900	30	1,043	17.9	12.9	[illegible]	1.9
850	30	1,531	15.8	8.3	21	1.9
800	30	2,044	13.2	4.2	22	2.[illegible]
750	30	2,5[illegible]5	11.0	-2.1	2[illegible]	3.5
700	30	3,158	8.2	-8.1	2[illegible]	4.6
650	30	3,766	4.9	-10.6	2[illegible]	5.1
600	30	4,415	1.5	-14.8	2[illegible]	5.5
550	30	5,111	-2.8	-19.7	2[illegible]	7.0
500	30	[illegible]	-7.6	-23.5	27	8.6
450	30	6,672	-12.6	-30.5	26	9.9
400	30	7,560	-18.9	-3[illegible]	2[illegible]	11.9
350	30	8,544	-25.8	-4[illegible].8	2[illegible]	13.8
300	[illegible]	9,639	-34.3	-49.0	27	15.4
250	[illegible]	10,888	-44.3		27	16.5
200	[illegible]	12,347	-55.4		28	21.0
175	30	13,187	-61.4		28	21.1
150	[illegible]	14,129	-67.4		28	20.0
125	[illegible]	15,214	-73.3		27	18.2
100	[illegible]	16,502	-78.0		27	[illegible]
80	[illegible]	17,782	-75.3		27	[illegible]
70	[illegible]	18,564	-71.0		26	[illegible]
60	[illegible]	19,489	-65.8		24	[illegible]
50	[illegible]	20,609	-62.0		30	[illegible]
40	[illegible]	[illegible]	-60.1		09	[illegible]
30	[illegible]	23,804	-56.[illegible]		[illegible]	[illegible]
25	[illegible]	24,968	-54.3		30	[illegible]
20	[illegible]	26,407	-52.7		31	3.4
15	[illegible]	28,278	[illegible]		[illegible]	6.1
10	[illegible]	30,949	-45.7		26	13.0
7						

• KOROR, CAROLINE IS.
1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	30	28.1	[illegible]4.7	07	2.5
1000	30	94	27.1	24.2	07	3.2
950	30	547	23.8	[illegible].8	07	5.1
900	30	1,020	20.9	1[illegible].3	0[illegible]	5.5
850	30	[illegible]	18.1	1[illegible].8	0[illegible]	5.4
800	30	2,032	15.8	9.7	08	5.6
750	30	2,579	13.2	5.6	08	6.2
700	30	3,157	10.0	1.6	08	6.1
650	30	3,770	6.6	-2.1	09	6.0
600	30	4,423	2.9	-7.4	09	6.0
550	30	5,123	-[illegible].0	-12.6	09	5.7
500	30	5,[illegible]8	-5.5	-15.9	10	5.7
450	30	6,698	-1[illegible]	-20.8	09	[illegible]
400	30	7,597	-15.5	-28.7	09	5.4
350	30	8,595	-2[illegible]	-35.6	09	4.2
300	30	9,707	-3[illegible].5	-44.1	08	4.4
250	[illegible]	10,975	-4[illegible].8	-53.7	08	4.9
200	[illegible]	12,454	-53.[illegible]		08	6.1
175	[illegible]	13,301	-6[illegible]		09	[illegible]
150	[illegible]	14,246	-6[illegible].6		[illegible]	6.5
125	[illegible]	15,324	-75.[illegible]		[illegible]	7.[illegible]
100	[illegible]	16,598	-80.4		09	7.9
80	[illegible]	17,856	-7[illegible]		08	8.5
70	[illegible]	18,622	-75.3		09	10.2
60	[illegible]	19,524	-7[illegible].9		09	15.0
50	[illegible]	20,619	-[illegible]5.8		09	21.2
40	[illegible]	21,988	-[illegible].4		[illegible]	[illegible]
30	[illegible]	23,801	-56.1		09	26.6
25	[illegible]	24,974	[illegible]		09	25.2
20	[illegible]	26,440	-45.7		[illegible]	13.9
15	[illegible]	28,381	-4[illegible]		[illegible]	4.3
10	[illegible]	31,138	-4[illegible].3		[illegible]	13.4
7	[illegible]	33,[illegible]	-3[illegible]			

See reference note at end of table.

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	27.3	23.9	07	4.6
1000	30	92	26.7	23.6	07	5.5
950	30	545	23.3	21.1	07	7.1
900	30	1,016	20.4	17.4	08	7.0
850	30	1,508	17.6	13.9	08	5.4
800	30	2,026	15.6	8.6	09	6.5
750	30	2,572	13.0	3.1	08	6.2
700	30	3,150	10.1	-3.2	08	5.2
650	30	3,763	7.0	-8.0	09	4.9
600	30	4,417	3.3	-12.8	09	5.3
550	30	5,117	-.5	-17.8	08	6.5
500	30	5,873	-4.9	-21.0	08	6.8
450	30	6,694	-9.9	-26.5	08	8.0
400	30	7,593	-15.5	-32.3	08	7.6
350	30	8,587	-22.5	-37.9	09	4.9
300	30	9,700	-31.0	-45.5	11	3.8
250	30	10,966	-41.3	-54.3	14	4.6
200	30	12,441	-53.8	-64.1	16	4.8
175	30	13,285	-60.9		15	4.3
150	30	14,225	-68.7		12	3.1
125	29	15,296	-76.2		08	3.7
100	22	16,558	-82.3		09	4.9
80	21	17,809	-80.8		08	8.3
70	17	18,569	-77.3		09	9.6
60	16	19,463	-73.1		09	15.0
50	16	20,548	-67.6		09	21.6
40	16	21,912	-61.3		09	24.0
30	16	23,724	-55.7		09	25.3
25	15	24,891	-52.8		09	22.1
20	14	26,346	-48.8		09	15.7
15	14	28,256	-44.7		01	2.0
10	10	30,988	-40.5		25	11.1
7	8	33,444	-35.9			

LAKE CHARLES, LA.
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	9.8	7.8	03	2.4
1000	28	144	10.0	6.6	04	3.2
950	28	571	9.5	4.1	04	1.4
900	28	1,020	10.4	-1.8	27	2.8
850	28	1,497	10.4	-5.3	26	5.9
800	28	2,000	9.0	-7.3	26	9.0
750	28	2,533	6.8	-9.8	25	11.4
700	28	3,097	4.3	-13.9	25	13.1
650	28	3,697	1.5	-18.3	26	15.3
600	28	4,337	-2.1	-21.5	26	17.8
550	28	5,023	-6.6	-25.7	26	19.8
500	28	5,760	-11.5	-30.1	25	20.5
450	28	6,559	-17.1	-34.3	25	24.0
400	28	7,432	-23.1	-38.9	25	28.4
350	28	8,400	-29.9	-44.4	25	33.7
300	28	9,477	-38.0	-49.0	25	36.7
250	28	10,709	-46.9		26	42.7
200	27	12,158	-56.2		26	42.4
175	27	12,999	-60.3		26	44.2
150	27	13,949	-64.8		26	40.7
125	25	15,049	-68.3		26	32.7
100	25	16,378	-71.1		26	25.2
80	23	17,699	-69.4		26	15.6
70	23	18,501	-66.8		25	11.8
60	22	19,442	-63.7		25	10.8
50	21	20,570	-61.0		25	5.2
40	21	21,960	-59.9		26	7.7
30	21	23,766	-58.0		26	7.0
25	20	24,915	-56.9		26	9.3
20	20	26,336	-54.9		27	9.8
15	20	28,186	-52.5		27	10.3
10	16	30,823	-48.0		27	15.0
7						

LANDER, WYO.
827 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,697	-5.3	-8.1	24	1.0
1000						
950						
900						
850						
800	30	1,962	-2.2	-9.2	25	.6
750	30	2,474	-3.4	-12.2	31	2.6
700	30	3,017	-6.2	-16.1	30	4.8
650	30	3,593	-9.7	-19.6	31	6.2
600	30	4,207	-13.4	-23.7	30	7.2
550	30	4,863	-17.5	-27.3	30	8.1
500	30	5,570	-22.4	-32.8	30	9.2
450	30	6,336	-28.0	-37.4	29	10.0
400	30	7,170	-34.7	-42.8	29	11.8
350	30	8,091	-41.8	-46.4	29	13.2
300	30	9,115	-49.8		30	16.2
250	30	10,289	-56.6		28	16.1
200	30	11,700	-57.3		28	18.6
175	30	12,546	-56.6		28	17.7
150	30	13,524	-57.0		28	15.7
125	29	14,682	-57.3		28	13.2
100	28	16,090	-59.1		28	12.2
80	27	17,495	-59.1		28	8.9
70	27	18,333	-59.0		28	8.0
60	27	19,298	-59.7		29	5.8
50	26	20,437	-59.8		29	3.8
40	25	21,831	-58.9		31	3.8
30	24	23,645	-57.3		35	3.2
25	24	24,801	-56.3		01	2.7
20	23	26,224	-55.8		02	3.1
15	20	28,063	-55.2		03	3.9
10	11	30,659	-53.3		35	4.5
7						

* LIHUE KAUAI, HAWAII
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	23.0	19.8	06	4.0
1000	30	161	22.4	17.5	07	5.6
950	30	606	18.8	16.0	07	7.5
900	30	1,069	15.5	13.2	07	7.3
850	30	1,552	12.4	9.6	07	6.8
800	30	2,059	10.8	-1.2	08	6.3
750	30	2,597	10.0	-10.0	08	5.0
700	30	3,167	7.6	-14.8	09	3.1
650	30	3,774	4.5	-18.1	08	1.8
600	30	4,421	.7	-21.7	04	.9
550	30	5,113	-3.8	-24.7	32	1.6
500	30	5,858	-8.9	-29.3	28	2.6
450	30	6,665	-14.6	-33.7	28	3.2
400	30	7,546	-20.9	-39.1	29	5.2
350	30	8,522	-28.2	-45.4	29	7.7
300	30	9,606	-36.3	-51.2	28	11.3
250	30	10,848	-45.0		28	17.1
200	30	12,309	-53.9		28	22.8
175	30	13,156	-59.4		28	22.1
150	30	14,108	-65.4		27	19.1
125	29	15,206	-71.4		27	14.8
100	29	16,507	-75.9		28	8.4
80	29	17,795	-75.4		28	3.0
70	29	18,574	-72.0		31	.9
60	29	19,490	-68.8		06	.9
50	29	20,596	-63.6		07	2.1
40	29	21,976	-60.5		10	3.8
30	29	23,784	-56.8		09	4.2
25	29	24,945	-54.4		09	4.7
20	29	26,363	-52.6		09	3.5
15	27	28,246	-51.1		21	2.2
10	17	30,924	-44.6		25	14.9
7						

LITTLE ROCK, ARK.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	6.1	2.3	30	1.0
1000	25	165	6.0	1.4	35	1.2
950	30	568	5.4	.1	31	2.0
900	30	1,009	3.7	-3.3	30	3.4
850	30	1,473	3.4	-7.0	29	5.3
800	30	1,964	2.6	-10.4	28	7.2
750	30	2,485	1.2	-13.4	27	10.0
700	30	3,038	-.5	-18.7	26	13.7
650	30	3,627	-3.3	-20.6	26	16.5
600	30	4,256	-6.9	-24.0	26	19.2
550	30	4,929	-11.4	-27.8	26	22.3
500	30	5,654	-15.8	-32.6	26	26.2
450	30	6,441	-20.9	-38.0	25	30.2
400	30	7,300	-27.3	-42.9	25	34.0
350	30	8,253	-33.4	-47.6	26	39.5
300	30	9,315	-41.1	-51.3	25	43.5
250	30	10,533	-49.2		25	46.7
200	30	11,973	-55.9		25	47.6
175	29	12,813	-58.4		25	46.1
150	29	13,776	-61.6		26	40.8
125	29	14,899	-64.1		26	33.7
100	28	16,262	-65.5		26	24.6
80	28	17,622	-64.8		26	16.0
70	27	18,436	-63.2		26	11.7
60	27	19,385	-62.8		26	9.0
50	26	20,510	-61.2		26	8.0
40	24	21,898	-59.7		27	7.3
30	23	23,709	-57.4		27	6.8
25	21	24,861	-56.3		28	5.6
20	21	26,285	-54.6		28	5.1
15	17	28,134	-52.1		29	6.2
10						
7						

MCGRATH, ALASKA
994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	103	-13.3	-17.4	17	.2
1000	7	142	-12.3	-14.6		
950	30	446	-11.1	-12.4	08	3.0
900	30	864	-7.9	-11.8	10	3.5
850	30	1,309	-7.4	-12.3	14	2.4
800	30	1,780	-9.5	-14.9	17	3.3
750	30	2,277	-12.1	-17.7	19	4.1
700	30	2,801	-15.2	-21.4	19	4.9
650	30	3,358	-18.6	-24.8	19	5.5
600	30	3,950	-22.1	-27.5	19	5.5
550	30	4,585	-26.2	-32.0	19	5.1
500	30	5,268	-30.8	-35.9	19	5.1
450	30	6,008	-35.9	-39.5	20	6.3
400	30	6,816	-41.8	-44.2	20	9.3
350	30	7,712	-47.8		21	9.2
300	30	8,714	-52.9		21	8.8
250	30	9,883	-54.9		22	9.7
200	30	11,319	-51.3		22	10.4
175	30	12,189	-50.0		23	10.2
150	29	13,203	-50.0		23	10.1
125	29	14,396	-49.5		23	10.1
100	29	15,859	-49.2		23	10.3
80	29	17,321	-49.9		24	10.2
70	29	18,194	-50.1		24	9.2
60	28	19,202	-50.6		24	8.9
50	27	20,390	-50.9		24	8.3
40	27	21,842	-51.2		25	7.5
30	26	23,710	-51.3		26	7.3
25	22	24,888	-51.5		26	5.6
20	20	26,337	-51.7		26	6.2
15	12	28,247	-51.0			
10						

* MAJURO, MARSHALL IS.
1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	28.7	24.5	06	4.0
1000	30	96	27.1	22.9	06	4.7
950	30	549	23.5	21.0	07	5.7
900	30	1,021	20.7	17.2	08	5.2
850	30	1,514	18.0	13.0	08	4.7
800	30	2,032	15.8	9.3	08	3.7
750	30	2,579	13.7	4.7	08	3.4
700	30	3,158	10.8	-1.2	09	3.3
650	30	3,773	7.4	-4.5	09	3.4
600	30	4,428	3.8	-9.0	10	3.9
550	30	5,130	.1	-14.6	09	3.8
500	30	5,888	-4.1	-22.4	08	5.1
450	30	6,712	-8.8	-25.5	08	5.8
400	30	7,615	-14.2	-30.8	08	5.0
350	30	8,617	-21.2	-37.1	08	4.5
300	30	9,732	-29.9	-43.7	10	3.6
250	30	11,004	-40.2	-49.9	13	5.4
200	30	12,486	-52.6		13	6.4
175	30	13,336	-59.4		12	5.7
150	29	14,284	-67.2		09	4.0
125	28	15,367	-74.8		06	3.7
100	28	16,640	-80.3		07	5.1
80	28	17,900	-79.2		08	7.6
70	27	18,671	-74.5		09	10.7
60	27	19,576	-70.4		09	15.9
50	27	20,671	-66.1		09	21.3
40	27	22,041	-60.9		09	23.8
30	27	23,859	-54.1		09	25.8
25	26	25,042	-49.5		09	20.0
20	24	26,514	-45.9		09	6.7
15	24	28,452	-40.8		27	8.4
10	20	31,238	-36.7		27	18.1

* MEDFORD, OREG.
971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	5.1	3.4	23	.4
1000						
950	30	575	5.3	2.8	18	.5
900	30	1,018	5.3	.4	17	2.7
850	30	1,484	3.4	-3.4	21	3.1
800	30	1,974	1.0	-6.0	24	3.8
750	30	2,490	-1.7	-8.7	25	5.4
700	30	3,037	-4.6	-13.7	26	7.0
650	30	3,617	-7.7	-17.5	27	8.2
600	30	4,236	-10.9	-21.7	28	8.7
550	30	4,900	-15.2	-26.5	29	9.3
500	30	5,613	-20.0	-31.3	29	10.8
450	30	6,386	-25.3	-36.4	29	12.0
400	29	7,226	-32.2	-42.0	29	13.6
350	29	8,156	-39.8	-46.3	29	14.5
300	29	9,190	-47.4		28	15.6
250	29	10,377	-53.4		29	18.5
200	29	11,800	-56.7		29	18.7
175	28	12,643	-56.6		29	17.8
150	28	13,618	-57.5		29	18.0
125	28	14,770	-57.9		29	15.7
100	28	16,171	-59.6		29	11.9
80	26	17,566	-59.7		29	9.0
70	25	18,404	-59.7		29	7.0
60	24	19,364	-59.8		29	4.9
50	23	20,507	-58.8		30	3.6
40	21	21,906	-58.4		30	2.7
30	19	23,714	-57.0		04	2.1
25	18	24,874	-55.4		08	2.2
20	18	26,301	-54.6		09	2.5
15	13	28,147	-54.0		07	3.9
10	8	30,761	-52.2			

MERIDA, MEXICO
1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	20.4	20.1	09	.9
1000	30	115	23.8	22.4	11	2.8
950	30	565	22.4	20.1	12	5.5
900	30	1,035	20.1	15.9	13	4.8
850	30	1,527	17.4	12.7	14	3.6
800	30	2,044	15.1	8.1	16	3.0
750	30	2,589	12.6	3.2	16	2.8
700	30	3,166	9.9	-3.1	16	1.9
650	30	3,779	6.5	-7.4	20	1.9
600	30	4,431	2.8	-11.5	22	2.2
550	30	5,130	-1.6	-15.7	23	3.0
500	30	5,882	-6.3	-19.2	25	4.0
450	30	6,699	-11.1	-26.7	25	4.8
400	30	7,593	-17.1	-34.2	24	5.3
350	30	8,584	-24.0	-40.5	25	6.7
300	30	9,688	-32.4	-47.9	26	7.8
250	30	10,947	-42.2		27	10.2
200	30	12,418	-54.2		27	13.5
175	29	13,263	-60.4		28	14.0
150	29	14,208	-67.2		27	14.1
125	29	15,292	-73.3		27	12.8
100	28	16,577	-79.3		26	9.1
80	28	17,845	-77.7		27	6.1
70	28	18,621	-71.7		27	3.7
60	28	19,542	-67.0		21	.6
50	28	20,653	-63.3		10	1.9
40	28	22,034	-60.5		10	2.2
30	27	23,850	-55.8		10	1.7
25	26	25,015	-54.2		07	.3
20	25	26,451	-52.7		23	.6
15	21	28,325	-49.8		06	1.1
10	17	31,018	-44.2			

MIAMI, FLA.
1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	20.7	18.1	34	1.1
1000	30	137	21.9	19.2	06	.6
950	30	583	20.1	16.1	15	2.0
900	30	1,049	17.5	12.6	18	2.3
850	30	1,536	15.3	9.0	22	2.6
800	30	2,048	13.3	5.9	23	3.6
750	30	2,590	10.6	.9	25	4.1
700	30	3,162	7.6	-3.4	26	4.9
650	30	3,770	4.7	-7.0	26	6.1
600	30	4,418	1.2	-11.2	26	7.5
550	30	5,113	-3.2	-14.7	26	8.9
500	30	5,861	-7.7	-19.9	26	10.8
450	30	6,673	-13.0	-24.8	27	12.4
400	30	7,560	-19.2	-31.8	26	13.7
350	30	8,543	-26.1	-39.0	27	16.0
300	30	9,637	-34.5	-45.6	27	17.3
250	30	10,885	-44.5		27	19.6
200	30	12,344	-55.5		27	23.6
175	30	13,184	-61.3		28	23.8
150	30	14,126	-67.4		28	23.0
125	30	15,209	-73.1		27	20.4
100	29	16,504	-77.1		27	15.2
80	29	17,789	-74.6		27	8.6
70	29	18,574	-70.0		27	4.8
60	29	19,501	-65.6		27	3.1
50	29	20,621	-62.2		29	1.8
40	27	22,006	-59.6		27	2.4
30	24	23,815	-56.5		28	2.2
25	2[illegible]	24,973	-55.0		29	2.9
20	20	26,399	-53.5		29	6.1
15	17	28,257	-51.2		27	7.8
10	7	30,928	-46.4			

MIDLAND, TEXAS
917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	3.0	.4	15	.3
1000						
950						
900	30	1,025	5.5	-.7	16	.5
850	30	1,493	5.8	-4.7	25	3.2
800	30	1,989	4.9	-8.5	28	6.2
750	30	2,514	3.4	-11.8	28	8.1
700	30	3,071	1.3	-17.3	27	11.2
650	30	3,664	-1.3	-19.3	26	14.2
600	30	4,298	-4.9	-24.6	26	16.9
550	30	4,977	-9.1	-27.7	26	19.1
500	30	5,707	-14.0	-31.5	26	22.5
450	30	6,498	-19.6	-36.1	26	25.4
400	30	7,362	-26.1	-41.9	26	28.0
350	30	8,317	-33.4	-47.5	26	30.4
300	30	9,379	-41.1	-52.0	26	35.7
250	30	10,595	-49.2		26	39.5
200	30	12,037	-55.9		26	40.8
175	30	12,881	-59.0		26	39.8
150	30	13,840	-61.7		26	36.2
125	27	14,965	-65.4		26	32.5
100	26	16,318	-67.4		27	23.1
80	24	17,664	-67.7		27	15.6
70	24	18,471	-65.5		27	11.9
60	23	19,417	-63.5		26	8.0
50	23	20,542	-61.2		27	7.7
40	23	21,931	-60.2		27	6.6
30	23	23,736	-58.0		28	5.9
25	23	24,886	-57.5		27	6.9
20	22	26,306	-55.7		28	7.6
15	21	28,148	-54.0		28	9.7
10	13	30,801	-50.5		27	14.2
7						

MONTERREY, MEXICO
964 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	12.0	9.5	01	1.5
1000						
950	30	575	13.2	8.9	01	2.1
900	30	1,031	12.7	7.0	36	1.2
850	30	1,511	12.0	4.1	17	1.4
800	30	2,019	12.0	1.2	22	3.1
750	30	2,559	11.3	-4.8	25	6.5
700	30	3,132	8.0	-7.0	25	9.0
650	30	3,739	4.0	-13.1	25	10.6
600	30	4,385	-.2	-17.8	25	12.1
550	30	5,075	-4.3	-23.4	25	13.6
500	30	5,819	-9.4	-28.1	25	16.1
450	30	6,625	-14.9	-33.3	25	17.8
400	30	7,505	-21.4	-37.4	25	20.9
350	30	8,479	-28.1	-43.9	25	24.3
300	30	9,566	-35.9	-50.0	25	28.7
250	30	10,809	-44.7		25	35.6
200	30	12,267	-55.4		26	34.3
175	29	13,107	-60.9		26	31.3
150	29	14,051	-67.0		25	28.6
125	29	15,137	-72.2		25	25.1
100	28	16,443	-74.5		25	17.5
80	25	17,738	-73.5		25	8.7
70	23	18,527	-69.2		26	5.0
60	23	19,457	-65.5		24	2.7
50	22	20,572	-62.3		24	2.6
40	22	21,958	-60.0		26	2.6
30	21	23,766	-57.9		26	2.5
25	21	24,921	-56.3		26	4.9
20	18	26,340	-54.6		26	5.5
15	16	28,184	-52.8		26	5.6
10						
7						

MONETT, MO.
966 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	438	2.6	.6	28	.3
1000						
950	30	568	2.4	-.9	28	1.1
900	30	1,005	1.3	-3.3	28	3.5
850	30	1,465	.6	-6.5	28	5.3
800	30	1,950	-.8	-8.5	27	6.9
750	30	2,465	-2.0	-11.6	27	8.6
700	30	3,011	-4.4	-14.3	27	10.4
650	30	3,593	-6.7	-18.8	27	12.6
600	30	4,215	-10.0	-22.0	27	15.1
550	30	4,880	-14.3	-25.8	27	17.2
500	30	5,596	-19.4	-30.7	26	19.6
450	30	6,370	-24.9	-35.7	26	21.5
400	30	7,217	-30.7	-41.3	26	25.0
350	30	8,155	-36.9	-45.7	26	30.2
300	30	9,205	-43.0		26	36.2
250	30	10,418	-49.2		26	40.0
200	30	11,862	-54.4		26	42.1
175	30	12,713	-56.8		26	38.0
150	30	13,684	-59.1		26	35.0
125	30	14,822	-61.1		26	30.3
100	29	16,195	-62.7		26	21.8
80	28	17,573	-62.6		26	15.9
70	28	18,398	-62.1		26	12.9
60	28	19,351	-61.8		27	9.7
50	28	20,482	-61.0		27	7.2
40	26	21,874	-59.6		27	6.6
30	24	23,685	-57.9		28	4.7
25	24	24,837	-56.9		29	4.4
20	23	26,256	-54.9		29	3.8
15	18	28,105	-53.7		29	4.0
10	14	30,743	-50.3			
7						

MONTGOMERY, ALA.
1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	57	8.6	6.1	01	.8
1000	30	147	9.1	5.8	04	.7
950	30	572	8.9	4.5	17	1.3
900	30	1,020	8.2	1.0	23	3.5
850	30	1,493	8.5	-2.8	25	6.5
800	30	1,994	8.0	-6.7	26	8.6
750	30	2,525	6.3	-9.3	26	11.3
700	30	3,088	3.5	-12.5	26	13.6
650	30	3,686	.5	-17.5	26	16.0
600	30	4,323	-3.1	-22.3	26	18.5
550	30	5,007	-7.4	-26.2	26	20.7
500	30	5,742	-12.2	-28.9	26	22.6
450	30	6,539	-17.8	-34.4	26	25.4
400	30	7,408	-24.3	-37.7	26	29.6
350	30	8,372	-31.2	-43.1	26	32.1
300	30	9,443	-39.1	-48.1	26	36.7
250	30	10,669	-47.8		26	39.1
200	30	12,112	-56.8		26	43.5
175	30	12,949	-61.0		26	43.7
150	30	13,899	-64.5		26	39.2
125	30	15,005	-67.7		26	32.9
100	28	16,332	-69.6		26	24.5
80	26	17,670	-68.0		26	15.9
70	26	18,476	-66.0		26	12.4
60	26	19,419	-62.9		26	9.1
50	26	20,546	-61.6		26	7.3
40	26	21,936	-59.5		27	8.7
30	26	23,743	-57.6		27	6.1
25	25	24,900	-56.1		28	7.6
20	25	26,324	-54.6		27	8.8
15	21	28,185	-52.4		27	9.3
10	12	30,844	-49.3		28	10.5
7						

NASHVILLE, TENN.
996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	5.6	3.2	30	.4
1000	8	207	2.1	-.5		
950	30	568	4.7	1.9	20	2.1
900	30	1,008	3.3	-.9	22	4.4
850	30	1,471	2.8	-6.1	24	6.1
800	30	1,961	2.1	-8.8	25	8.2
750	30	2,481	1.0	-12.2	25	10.0
700	30	3,034	-1.0	-15.8	25	12.3
650	30	3,623	-3.7	-18.1	25	15.3
600	28	4,254	-7.6	-20.9	25	17.6
550	28	4,927	-11.5	-27.1	26	21.0
500	28	5,651	-16.4	-31.2	26	23.5
450	28	6,435	-21.9	-35.5	26	26.5
400	28	7,290	-28.2	-41.2	26	31.2
350	28	8,238	-34.7	-46.9	26	35.2
300	28	9,296	-42.0	-49.8	26	40.7
250	28	10,509	-50.3		26	43.0
200	28	11,945	-56.0		26	45.9
175	28	12,790	-58.5		26	41.7
150	28	13,752	-61.6		26	38.0
125	28	14,876	-63.8		26	30.8
100	27	16,235	-64.6		26	23.7
80	27	17,599	-63.9		26	17.8
70	27	18,419	-63.2		26	12.7
60	26	19,369	-62.2		27	10.3
50	26	20,499	-61.3		27	9.4
40	25	21,892	-59.8		27	8.1
30	25	23,697	-57.6		28	6.7
25	24	24,852	-56.6		28	6.5
20	23	26,275	-55.0		28	7.2
15	22	28,113	-53.6		28	8.7
10	19	30,740	-51.7		27	13.8
7	8	33,112	-48.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

• NOME, ALASKA 1003 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	-6.0	-8.8	07	3.5
1000	19	67	-4.9	-7.9	09	2.3
950	29	429	-7.2	-9.8	10	4.8
900	29	849	-9.1	-11.7	12	4.1
850	29	1,290	-10.5	-14.8	14	4.2
800	29	1,755	-12.4	-17.3	14	3.2
750	29	2,246	-15.3	-20.6	15	3.2
700	29	2,764	-18.3	-23.4	16	3.4
650	29	3,314	-21.3	-27.7	17	3.9
600	29	3,901	-24.6	-30.2	18	5.5
550	29	4,530	-28.4	-31.7	18	6.4
500	29	5,207	-33.2	-36.2	18	7.8
450	29	5,940	-38.2	-40.1	18	9.2
400	29	6,741	-43.5	-40.7	19	10.8
350	29	7,631	-49.4		19	11.3
300	29	8,625	-54.6		19	12.0
250	29	9,788	-55.4		20	10.7
200	29	11,222	-52.0		20	9.6
175	28	12,087	-51.1		20	9.6
150	28	13,091	-50.4		21	10.6
125	28	14,282	-49.9		21	9.2
100	28	15,741	-49.9		22	10.6
80	26	17,200	-49.9		22	9.8
70	24	18,073	-50.1		22	9.6
60	23	19,076	-50.4		23	10.3
50	22	20,267	-50.9		23	9.6
40	21	21,722	-50.7		23	8.6
30	21	23,593	-51.9		24	9.1
25	19	24,768	-52.2		25	8.9
20	17	26,219	-52.3		24	8.2
15	14	28,063	-51.7		24	8.6
10	6	30,734	-51.5			

NORTH PLATTE, NEBR. 918 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	847	-3.9	-6.0	34	1.2
1000						
950						
900	30	1,000	-1.5	-5.2	33	2.6
850	30	1,458	-.2	-6.6	33	3.8
800	30	1,942	-1.8	-9.0	33	4.3
750	30	2,454	-3.7	-13.4	33	5.4
700	30	2,997	-6.2	-18.1	32	6.4
650	30	3,573	-9.2	-21.5	32	6.8
600	30	4,188	-13.0	-26.1	31	6.8
550	30	4,846	-17.4	-29.8	30	7.6
500	30	5,553	-22.4	-33.1	29	8.6
450	30	6,318	-27.8	-38.1	29	10.1
400	30	7,154	-34.2	-43.7	28	11.8
350	30	8,078	-41.2	-46.2	28	14.2
300	30	9,105	-48.7		28	16.7
250	30	10,289	-53.7		27	18.4
200	30	11,721	-54.5		27	21.2
175	30	12,575	-55.2		27	20.8
150	30	13,558	-55.7		27	19.6
125	30	14,717	-56.8		27	18.3
100	30	16,125	-58.2		27	14.8
80	30	17,527	-58.9		27	11.6
70	30	18,365	-59.1		27	10.1
60	29	19,329	-59.2		28	8.6
50	29	20,474	-58.6		28	6.7
40	28	21,882	-58.3		29	5.3
30	26	23,697	-57.1		31	3.5
25	24	24,862	-56.6		33	2.8
20	21	26,291	-55.7		34	2.4
15	17	28,134	-53.8		31	3.0
10	7	30,767	-53.5			

OAKLAND, CALIF. 1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	9.6	7.9	11	1.0
1000	30	146	11.0	6.8	[illegible]	.8
950	30	574	9.5	3.9	30	.5
900	30	1,021	7.9	-.3	29	2.3
850	30	1,491	5.8	-5.3	28	3.6
800	30	1,986	4.0	-8.9	30	3.9
750	30	2,508	1.4	-12.6	30	5.0
700	30	3,061	-1.4	-17.4	30	7.1
650	30	3,648	-4.7	-20.2	30	8.4
600	30	4,273	-8.7	-24.5	30	9.6
550	30	4,942	-13.0	-27.2	30	10.6
500	30	5,661	-18.0	-31.6	30	12.0
450	30	6,440	-23.8	-36.6	30	13.0
400	30	7,289	-30.4	-42.3	29	15.5
350	30	8,227	-37.6	-47.1	30	18.4
300	30	9,270	-45.1		30	22.1
250	30	10,471	-51.8		30	26.4
200	30	11,898	-57.4		30	26.1
175	29	12,746	-58.3		29	25.6
150	29	13,715	-58.5		29	22.9
125	28	14,845	-60.6		29	21.0
100	28	16,228	-62.6		29	15.6
80	28	17,602	-63.0		29	11.5
70	28	18,425	-62.6		30	9.2
60	28	19,377	-62.0		30	6.8
50	28	20,506	-61.5		29	5.1
40	28	21,895	-59.9		28	3.9
30	25	23,702	-58.3		27	3.1
25	20	24,857	-57.2		28	2.4
20	20	26,273	-55.8		26	2.0
15	18	28,108	-54.6		28	2.4
10	8	30,738	-50.9			

OMAHA, NEBR. 969 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	.3	-1.5	33	.4
1000						
950	30	558	.6	-1.3	30	1.2
900	30	992	-.2	-3.9	30	[illegible]
850	30	1,449	-1.2	-6.1	30	[illegible]
800	30	1,931	-2.6	-11.0	31	[illegible]
750	30	2,442	-4.4	-15.0	31	3.7
700	30	2,983	-6.8	-17.4	30	4.4
650	30	3,558	-9.8	-20.4	29	5.9
600	30	4,173	-13.1	-25.3	29	7.1
550	30	4,830	-17.2	-29.4	29	7.6
500	30	5,538	-22.1	-32.9	28	8.9
450	30	6,305	-27.6	-37.2	28	11.5
400	30	7,142	-33.6	-42.6	27	13.6
350	30	8,067	-40.5	-44.3	27	14.7
300	30	9,098	-47.9		26	17.7
250	30	10,286	-52.8		26	20.2
200	30	11,722	-53.7		26	23.3
175	30	12,579	-54.7		26	23.3
150	30	13,563	-55.7		26	21.5
125	28	14,722	-57.0		26	19.4
100	28	16,131	-58.4		26	14.6
80	28	17,531	-59.5		27	[illegible]
70	28	18,367	-59.0		27	11.3
60	27	19,328	-59.0		27	9.1
50	26	20,474	-58.8		27	7.3
40	24	21,881	-58.3		29	5.3
30	23	23,698	-57.2		31	3.0
25	22	24,855	-56.5		31	3.3
20	22	26,274	-55.6		31	3.3
15	18	28,110	-54.4		32	5.3
10	5	30,680	-54.5			

• PAGO PAGO, AMERICAN SAMOA 1011 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	28.2	23.8	10	5.9
1000	30	99	26.2	22.4	10	[illegible]
950	30	551	22.7	20.1	10	[illegible]
900	30	1,021	19.4	17.1	09	7.3
850	30	1,512	17.1	12.7	09	6.2
800	30	2,029	15.3	8.9	08	[illegible]
750	30	2,575	12.7	5.0	05	1.7
700	30	3,152	9.3	[illegible]	03	2.0
650	30	3,764	6.5	-3.2	35	[illegible]
600	30	4,417	2.9	-7.8	34	[illegible]
550	30	5,116	-.9	-14.9	31	[illegible]
500	30	5,872	-4.8	-20.3	29	[illegible]
450	30	6,694	-9.5	-25.4	29	3.4
400	30	7,594	-15.4	-30.5	26	5.6
350	30	8,592	-22.0	-35.2	26	7.8
300	30	9,705	-30.1	[illegible]	27	8.9
250	30	10,975	-40.6	-52.3	28	[illegible]
200	30	12,455	-52.8		28	9.4
175	30	13,304	-59.6		27	[illegible]
150	30	14,251	-67.1		27	[illegible]
125	30	15,330	-75.0		[illegible]	[illegible]
100	30	16,605	-80.4		24	3.3
80	30	17,870	-78.4		[illegible]	3.0
70	30	18,641	-73.6		09	5.9
60	30	19,553	-68.6		09	9.5
50	30	20,659	-64.0		09	13.5
40	29	22,040	-60.5		08	17.7
30	28	23,853	-55.2		09	18.6
25	28	25,025	-52.0		09	18.9
20	27	26,482	-47.9		08	15.7
15	25	28,403	-42.9		09	[illegible]
10	18	31,158	-39.0		12	3.3

• PEORIA, ILL. 994 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	.9	-1.4	30	.3
1000	7	211	-2.4	-5.9		
950	30	560	.5	-1.9	27	1.5
900	30	993	-.9	-4.1	28	2.3
850	30	1,449	-1.6	-9.5	29	2.6
800	30	1,932	-2.4	-12.7	27	3.7
750	30	2,443	-4.1	-16.0	26	5.2
700	30	2,985	-6.0	-18.0	27	6.7
650	30	3,562	-8.4	-21.5	26	8.4
600	30	4,179	-11.7	-25.4	26	9.8
550	30	4,840	-16.2	-29.5	26	11.1
500	30	5,550	-21.2	-33.9	26	13.1
450	30	6,320	-26.8	-37.6	26	14.8
400	30	7,159	-33.0	-42.1	26	17.1
350	30	8,088	-39.9	-45.8	26	20.6
300	30	9,123	-46.3		25	24.7
250	30	10,318	-52.1		25	29.2
200	30	11,752	-55.1		25	32.2
175	30	12,603	-55.9		26	31.0
150	30	13,582	-57.2		26	29.1
125	29	14,729	-58.6		26	24.2
100	28	16,119	-59.7		26	20.0
80	25	17,507	-59.8		26	15.1
70	23	18,342	-60.4		27	13.0
60	23	19,304	-60.0		27	10.2
50	23	20,442	-59.7		27	8.7
40	22	21,840	-58.8		28	5.8
30	22	23,653	-57.0		29	5.0
25	22	24,809	-56.5		30	4.4
20	22	26,228	-55.7		30	5.0
15	22	28,070	-53.8		32	4.8
10	18	30,695	-51.9		31	6.4
7	12	33,024	-50.0			
5	6	35,261	-47.4			

• PITTSBURGH, PA. 974 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	2.6	.3	25	.9
1000						
950	29	567	2.3	-.8	27	2.0
900	30	996	.8	-4.1	27	5.7
850	30	1,454	-.6	-8.0	27	7.0
800	30	1,938	-1.7	-11.4	27	7.7
750	30	2,450	-3.2	-15.1	26	9.0
700	30	2,994	-5.4	-16.9	26	11.1
650	30	3,573	-8.2	-20.0	26	12.7
600	30	4,191	-11.4	-24.3	26	14.4
550	30	4,853	-15.6	-28.1	26	16.0
500	30	5,566	-20.1	-32.4	26	17.7
450	30	6,339	-25.5	-38.0	26	19.3
400	30	7,183	-31.4	-43.1	26	22.1
350	30	8,118	-38.1	-45.4	26	25.5
300	30	9,161	-44.9	-49.9	26	29.0
250	30	10,364	-50.7		26	33.4
200	29	11,802	-55.7		26	38.1
175	28	12,655	-57.1		27	35.0
150	28	13,626	-58.6		26	30.3
125	27	14,767	-60.2		26	26.5
100	24	16,136	-60.6		27	21.4
80	22	17,518	-60.4		27	15.2
70	20	18,358	-60.3		27	13.5
60	20	19,320	-60.3		27	10.6
50	20	20,457	-60.0		27	9.2
40	19	21,853	-59.4		28	8.4
30	18	23,663	-57.8		30	6.0
25	17	24,819	-57.1		30	6.6
20	17	26,236	-55.4		30	6.7
15	14	28,086	-53.9		30	9.3
10	13	30,708	-52.2		29	12.1
7	10	33,018	-52.2			
5	6	35,221	-48.6			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	29.3	24.3	06	2.3
1000	30	80	27.7	22.4	07	2.7
950	30	534	24.1	20.0	08	4.5
900	30	1,006	20.8	15.3	09	5.2
850	30	1,500	18.2	12.3	08	5.3
800	30	2,018	16.4	7.4	08	4.6
750	30	2,566	13.8	3.1	08	4.3
700	30	3,144	10.6	-.7	08	5.0
650	30	3,759	7.3	-5.7	09	5.3
600	30	4,413	3.6	-10.8	09	6.7
550	30	5,115	-.3	-15.8	09	6.9
500	30	5,871	-4.5	-21.1	09	7.2
450	30	6,693	-9.3	-25.5	09	8.5
400	30	7,595	-14.8	-32.0	09	6.8
350	30	8,595	-21.7	-37.5	09	5.6
300	30	9,709	-30.0	-44.7	10	5.0
250	30	10,980	-40.2	-53.4	11	4.8
200	30	12,463	-52.6		11	3.9
175	30	13,312	-59.4		10	2.6
150	30	14,260	-66.9		06	1.6
125	30	15,341	-74.3		08	3.4
100	30	16,617	-80.7		09	6.4
80	30	17,880	-78.4		09	7.8
70	30	18,648	-75.8		09	10.1
60	30	19,548	-71.7		09	15.9
50	30	20,638	-66.4		09	21.9
40	30	22,007	-61.2		09	24.3
30	27	23,825	-54.6		09	25.4
25	27	25,001	-51.2		09	22.6
20	27	26,467	-46.5		10	14.8
15	23	28,392	-42.3		25	4.2
10	18	31,168	-38.1		27	10.7

PORTLAND, MAINE 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	.1	-3.2	35	1.8
1000	29	147	1.0	-3.2	36	2.2
950	30	553	-.8	-4.3	36	2.2
900	30	983	-2.4	-6.8	35	1.8
850	30	1,437	-2.9	-10.7	29	2.8
800	30	1,918	-3.3	-12.1	27	5.2
750	30	2,427	-4.9	-15.6	27	7.7
700	30	2,968	-7.0	-18.8	27	10.1
650	30	3,543	-9.3	-21.9	28	12.0
600	30	4,159	-12.7	-24.4	28	14.2
550	30	4,817	-16.7	-27.7	28	17.0
500	30	5,527	-21.2	-32.4	27	19.8
450	30	6,297	-26.7	-36.5	27	21.6
400	30	7,136	-32.9	-42.4	27	22.4
350	30	8,066	-39.3	-44.4	27	25.9
300	30	9,105	-45.6		28	29.7
250	30	10,304	-51.6		28	31.6
200	30	11,738	-55.0		28	30.7
175	30	12,590	-55.9		27	28.5
150	30	13,570	-56.5		27	23.9
125	29	14,733	-57.5		27	21.1
100	29	16,139	-59.1		27	17.9
80	29	17,535	-59.7		27	13.5
70	28	18,375	-59.4		28	10.8
60	28	19,340	-59.7		27	10.6
50	28	20,482	-59.3		28	8.4
40	28	21,879	-59.1		28	7.3
30	26	23,696	-58.0		28	7.3
25	24	24,843	-57.7		29	7.8
20	23	26,256	-56.9		29	8.8
15	20	28,088	-55.6		28	12.5
10	11	30,678	-54.0			
5	5	32,966	-52.8			

• QUILLAYUTE, WASH. 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	5.2	4.0	11	1.3
1000	22	150	5.8	4.4	[illegible]	1.8
950	30	539	5.6	3.3	17	[illegible]
900	30	980	3.3	1.0	18	[illegible]
850	30	1,441	.7	-2.5	20	7.0
800	30	1,927	-1.4	-6.0	21	7.3
750	30	2,439	-3.9	-11.1	22	[illegible]
700	30	2,981	-6.5	-16.0	23	7.2
650	30	3,558	-9.4	-19.0	24	8.3
600	30	4,172	-12.7	-23.5	25	9.1
550	30	4,832	-16.5	-27.2	26	9.6
500	30	5,542	-21.3	-31.7	27	9.7
450	30	6,310	-27.0	-36.1	27	11.3
400	30	7,148	-33.8	-40.9	27	12.3
350	30	8,073	-40.9	-45.1	28	13.9
300	29	9,106	-48.5		28	14.5
250	29	10,288	-55.1		28	15.1
200	29	11,702	-57.8		29	17.2
175	29	12,546	-56.9		29	15.6
150	29	13,524	-56.1		29	13.4
125	29	14,682	-56.5		29	12.0
100	25	16,082	-57.6		30	10.0
80	24	17,492	-57.9		30	8.3
70	24	18,334	-58.1		30	6.2
60	21	19,296	-57.4		31	4.5
50	20	20,451	-57.3		32	[illegible]
40	18	21,863	-57.3		35	[illegible]
30	14	23,691	-55.7		06	1.5
25	10	24,851	-55.3		08	1.9
20	10	26,278	-53.9			
15	8	28,123	-53.4			
10	5	30,739	-52.6			

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	-3.1	-7.3	33	2.8
1000						
950						
900	24	1,016	-2.0	-6.7	33	2.6
850	30	1,455	.3	-8.7	32	5.1
800	30	1,940	-1.5	-11.0	32	5.9
750	30	2,452	-3.9	-13.8	32	5.8
700	30	2,993	-7.3	-16.8	31	6.3
650	30	3,567	-10.9	-19.6	30	6.8
600	30	4,178	-14.6	-23.9	29	7.9
550	30	4,832	-18.6	-27.8	29	8.8
500	30	5,536	-23.3	-33.0	30	9.5
450	30	6,298	-29.1	-37.5	30	10.5
400	30	7,130	-35.3	-43.4	30	12.0
350	30	8,048	-42.7	-49.6	30	11.8
300	30	9,069	-50.2		30	13.2
250	30	10,243	-55.8		29	15.0
200	30	11,662	-55.7		28	14.9
175	30	12,513	-55.7		28	15.5
150	30	13,496	-55.3		28	13.8
125	30	14,657	-56.3		28	13.7
100	30	16,072	-57.1		28	11.3
80	30	17,481	-57.7		28	9.6
70	30	18,324	-57.9		28	8.2
60	30	19,295	-58.3		28	7.3
50	30	20,443	-58.1		29	5.8
40	29	21,849	-57.9		29	4.5
30	28	23,666	-57.1		33	3.6
25	26	24,821	-56.2		35	3.9
20	22	26,239	-55.8		36	3.0
15	16	28,075	-54.6		02	3.4
10	7	30,687	-53.4			

ST CLOUD, MINN. 980 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	-2.2	-4.7	33	.7
1000						
950	30	561	-3.2	-4.9	30	1.8
900	30	989	-3.9	-6.4	30	3.4
850	30	1,441	-3.8	-9.9	29	4.3
800	30	1,919	-4.8	-12.5	29	5.2
750	30	2,425	-6.0	-15.0	29	5.4
700	30	2,963	-8.4	-19.0	29	6.4
650	30	3,535	-11.3	-23.1	29	6.8
600	30	4,146	-14.6	-25.3	28	7.5
550	30	4,800	-18.9	-29.0	28	7.9
500	30	5,502	-23.9	-34.5	28	8.5
450	30	6,263	-29.3	-37.9	28	9.7
400	30	7,093	-35.7	-43.3	27	11.7
350	30	8,010	-43.1	-45.3	27	13.7
300	30	9,029	-50.7		26	16.0
250	30	10,202	-55.7		26	17.9
200	30	11,622	-55.4		26	18.4
175	29	12,482	-55.2		27	17.9
150	29	13,466	-55.1		27	16.5
125	28	14,625	-55.9		27	14.6
100	28	16,042	-56.9		27	12.3
80	28	17,456	-57.1		27	10.3
70	28	18,300	-57.5		27	9.1
60	28	19,273	-57.8		28	7.9
50	28	20,423	-58.0		29	6.4
40	26	21,833	-57.5		30	5.5
30	25	23,659	-56.9		32	4.4
25	22	24,819	-56.6		34	4.2
20	21	26,239	-55.7		33	4.3
15	16	28,078	-54.7		34	5.1
10	6	30,677	-54.3			

• ST PAUL IS., ALASKA 994 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	.9	-1.1	16	2.3
1000	12	85	1.0	-2.4	18	3.2
950	30	374	-1.0	-3.0	16	3.0
900	30	803	-4.4	-5.9	16	4.5
850	30	1,251	-7.2	-10.0	17	4.6
800	30	1,721	-9.8	-13.3	18	4.3
750	30	2,217	-12.6	-16.7	19	4.2
700	30	2,740	-15.9	-20.9	20	4.7
650	30	3,295	-19.2	-25.9	21	5.3
600	30	3,886	-23.1	-29.0	21	5.5
550	30	4,518	-27.1	-32.6	21	7.1
500	30	5,199	-31.5	-36.7	22	8.3
450	30	5,937	-36.6	[illegible]	22	9.3
400	30	6,744	-42.1	-45.6	22	11.0
350	30	7,639	-47.6		23	11.9
300	30	8,646	-51.2		22	12.9
250	30	9,831	-50.9		23	11.8
200	30	11,290	-49.0		22	11.0
175	30	12,169	-48.4		22	11.1
150	30	13,184	-48.4		22	11.5
125	30	14,386	-47.9		23	10.7
100	30	15,856	-48.4		23	10.6
80	30	17,325	-48.5		23	9.0
70	30	18,203	-49.5		22	8.3
60	30	19,212	-49.7		22	7.9
50	30	20,406	-49.5		23	8.1
40	28	21,866	-50.5		22	5.8
30	27	23,742	-50.3		21	4.5
25	26	24,932	-50.8		20	3.6
20	25	26,393	-50.8		19	2.0
15	20	28,270	-50.2		14	1.8
10	10	30,989	-48.3			

SALEM, ILL. 997 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	3.1	1.3	32	.5
1000	11	198	1.1	-1.5	34	1.0
950	30	560	2.1	-.2	27	1.9
900	30	996	.6	-3.1	27	3.4
850	30	1,454	-.1	[illegible]	27	4.7
800	30	1,939	-.6	-12.4	27	5.7
750	30	2,454	-2.2	-15.4	27	7.0
700	30	3,000	-4.6	-18.2	27	[illegible]
650	30	3,581	-7.5	-20.8	26	11.0
600	30	4,201	-10.4	-24.0	26	13.7
550	30	4,865	-14.7	-28.0	25	15.2
500	29	5,577	-20.1	-32.9	26	16.9
450	29	6,349	-25.5	-37.1	26	[illegible]
400	29	7,193	-31.8	-44.1	26	24.3
350	29	8,128	-37.9	-48.5	25	27.2
300	29	9,172	-44.4		25	31.2
250	29	10,376	-50.9		25	36.8
200	29	11,815	-54.9		26	36.3
175	29	12,666	-56.3		26	34.5
150	29	13,640	-58.5		26	[illegible]
125	29	14,782	-60.2		[illegible]	[illegible]
100	29	16,168	-61.9		26	19.9
80	29	17,548	-62.0		27	[illegible]
70	29	18,376	-61.3		27	[illegible]
60	28	19,334	-61.3		27	[illegible]
50	28	20,468	-60.8		27	7.3
40	28	21,859	-59.8		27	6.2
30	27	23,663	-57.9		28	4.9
25	27	24,816	-57.1		30	4.4
20	26	26,231	-56.1		29	[illegible]
15	24	28,070	-53.9		30	5.8
10	[illegible]	30,653	-52.4		29	[illegible]

SALEM, OREG. 1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	6.9	5.2	18	1.8
1000	23	162	7.4	5.9	18	[illegible]
950	30	556	6.8	3.7	20	5.7
900	30	1,000	4.9	.2	21	7.4
850	30	1,464	2.6	[illegible]	22	7.3
800	30	1,953	.1	-5.5	24	8.2
750	30	2,468	-2.5	-8.3	24	8.6
700	30	3,013	-5.1	-13.6	25	9.3
650	30	3,592	-8.1	-18.2	26	9.7
600	30	4,210	-11.9	[illegible]	26	9.9
550	30	4,871	-15.9	-26.8	27	[illegible]
500	30	5,582	-20.8	[illegible]	27	11.2
450	30	6,353	-26.3	-37.5	28	12.1
400	30	7,193	-32.9	-43.8	28	12.4
350	30	8,121	-40.3	-47.2	29	14.3
300	30	9,152	-48.0		29	16.3
250	30	10,336	-54.7		29	19.1
200	30	11,753	-57.1		30	19.1
175	29	12,597	-57.4		30	17.3
150	29	13,573	-56.5		30	17.5
125	28	14,733	-57.5		30	14.7
100	27	16,137	-59.0		30	12.0
80	24	17,532	-59.0		30	9.0
70	23	18,369	-58.6		30	6.2
60	20	19,333	-59.0		30	5.5
50	[illegible]	20,478	-58.5		[illegible]	3.6
40	18	21,889	-58.4		35	7.3
30	18	23,704	-56.8		04	7.7
25	[illegible]	24,856	-56.2		05	3.4
20	[illegible]	26,277	-55.3		08	2.5
15	[illegible]	28,119	-54.6			

• See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH 872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	1.7	-3.2	15	2.4
1000						
950						
900						
850	30	1,496	1.8	-4.1	16	3.2
800	30	1,983	-.9	-6.4	20	2.7
750	30	2,495	-4.1	-9.5	25	2.4
700	30	3,037	-7.0	-13.5	30	3.5
650	30	3,612	-9.9	-17.2	29	5.2
600	30	4,226	-13.1	-21.9	29	6.1
550	30	4,884	-17.2	-28.3	30	7.8
500	30	5,593	-21.4	-31.8	30	8.9
450	30	6,362	-26.6	-36.3	30	10.0
400	30	7,202	-33.1	-42.5	30	11.3
350	30	8,129	-40.5	-47.1	30	13.7
300	30	9,159	-48.5		29	15.6
250	30	10,340	-54.9		29	19.8
200	30	11,761	-56.3		29	22.1
175	30	12,608	-56.1		29	19.9
150	30	13,587	-56.8		29	17.0
125	30	14,739	-58.3		28	15.7
100	30	16,139	-59.3		28	12.7
80	30	17,533	-59.9		28	9.9
70	30	18,367	-59.8		28	7.5
60	29	19,330	-60.1		28	5.5
50	28	20,465	-59.1		29	5.2
40	26	21,863	-58.6		29	4.2
30	25	23,675	-57.5		30	2.4
25	25	24,830	-56.4		32	2.1
20	24	26,247	-55.7		35	1.6
15	20	28,067	-55.2		01	1.8
10	13	30,654	-54.2		33	2.0
7	6	32,929	-53.1			
5						

SAN DIEGO, CALIF. 1001 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	124	10.6	7.6	06	.8
1000	19	152	12.7	5.3	04	1.2
950	29	568	13.4	1.6	26	.7
900	29	1,021	11.3	-3.0	28	1.2
850	29	1,496	8.9	-6.7	28	1.3
800	29	1,996	6.5	-10.9	29	3.0
750	29	2,523	4.4	-15.3	30	5.1
700	29	3,082	2.0	-17.9	30	7.0
650	29	3,676	-1.5	-20.6	30	9.4
600	29	4,308	-5.5	-22.2	30	10.7
550	29	4,985	-10.0	-26.5	30	12.7
500	29	5,712	-15.2	-30.6	30	15.5
450	29	6,500	-20.5	-35.6	29	18.5
400	29	7,361	-26.8	-41.3	29	21.2
350	29	8,314	-34.1	-46.8	29	22.7
300	29	9,372	-42.1	-48.9	29	25.2
250	29	10,585	-49.8		29	28.4
200	29	12,020	-56.8		28	30.1
175	29	12,863	-58.7		28	30.2
150	29	13,827	-60.8		28	27.9
125	29	14,952	-64.0		28	25.9
100	29	16,312	-65.8		28	19.7
80	29	17,668	-65.2		28	13.5
70	29	18,484	-64.3		28	9.8
60	29	19,432	-62.6		28	7.5
50	29	20,560	-61.2		28	6.2
40	29	21,954	-58.7		26	5.1
30	29	23,768	-56.9		27	5.6
25	28	24,926	-56.0		27	7.2
20	27	26,355	-54.8		28	9.3
15	25	28,203	-53.6		27	10.1
10	15	30,829	-50.8		28	15.2
7						
5						

SAN JUAN, P. R. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	24.8	21.2	16	1.8
1000	30	130	24.9	21.4	11	3.4
950	30	579	22.0	19.2	09	5.7
900	30	1,048	19.1	14.8	09	5.5
850	30	1,538	16.0	11.6	09	5.1
800	30	2,053	13.9	5.7	09	4.7
750	30	2,595	11.3	-.6	09	3.8
700	30	3,168	8.7	-6.4	08	3.9
650	30	3,778	5.9	-11.3	06	3.1
600	30	4,430	2.6	-15.9	06	3.6
550	30	5,128	-1.6	-19.9	06	4.1
500	30	5,880	-6.2	-24.7	04	4.1
450	30	6,697	-11.3	-29.8	03	4.9
400	30	7,589	-17.8	-35.3	36	5.4
350	30	8,577	-25.0	-41.0	35	6.5
300	30	9,675	-33.5	-47.7	34	9.1
250	30	10,928	-43.5		33	12.5
200	30	12,394	-54.4		32	13.8
175	30	13,237	-60.6		32	14.0
150	30	14,181	-67.5		32	12.8
125	29	15,268	-73.5		31	10.6
100	29	16,555	-78.2		32	7.3
80	29	17,829	-76.7		34	2.9
70	29	18,608	-71.2		02	1.9
60	28	19,530	-66.7		08	3.8
50	28	20,642	-63.5		09	7.9
40	27	22,021	-60.0		09	10.8
30	23	23,842	-54.0		09	11.6
25	23	25,017	-52.2		09	10.1
20	23	26,470	-49.7		10	6.3
15	22	28,364	-46.7		21	1.1
10	10	31,087	-41.1			
7						
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* SAULT STE MARIE, MICH. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	-.8	-2.9	06	.7
1000						
950	30	547	-2.6	-4.2	25	1.2
900	30	975	-4.0	-5.9	27	2.3
850	30	1,425	-5.3	-10.0	27	3.8
800	30	1,901	-6.2	-13.5	28	5.1
750	30	2,404	-7.9	-17.8	28	5.7
700	30	2,939	-10.0	-20.7	28	7.3
650	30	3,508	-12.4	-23.1	28	8.4
600	30	4,116	-15.4	-26.4	28	10.0
550	30	4,768	-19.0	-29.7	28	11.1
500	30	5,471	-23.7	-34.1	28	12.5
450	30	6,233	-29.0	-38.7	28	13.9
400	30	7,065	-35.0	-43.2	27	15.6
350	30	7,985	-42.2	-45.8	27	17.5
300	30	9,008	-49.3		27	20.9
250	30	10,187	-54.8		26	25.0
200	30	11,610	-55.5		26	25.6
175	29	12,461	-55.1		26	23.4
150	29	13,447	-54.6		26	21.5
125	29	14,612	-55.4		27	18.9
100	28	16,038	-56.5		27	15.3
80	28	17,453	-57.0		27	12.1
70	28	18,298	-57.2		27	11.1
60	28	19,273	-57.6		27	9.3
50	28	20,424	-57.6		28	8.1
40	28	21,833	-57.6		29	6.6
30	27	23,651	-56.7		30	5.9
25	27	24,808	-56.3		31	6.6
20	27	26,226	-56.3		31	7.6
15	27	28,058	-55.2		31	9.3
10	21	30,648	-53.6		31	9.9
7	16	32,967	-52.5		31	14.1
5	9	35,149	-51.8			

* SHEMYA, ALASKA 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	38	.7	-2.7	30	3.9
1000	10	89	-.9	-6.4		
950	29	405	-2.4	-5.5	29	5.2
900	30	819	-5.7	-7.2	29	6.5
850	30	1,264	-9.1	-10.5	28	6.6
800	30	1,731	-12.0	-14.9	28	6.6
750	30	2,223	-14.7	-19.2	27	7.2
700	30	2,742	-18.0	-23.7	27	7.9
650	30	3,292	-21.2	-27.4	27	8.7
600	30	3,879	-24.7	-31.9	27	9.8
550	30	4,508	-28.2	-35.6	27	10.8
500	30	5,185	-32.7	-41.0	27	12.4
450	30	5,920	-37.7	-43.1	27	14.4
400	30	6,723	-43.4	-42.5	27	16.8
350	30	7,614	-48.4		27	17.8
300	30	8,617	-51.7		26	17.0
250	30	9,798	-51.7		26	19.3
200	30	11,252	-50.1		26	15.9
175	30	12,125	-49.9		26	16.6
150	30	13,135	-49.4		26	15.3
125	29	14,325	-49.6		26	14.9
100	29	15,784	-49.8		25	14.5
80	29	17,244	-49.9		25	12.3
70	29	18,117	-50.3		24	10.7
60	28	19,120	-51.1		24	10.5
50	28	20,306	-51.3		24	8.4
40	28	21,756	-51.3		23	7.5
30	28	23,624	-51.7		23	5.5
25	28	24,807	-51.5		20	3.9
20	27	26,257	-51.5		19	2.8
15	22	28,123	-51.6		17	2.0
10	20	30,750	-51.0		17	1.8
7	11	33,041	-50.0		25	3.6
5						

* SHREVEPORT, LA. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	7.6	4.8	03	.4
1000	27	159	7.4	3.7	04	1.4
950	30	571	6.9	1.0	36	1.1
900	30	1,015	5.9	-3.4	29	3.5
850	30	1,484	6.6	-7.4	28	7.0
800	30	1,981	6.2	-9.7	27	9.0
750	30	2,509	4.3	-12.0	26	11.9
700	30	3,068	1.9	-16.1	26	14.5
650	30	3,663	-.6	-18.9	26	17.1
600	30	4,298	-4.2	-22.3	26	19.9
550	30	4,979	-8.3	-26.3	26	22.7
500	30	5,712	-13.4	-31.6	26	26.2
450	30	6,505	-18.8	-36.0	26	28.3
400	30	7,372	-25.1	-40.8	25	31.3
350	30	8,331	-32.0	-46.0	25	35.3
300	30	9,399	-39.9	-50.3	25	36.6
250	30	10,622	-48.3		25	43.1
200	30	12,064	-56.4		26	45.4
175	30	12,905	-59.8		26	39.9
150	30	13,860	-63.2		26	33.4
125	29	14,974	-66.2		26	31.3
100	29	16,317	-68.5		25	24.2
80	26	17,657	-67.5		26	15.1
70	26	18,465	-65.5		26	13.0
60	25	19,408	-63.5		26	8.0
50	25	20,534	-61.2		27	8.2
40	25	21,922	-60.6		26	8.9
30	24	23,725	-57.6		27	8.0
25	22	24,877	-56.7		27	10.2
20	20	26,291	-55.2		26	9.4
15	20	28,134	-53.5		27	10.3
10	17	30,763	-49.5		27	16.0
7	15	33,132	-45.9		27	22.4
5	6	35,395	-42.9			
4	5	36,899	-40.2			

SPOKANE, WASH. 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	1.7	-.6	11	.7
1000						
950						
900	30	1,002	1.6	-.7	18	1.8
850	30	1,462	.5	-5.2	22	3.6
800	30	1,947	-1.8	-7.7	24	4.4
750	30	2,458	-4.8	-9.7	25	5.2
700	30	2,998	-7.9	-14.0	26	5.8
650	30	3,571	-10.8	-18.6	27	7.7
600	30	4,182	-14.4	-23.0	27	8.5
550	30	4,837	-18.7	-27.2	28	9.9
500	30	5,541	-23.0	-32.6	29	11.6
450	30	6,306	-27.9	-38.1	29	13.2
400	30	7,141	-34.2	-44.2	29	15.2
350	30	8,065	-41.0	-47.2	29	16.6
300	30	9,093	-48.9		29	17.6
250	30	10,272	-55.5		30	19.6
200	30	11,687	-56.9		30	17.3
175	29	12,538	-55.6		30	16.1
150	29	13,522	-55.1		30	14.1
125	29	14,686	-55.8		30	12.3
100	28	16,096	-56.5		30	10.8
80	28	17,510	-57.0		30	8.5
70	28	18,355	-57.1		30	6.9
60	28	19,332	-56.8		31	5.5
50	28	20,488	-56.6		32	3.6
40	28	21,905	-56.2		33	2.2
30	28	23,736	-55.7		36	2.2
25	25	24,893	-54.8		03	2.5
20	25	26,323	-54.2		05	2.9
15	23	28,164	-53.8		04	4.0
10	17	30,768	-53.6		05	5.5
7	7	33,082	-52.3			
5						
4						

* SWAN ISLAND, W. I. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	26.5	23.4	09	3.7
1000	30	110	26.0	22.9	09	4.4
950	30	561	22.6	20.4	09	5.7
900	30	1,031	19.7	15.6	10	5.6
850	30	1,522	16.7	10.9	10	5.7
800	30	2,037	14.1	6.4	11	5.3
750	30	2,580	11.4	.9	11	5.0
700	30	3,154	8.8	-5.0	11	4.4
650	29	3,765	5.8	-9.0	11	4.5
600	29	4,416	2.3	-12.7	10	4.1
550	29	5,114	-1.7	-16.7	10	3.8
500	29	5,867	-6.0	-21.7	09	2.8
450	29	6,684	-11.2	-27.0	09	2.2
400	29	7,578	-17.0	-32.3	10	1.9
350	29	8,569	-24.0	-39.5	30	.9
300	29	9,673	-32.5	-46.8	31	3.3
250	29	10,931	-42.6		30	5.8
200	29	12,399	-54.5		28	7.4
175	29	13,241	-61.1		28	7.9
150	29	14,183	-68.1		28	8.0
125	29	15,258	-75.1		28	6.4
100	28	16,534	-80.3		29	3.8
80	28	17,795	-78.9		02	.5
70	28	18,567	-72.9		09	2.1
60	28	19,485	-67.5		08	4.3
50	27	20,592	-64.1		09	8.5
40	26	21,968	-60.7		09	11.8
30	23	23,773	-56.0		09	12.1
25	23	24,942	-52.9		09	10.3
20	20	26,385	-51.0		08	9.1
15	19	28,279	-47.6		10	2.7
10	12	30,992	-41.4			
7						
5						
4						

TAMPA, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	17.0	15.2	05	1.1
1000	30	144	18.2	15.1	08	1.4
950	30	584	17.0	13.1	19	1.5
900	30	1,045	15.4	8.5	23	3.4
850	30	1,530	14.6	3.1	25	5.3
800	30	2,041	12.6	.2	25	6.0
750	30	2,580	10.1	-2.8	25	7.2
700	30	3,151	7.0	-7.3	26	8.8
650	30	3,757	3.6	-10.8	26	10.2
600	30	4,402	-.3	-14.4	26	12.6
550	30	5,093	-4.2	-18.5	26	14.4
500	30	5,838	-8.9	-21.5	26	15.2
450	30	6,646	-14.2	-26.2	26	16.9
400	30	7,530	-20.4	-31.3	26	18.9
350	30	8,507	-27.5	-37.5	26	21.5
300	30	9,595	-35.8	-45.5	26	24.9
250	30	10,836	-45.6		26	27.4
200	30	12,288	-56.1		27	28.6
175	30	13,127	-61.3		27	27.7
150	30	14,072	-66.7		27	26.8
125	30	15,160	-71.8		27	21.3
100	30	16,461	-75.6		27	14.9
80	29	17,760	-72.6		26	9.3
70	29	18,552	-68.3		26	5.5
60	28	19,485	-65.2		26	5.4
50	28	20,605	-62.0		26	1.8
40	26	21,994	-59.6		26	2.7
30	25	23,806	-57.1		28	4.5
25	25	24,966	-55.2		28	6.6
20	24	26,398	-53.8		29	6.3
15	22	28,248	-51.5		27	10.2
10	17	30,911	-47.0		26	14.2
7						
5						
4						

TOPEKA, KANS. 986 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	3.0	-.3	35	.6
1000						
950	30	566	2.1	-.8	26	2.1
900	30	1,001	.5	-3.4	28	3.2
850	30	1,459	-.7	-6.9	29	3.8
800	30	1,942	-2.2	-9.7	29	4.6
750	30	2,454	-3.8	-13.4	29	6.0
700	30	2,997	-5.9	-17.0	28	7.4
650	30	3,575	-8.8	-22.3	28	8.6
600	30	4,192	-12.2	-25.0	28	9.5
550	30	4,852	-16.4	-28.1	28	11.4
500	30	5,563	-21.3	-31.5	27	13.4
450	29	6,327	-27.0	-37.3	27	15.5
400	29	7,165	-33.2	-43.8	26	18.1
350	29	8,094	-39.7	-48.6	26	21.1
300	29	9,129	-46.8		26	25.8
250	29	10,326	-50.4		26	28.2
200	29	11,770	-53.6		26	29.4
175	28	12,631	-55.2		26	28.7
150	28	13,612	-56.6		26	27.2
125	28	14,765	-58.3		26	23.3
100	26	16,162	-59.8		26	18.3
80	26	17,553	-60.5		26	13.8
70	25	18,387	-60.6		27	11.0
60	24	19,348	-60.5		27	9.3
50	23	20,484	-59.8		27	7.7
40	23	21,880	-59.3		28	4.8
30	23	23,690	-57.4		28	4.0
25	21	24,844	-56.4		29	3.1
20	20	26,255	-55.6		30	3.0
15	19	28,094	-54.2		31	2.9
10	10	30,706	-51.8			
7						
5						
4						

* TRUK, CAROLINE IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	28.8	24.7	05	3.4
1000	30	97	27.9	24.1	06	3.8
950	30	552	24.3	21.6	08	5.4
900	30	1,025	21.3	18.3	08	5.5
850	30	1,519	18.2	14.8	09	5.8
800	30	2,038	16.1	10.4	08	5.8
750	30	2,586	13.7	6.0	08	5.5
700	30	3,165	10.6	.8	09	6.0
650	30	3,779	7.4	-4.7	09	6.0
600	30	4,434	3.7	-9.1	09	6.6
550	30	5,136	-.5	-14.4	09	7.7
500	30	5,892	-4.7	-18.0	09	8.2
450	30	6,714	-9.5	-23.9	10	7.8
400	30	7,614	-15.2	-29.3	10	5.4
350	30	8,613	-21.9	-35.1	11	4.6
300	30	9,727	-30.1	-42.2	12	2.9
250	30	10,997	-40.6	-49.3	12	2.1
200	30	12,477	-52.9		12	2.3
175	30	13,326	-59.6		11	1.4
150	30	14,273	-67.1		08	1.5
125	30	15,354	-74.3		08	4.7
100	29	16,630	-80.6		09	7.6
80	28	17,889	-78.5		09	7.8
70	28	18,655	-75.5		09	10.1
60	28	19,556	-71.6		09	16.5
50	28	20,649	-66.2		09	22.0
40	28	22,018	-60.9		09	24.9
30	25	23,836	-54.7		09	25.4
25	25	25,012	-50.8		09	22.9
20	23	26,481	-46.1		09	11.9
15	20	28,411	-42.9		25	3.9
10	13	31,167	-39.1		27	18.3
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* TUCSON, ARIZ. 925 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	6.3	2.1	15	2.7
1000						
950						
900	30	1,017	10.4	.3	15	2.3
850	30	1,491	8.5	-3.0	21	1.3
800	30	1,990	5.8	-6.9	25	2.4
750	30	2,515	3.3	-13.3	27	4.4
700	30	3,072	1.0	-19.0	27	6.3
650	30	3,665	-1.7	-22.5	28	8.6
600	30	4,297	-5.5	-25.6	27	10.8
550	30	4,974	-9.9	-28.4	27	12.8
500	30	5,701	-15.2	-33.3	28	15.6
450	30	6,490	-20.7	-37.0	27	19.5
400	30	7,350	-26.9	-42.6	27	22.8
350	29	8,302	-34.0	-48.8	27	25.3
300	29	9,361	-42.0	-54.1	27	27.8
250	28	10,581	-50.3		27	31.9
200	28	12,018	-55.9		27	34.6
175	27	12,866	-58.1		27	34.8
150	27	13,831	-60.8		27	32.2
125	27	14,957	-64.0		27	28.1
100	26	16,313	-66.3		27	22.2
80	22	17,659	-65.3		27	15.2
70	21	18,473	-63.8		27	11.4
60	21	19,423	-62.3		27	8.0
50	19	20,561	-60.1		27	6.8
40	19	21,960	-58.5		27	4.9
30	18	23,773	-58.0		28	6.4
25	17	24,931	-56.4		29	7.5
20	15	26,354	-55.2		28	8.2
15	11	28,210	-52.7		28	11.9
10	7	30,835	-50.6			
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* VANDENBERG AFB, CALIF. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	10.0	6.8	10	.8
1000	26	154	11.3	6.0	04	1.2
950	30	571	12.1	1.9	35	2.1
900	30	1,023	10.3	-1.5	34	2.1
850	30	1,497	8.3	-5.4	33	3.1
800	30	1,995	5.9	-10.0	32	4.3
750	30	2,521	3.4	-14.0	31	5.7
700	30	3,077	.3	-16.3	31	7.2
650	30	3,668	-2.9	-20.3	30	8.5
600	30	4,297	-7.1	-24.7	29	9.7
550	30	4,969	-11.8	-27.9	29	11.5
500	30	5,692	-16.7	-32.3	29	14.4
450	30	6,476	-22.0	-35.7	29	17.8
400	30	7,332	-28.2	-41.7	29	21.0
350	30	8,278	-35.4	-46.0	29	24.0
300	30	9,331	-43.3		29	26.2
250	30	10,537	-51.1		29	28.9
200	30	11,967	-57.1		29	28.8
175	30	12,809	-58.7		28	28.5
150	30	13,774	-60.4		28	26.1
125	30	14,905	-62.6		28	21.5
100	30	16,273	-64.5		28	18.7
80	29	17,638	-65.0		29	12.7
70	29	18,454	-64.1		29	10.2
60	28	19,400	-62.8		29	8.1
50	28	20,528	-61.5		28	5.3
40	27	21,917	-59.6		27	5.6
30	27	23,726	-57.6		26	5.7
25	27	24,880	-56.6		26	6.8
20	25	26,295	-56.0		27	8.1
15	24	28,139	-53.7		26	8.9
10	20	30,764	-51.3		27	10.8
7	16	33,091	-49.5			
5	7	35,270	-46.1			

VICTORIA, TEXAS 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	33	10.2	7.5	02	3.0
1000	30	139	11.6	6.5	03	4.1
950	30	569	12.2	4.3	04	4.0
900	30	1,023	12.2	1.2	32	1.2
850	30	1,502	11.6	-1.0	26	4.8
800	30	2,007	9.6	-1.8	25	7.9
750	29	2,541	7.6	-5.7	25	10.9
700	29	3,108	5.9	-12.5	26	12.9
650	28	3,712	2.3	-13.5	26	13.9
600	28	4,354	-1.7	-19.3	26	15.8
550	28	5,041	-6.0	-25.5	26	18.4
500	28	5,780	-11.1	-29.0	25	20.6
450	28	6,581	-16.1	-33.8	26	23.1
400	28	7,457	-22.6	-39.0	26	26.3
350	28	8,427	-29.5	-44.2	26	29.4
300	28	9,505	-38.0	-49.4	26	32.7
250	28	10,738	-46.7		26	38.5
200	28	12,184	-56.4		26	42.8
175	28	13,023	-61.0		26	42.9
150	28	13,970	-65.8		26	38.8
125	28	15,065	-70.1		26	32.8
100	28	16,383	-72.6		26	22.4
80	27	17,698	-70.8		26	13.9
70	26	18,495	-68.1		26	9.7
60	26	19,430	-64.7		26	6.3
50	25	20,553	-61.9		27	4.0
40	24	21,935	-60.7		26	6.2
30	24	23,735	-58.2		27	3.9
25	24	24,887	-56.8		27	5.6
20	22	26,313	-54.8		27	7.3
15	19	28,163	-52.5		27	8.9
10	13	30,818	-47.8		27	11.6
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* WAKE IS., PACIFIC AREA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	26.8	23.0	07	7.7
1000	30	139	25.5	21.6	07	9.1
950	30	590	21.8	19.6	08	9.9
900	30	1,058	18.7	15.8	08	10.0
850	30	1,548	15.9	11.3	08	9.6
800	30	2,062	14.1	3.2	08	9.4
750	30	2,606	12.7	-5.0	09	7.9
700	30	3,182	10.2	-12.5	08	8.3
650	30	3,795	7.3	-14.5	08	8.6
600	30	4,449	3.6	-17.5	08	7.6
550	30	5,149	-.2	-21.5	07	6.4
500	30	5,905	-5.0	-26.6	06	5.5
450	30	6,725	-10.4	-30.5	06	4.7
400	30	7,620	-17.2	-35.9	05	4.4
350	30	8,609	-24.7	-42.0	01	3.1
300	30	9,710	-32.9	-48.6	32	4.4
250	30	10,968	-42.4		28	5.5
200	30	12,439	-53.9		26	6.8
175	30	13,284	-60.0		26	6.2
150	29	14,232	-66.4		27	5.6
125	29	15,318	-73.4		28	3.0
100	25	16,603	-79.0		03	1.2
80	22	17,871	-78.3		10	4.8
70	20	18,642	-74.4		09	4.8
60	19	19,556	-69.0		09	6.6
50	18	20,660	-63.9		10	8.1
40	17	22,038	-60.6		08	10.2
30	15	23,846	-55.7		08	11.7
25	15	25,015	-53.1		08	10.6
20	14	26,469	-50.2		09	7.7
15	13	28,365	-48.0		12	2.2
10	10	31,041	-42.9		28	9.6
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	• WALLOPS IS., VA. NASA 1017 MB				Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	29	4	7.3	4.3	30	1.3
1000	28	147	7.4	2.6	35	1.8
950	29	561	5.8	1.4	30	2.8
900	29	1,003	4.6	-2.5	28	5.5
850	29	1,469	4.0	-6.5	27	7.1
800	29	1,961	2.8	-9.5	26	10.1
750	29	2,482	1.5	-11.9	26	11.7
700	29	3,035	-1.2	-14.8	26	13.6
650	29	3,623	-3.9	-19.1	26	16.1
600	29	4,251	-7.3	-22.6	26	18.4
550	29	4,923	-11.7	-26.5	26	20.8
500	29	5,647	-16.7	-29.7	26	22.6
450	29	6,430	-21.7	-34.6	26	25.6
400	29	7,287	-27.9	-40.3	26	29.2
350	29	8,237	-34.6	-43.8	26	30.9
300	29	9,294	-42.1	-46.3	26	33.9
250	29	10,507	-50.0		27	37.7
200	29	11,942	-56.6		27	38.7
175	29	12,784	-59.2		28	35.3
150	29	13,744	-61.9		28	32.0
125	29	14,871	-62.8		27	27.7
100	28	16,245	-65.1		28	21.8
80	27	17,609	-64.4		28	14.2
70	27	18,428	-63.3		28	11.2
60	27	19,379	-62.3		28	10.1
50	27	20,507	-61.5		28	8.2
40	27	21,894	-60.3		28	7.6
30	26	23,701	-58.1		28	7.8
25	24	24,849	-57.2		28	7.0
20	23	26,263	-55.7		29	7.3
15	18	28,098	-54.1		29	10.1
10	15	30,723	-52.0		28	12.4
7	9	33,052	-48.2			

Standard pressure surface (mb.)	WASHINGTON DULLES INT. AP 1008 MB				Resultant Wind	
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	85	2.0	-.5	32	.9
1000	24	173	4.1	-.3	33	1.3
950	30	562	3.7	-1.1	30	3.8
900	30	1,000	2.7	-3.3	29	5.4
850	30	1,463	2.4	-6.6	28	6.1
800	30	1,952	1.0	-8.2	27	7.0
750	30	2,469	-.6	-10.5	26	9.2
700	30	3,019	-2.7	-14.1	26	12.3
650	30	3,604	-5.2	-18.0	26	14.4
600	30	4,229	-8.6	-20.4	26	16.1
550	30	4,898	-12.7	-25.2	26	18.9
500	30	5,619	-17.6	-28.5	26	21.4
450	30	6,400	-22.8	-34.2	26	24.1
400	30	7,252	-29.1	-39.7	26	26.9
350	30	8,197	-35.7	-43.8	26	29.8
300	30	9,249	-43.1	-46.6	26	32.6
250	30	10,459	-50.0		26	36.8
200	30	11,897	-55.7		26	40.5
175	30	12,744	-57.7		26	38.9
150	30	13,711	-60.3		26	34.0
125	30	14,846	-61.1		26	29.2
100	30	16,226	-62.6		26	22.8
80	30	17,601	-62.5		27	16.2
70	29	18,426	-61.7		27	12.5
60	29	19,382	-61.0		27	10.8
50	29	20,517	-60.5		27	10.2
40	29	21,911	-59.4		28	8.5
30	29	23,722	-57.4		28	7.1
25	29	24,876	-56.7		29	7.1
20	27	26,299	-55.6		29	8.0
15	24	28,145	-53.5		29	9.0
10	20	30,762	-51.4		29	11.4
7						

Standard pressure surface (mb.)	WAYCROSS, GA. 1012 MB				Resultant Wind	
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	44	10.8	9.3	35	1.0
1000	30	140	12.4	9.3	04	.9
950	30	572	12.9	8.1	17	1.0
900	30	1,026	11.6	4.9	23	3.8
850	30	1,505	11.5	-1.9	25	7.5
800	30	2,010	10.1	-3.1	25	9.5
750	30	2,545	8.2	-7.2	25	10.8
700	30	3,112	5.0	-12.8	26	12.2
650	30	3,713	1.9	-16.7	26	14.6
600	30	4,355	-1.4	-19.9	26	15.8
550	30	5,042	-5.8	-23.1	26	17.1
500	30	5,782	-10.6	-26.6	26	19.7
450	30	6,585	-16.0	-30.4	26	22.5
400	30	7,461	-22.3	-34.2	26	26.9
350	30	8,432	-29.1	-40.1	26	29.9
300	30	9,512	-37.3	-46.7	26	32.8
250	30	10,746	-46.8		26	37.5
200	30	12,193	-56.4		27	40.5
175	29	13,035	-60.4		27	40.7
150	28	13,989	-64.6		27	35.0
125	26	15,103	-68.4		26	30.2
100	26	16,429	-71.5		26	20.8
80	24	17,754	-69.6		26	14.1
70	24	18,555	-67.2		27	10.0
60	23	19,493	-64.0		26	7.2
50	23	20,617	-62.0		27	6.6
40	23	22,006	-59.7		27	5.6
30	22	23,815	-57.5		27	7.5
25	21	24,965	-56.2		27	8.3
20	17	26,409	-53.8		28	8.7
15	16	28,268	-52.0		27	12.9
10	12	30,919	-50.0		26	14.0
7	7	33,255	-47.0			

Standard pressure surface (mb.)	WINNEMUCCA, NEV. 871 MB				Resultant Wind	
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	29	1,312	-1.3	-2.3	07	.9
1000						
950						
900						
850	29	1,510	1.9	-3.2	15	.9
800	29	1,998	.1	-6.9	27	2.2
750	29	2,513	-2.4	-10.4	25	3.5
700	29	3,058	-5.0	-13.9	27	5.1
650	29	3,638	-8.1	-17.6	29	6.8
600	29	4,255	-11.6	-20.9	29	8.3
550	29	4,917	-16.1	-25.8	30	9.3
500	29	5,628	-20.8	-30.8	30	10.8
450	29	6,398	-26.4	-35.2	30	12.2
400	29	7,238	-32.8	-40.9	30	13.7
350	29	8,167	-39.9	-43.1	29	15.1
300	29	9,200	-47.7		29	17.4
250	29	10,386	-54.2		29	19.5
200	29	11,805	-57.3		29	18.4
175	28	12,642	-58.2		29	18.1
150	28	13,616	-57.4		28	16.3
125	28	14,765	-58.6		29	13.9
100	28	16,163	-60.0		28	10.5
80	25	17,560	-61.0		29	8.9
70	25	18,390	-60.7		29	7.0
60	25	19,351	-60.2		29	4.2
50	23	20,490	-60.4		27	3.8
40	19	21,887	-59.3		29	2.3
30	16	23,697	-57.5		33	1.1
25	14	24,851	-57.0		35	.3
20	10	26,257	-55.9			
15	7	28,084	-54.6			
10						
7						

Standard pressure surface (mb.)	WINSLOW, ARIZ. 85[illegible] MB				Resultant Wind	
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	1,487	.5	-2.3	21	1.0
1000						
950						
900						
850	20	1,525	-.1	-4.7	16	.2
800	30	1,989	1.9	-5.5	27	2.4
750	30	2,508	-.1	-8.5	27	4.1
700	30	3,058	-2.7	-13.9	28	5.5
650	30	3,643	-5.3	-18.9	28	8.8
600	30	4,267	-9.0	-22.8	28	10.2
550	30	4,935	-13.1	-25.8	29	12.3
500	30	5,654	-18.1	-30.[illegible]	29	14.2
450	30	6,433	-23.7	-35.1	28	16.6
400	30	7,282	-30.0	-41.2	28	20.0
350	30	8,223	-36.7	-46.7	27	22.8
300	30	9,272	-43.7		28	26.1
250	30	10,478	-50.9		28	27.7
200	30	11,911	-56.3		28	30.6
175	30	12,757	-57.3		28	27.4
150	30	13,727	-59.2		28	26.3
125	28	14,863	-61.5		27	23.3
100	27	16,236	-63.7		27	18.7
80	26	17,607	-63.4		28	14.[illegible]
70	25	18,429	-62.5		27	10.5
60	26	19,382	-62.0		28	8.3
50	26	20,512	-60.9		28	7.2
40	25	21,909	-59.3		29	6.3
30	24	23,718	-58.3		29	6.6
25	23	24,865	-57.3		30	6.2
20	23	26,279	-56.3		30	5.6
15	20	28,121	-54.5		28	6.8
10	10	30,738	-52.0			
7						

Standard pressure surface (mb.)	YAKUTAT, ALASKA 1005 MB					
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	12	.3	-1.3	09	.9
1000	23	72	1.9	-2.6	08	1.2
950	30	462	1.2	-3.1	14	3.9
900	30	895	-1.3	-5.6	15	4.2
850	30	1,348	-4.1	-8.5	16	4.8
800	30	1,825	-6.5	-11.0	17	4.8
750	30	2,327	-9.2	-15.7	18	5.0
700	30	2,857	-12.3	-18.9	18	6.7
650	30	3,420	-15.7	-24.0	19	7.2
600	30	4,019	-19.8	-29.0	20	7.4
550	30	4,660	-23.7	-32.6	21	8.6
500	30	5,350	-28.0	-36.7	22	9.3
450	30	6,099	-33.2	-40.6	22	12.2
400	30	6,916	-39.4	-44.8	22	13.5
350	30	7,821	-45.6		23	15.8
300	30	8,833	-50.9		23	15.6
250	30	10,011	-53.7		24	13.6
200	30	11,449	-52.1		25	13.3
175	30	12,315	-51.3		26	12.3
150	30	13,317	-51.5		25	12.0
125	30	14,502	-51.1		26	11.2
100	30	15,955	-50.8		26	9.8
80	29	17,409	-52.3		26	9.2
70	29	18,272	-52.4		26	8.6
60	29	19,270	-52.4		27	7.2
50	29	20,448	-52.7		27	5.3
40	27	21,894	-53.0		28	5.0
30	27	23,751	-53.0		31	3.7
25	27	24,927	-52.9		32	3.6
20	25	26,370	-53.2		32	3.5
15	21	28,223	-53.1		33	3.3
10	14	30,812	-52.2			
7						

Standard pressure surface (mb.)	◆ YAP, CAROLINE IS. 1009 MB					
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	14	28.3	24.6	07	4.1
1000	30	95	26.9	24.1	07	5.2
950	30	548	23.5	21.6	07	8.1
900	30	1,021	20.8	17.2	08	8.2
850	30	1,514	18.1	13.7	08	7.1
800	30	2,033	16.0	8.1	09	7.5
750	30	2,579	13.2	4.9	09	7.5
700	30	3,157	10.0	.8	09	7.3
650	30	3,770	6.7	-4.7	09	7.9
600	30	4,423	3.0	-7.7	09	7.4
550	30	5,123	-.9	-13.9	09	7.5
500	30	5,878	-5.5	-18.7	09	7.5
450	30	6,697	-10.1	-22.8	09	7.6
400	30	7,596	-15.6	-30.3	09	6.6
350	30	8,594	-22.4	-35.2	08	5.7
300	30	9,705	-30.7	-42.3	08	5.3
250	30	10,973	-40.9	-50.4	07	4.1
200	30	12,451	-53.3		08	3.8
175	30	13,297	-60.3		08	4.1
150	30	14,241	-67.5		09	5.3
125	30	15,321	-74.7		08	7.1
100	30	16,596	-80.5		09	8.5
80	29	17,852	-79.5		09	9.0
70	29	18,617	-76.0		09	9.6
60	29	19,518	-71.2		09	13.3
50	28	20,612	-66.3		08	19.8
40	27	21,978	-61.3		09	22.9
30	27	23,789	-55.7		09	24.5
25	26	24,958	-52.1		09	23.9
20	26	26,419	-47.5		09	17.5
15	25	28,346	-42.9		13	2.3
10	23	31,095	-40.4		27	15.3
7	16	33,540	-36.4			

Standard pressure surface (mb.)	YUCCA FLAT, NEV. 882 MB					
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	1,198	1.4	-2.7	31	.8
1000						
950						
900						
850	30	1,496	4.9	-4.3	36	2.1
800	30	1,989	2.6	-6.9	33	1.0
750	30	2,508	-.2	-10.8	31	1.5
700	30	3,058	-2.4	-16.1	30	3.5
650	30	3,644	-5.2	-19.3	30	5.9
600	29	4,269	-8.8	-22.4	30	7.9
550	29	4,937	-13.5	-25.5	30	9.3
500	29	5,655	-18.6	-29.9	29	10.9
450	29	6,432	-24.4	-35.1	29	13.0
400	29	7,279	-30.6	-40.8	30	14.0
350	29	8,217	-37.7	-45.4	29	16.6
300	29	9,260	-45.0		29	20.3
250	29	10,461	-51.5		29	24.2
200	29	11,892	-56.4		28	24.7
175	29	12,737	-57.9		28	24.1
150	29	13,708	-58.2		29	23.3
125	29	14,851	-60.6		29	19.7
100	29	16,234	-62.4		29	15.6
80	28	17,611	-62.5		29	11.3
70	27	18,439	-62.1		29	8.4
60	27	19,393	-61.6		28	7.2
50	27	20,525	-60.5		28	5.4
40	26	21,917	-59.2		28	4.7
30	25	23,725	-57.7		28	4.8
25	25	24,877	-57.1		29	4.3
20	22	26,296	-55.9		28	3.7
15	17	28,129	-54.8		29	4.0
10						
7						

Note: All observations scheduled at 1200, G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

NOVEMBER 1972

Tabulated in langleys per minute on a surface normal to the direction of the sun.

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N.MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Nov.									
1-----	----	----	----	----	----	1.37	----	1.08	0.93
2-----	0.98	1.08	1.18	1.32	1.36	1.29	1.18	1.09	.97
3-----	.98	1.05	----	1.32	1.37	----	1.19	----	.97
4-----	----	----	1.22	1.35	----	----	----	----	----
5-----	.89	.98	1.10	1.26	1.36	----	----	----	----
6-----	.96	1.06	----	----	----	----	1.20	1.05	.98
9-----	----	----	----	----	----	----	1.15	1.08	1.00
10----	1.02	1.10	1.21	1.34	1.39	----	----	----	----
11----	----	----	----	----	----	----	----	1.04	.93
13----	----	----	1.15	1.34	1.35	1.29	1.14	1.02	1.01
14----	.96	----	----	----	----	----	----	----	----
15----	----	----	----	----	----	----	1.18	----	----
16----	1.00	1.09	1.16	----	----	----	----	----	.89
18----	.99	1.08	1.20	1.33	----	----	----	----	----
19----	----	----	----	----	----	----	1.16	1.05	.96
21----	----	----	1.16	----	----	----	----	----	----
22----	.96	1.07	1.19	1.33	----	----	----	----	----
23----	1.00	1.08	1.20	1.33	1.35	1.27	1.14	.99	.90
24----	----	----	----	----	1.29	1.24	----	1.14	1.07
25----	1.04	1.15	1.25	1.37	1.41	1.35	1.19	1.09	1.01
26----	----	----	----	----	----	----	----	1.11	1.02
27----	1.04	1.14	1.23	1.34	1.37	1.32	1.11	1.04	.94
28----	----	----	----	----	----	1.34	1.20	----	----
29----	.98	1.07	1.12	1.35	1.41	1.38	1.24	1.13	1.02
30----	1.03	1.11	1.21	1.35	1.36	1.37	1.17	1.04	.96
Averages	0.99	1.08	1.18	1.33	1.37	1.32	1.17	1.07	0.97
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
	NO DATA RECEIVED								

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Nov.									
1-----	0.97	1.07	1.17	1.33	----	1.34	1.18	1.07	0.99
2-----	.92	1.04	1.15	1.27	1.39	H 1.21	H 1.03	H .96	H .87
3-----	.90	1.02	1.14	1.31	1.39	H 1.20	H 1.06	H .91	H .83
4-----	.93	1.05	----	----	1.41	1.31	1.16	1.03	.92
5-----	.85	.99	1.10	1.24	1.37	1.30	1.11	1.01	.90
6-----	.90	.99	1.10	1.29	1.41	1.27	1.11	.99	.89
7-----	.95	1.05	1.16	1.34	1.42	----	----	----	----
8-----	.89	1.02	----	----	----	----	----	----	.92
9-----	.97	1.07	1.20	1.34	1.44	1.26	1.07	1.03	.92
10----	.96	1.05	1.19	1.36	1.45	1.29	1.12	1.02	.94
11----	----	----	----	----	1.39	1.29	1.12	----	----
12----	----	----	----	----	1.39	----	1.10	.96	.86
13----	.82	.93	1.10	1.34	----	1.35	1.16	----	----
14----	.91	1.00	1.14	1.30	----	1.29	----	1.01	.93
15----	----	----	----	----	----	1.34	1.14	----	----
16----	----	----	----	----	----	----	1.14	1.04	.94
17----	----	----	----	----	----	1.37	----	----	----
18----	.95	1.06	1.17	1.33	1.45	1.35	1.23	1.11	1.01
19----	.96	1.06	1.21	1.36	1.44	1.36	1.21	1.08	.99
20----	.85	.95	----	----	----	1.28	1.15	1.08	1.01
21----	.93	----	1.17	1.30	----	1.35	----	----	----
22----	1.01	1.10	1.17	1.39	----	----	----	----	----
23----	.94	1.05	1.17	1.32	----	----	----	----	----
24----	H .75	H .82	H 1.01	H 1.23	1.33	1.25	1.12	.99	.89
25----	.94	1.06	1.17	1.33	1.38	1.29	1.11	.99	.91
26----	.92	1.04	1.18	1.35	1.41	1.34	1.21	1.07	.97
27----	.98	1.08	1.20	1.35	1.36	1.34	1.22	1.11	1.02
28----	.97	1.07	1.19	1.36	1.42	1.33	1.20	1.08	.98
29----	H .82	H .95	H 1.09	H 1.29	1.40	1.37	1.23	1.11	1.03
30----	1.02	1.10	1.24	1.36	1.43	1.37	1.23	1.12	1.02
Averages	0.92	1.03	1.16	1.32	1.40	1.31	1.15	1.04	0.94
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Nov.									
15----	0.89	0.99	S 1.11	----	----	----	----	----	----
24----	.63	.76	.95	----	1.02	----	0.94	0.78	----

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

NOVEMBER 1972

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	**Avg.**
Langleys. . .	- 1	-71	-59	-43	-54	-61	-42	- 3	22	8	8	- 9	-14	3	-42	-48	-96	-68	- 9	-35	-26	-19	-49	-47	-10	-73	-17	-44	-94	-87		-37

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	1.46	2.92	3.16	6.94	5.97	0.97	3.41	4.51	1.82	1.95	4.99	1.70									4.02	3.04	5.60	5.48	1.70	3.65	2.19	3.04	4.63	4.99		3.55

These data are from an U-V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder.

This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code as defined in the August 1962 WMO circular entitled 'PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA.'

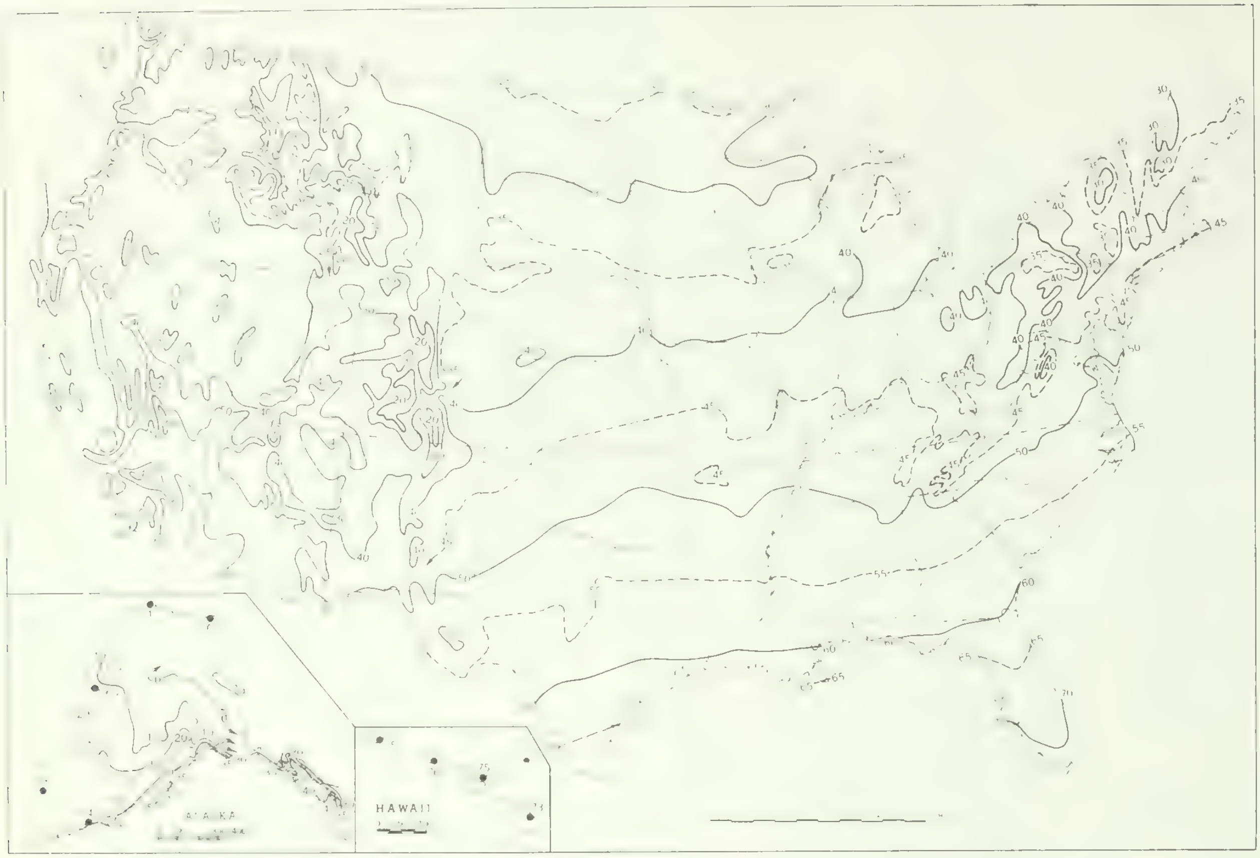
Units: Milli-atmo cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O₃

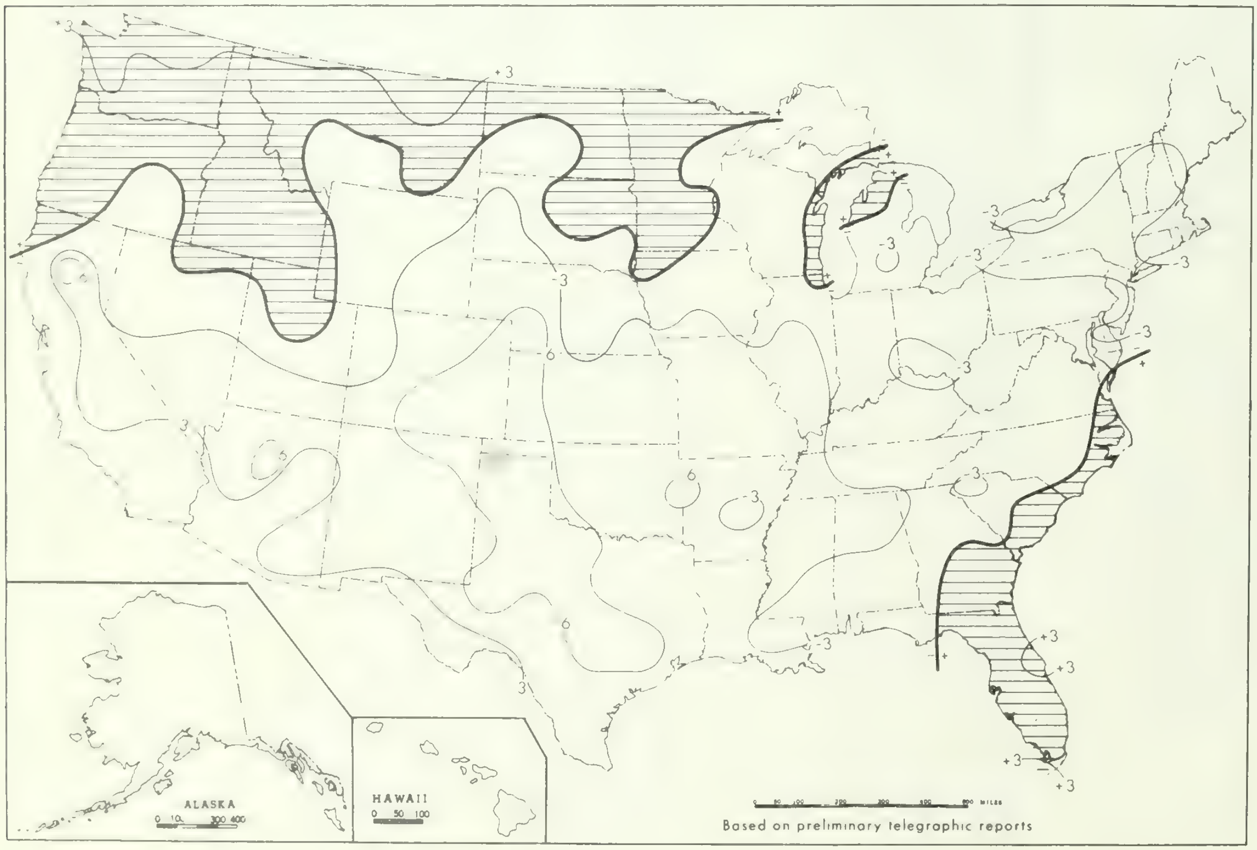
DATA NOT RECEIVED IN TIME FOR PUBLICATION

[illegible]

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), November

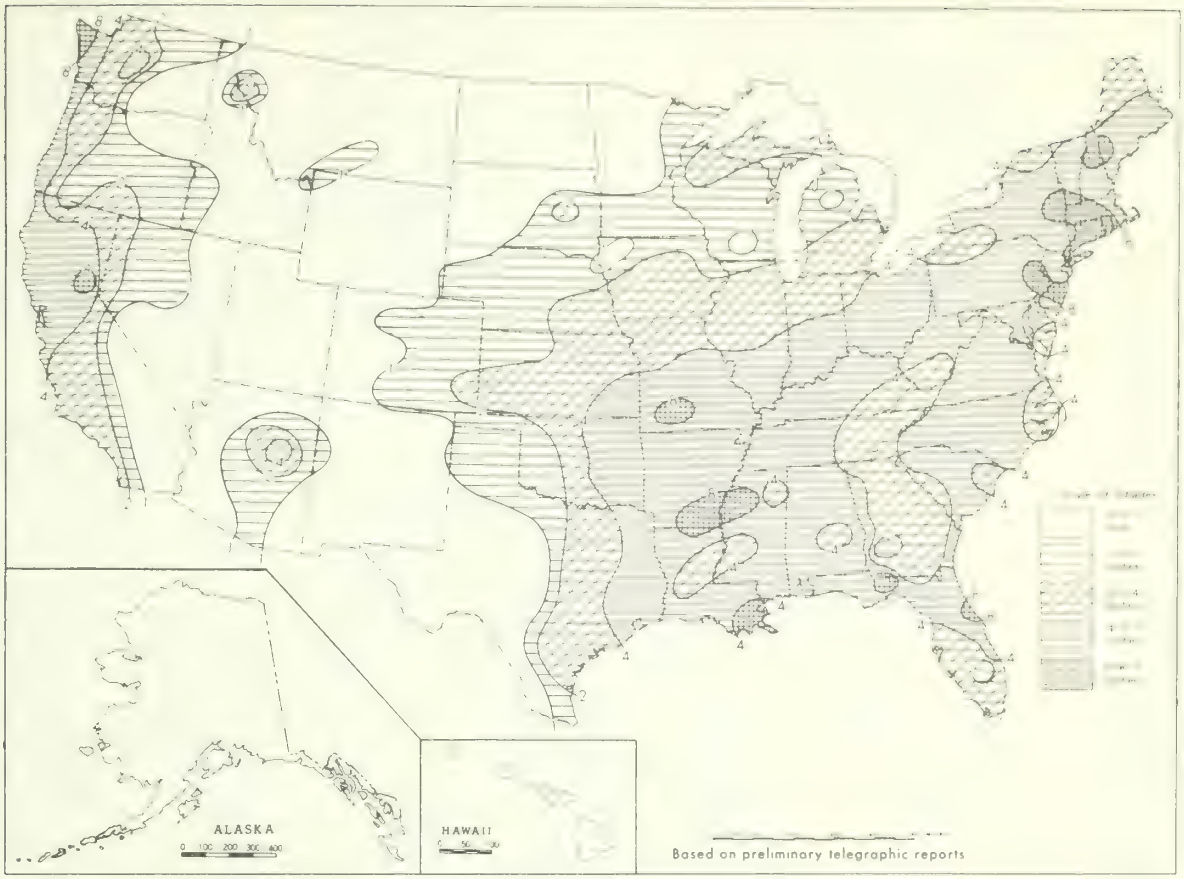


B. Temperature Departure from 30 - Year Mean (°F 1931-60), November 1972



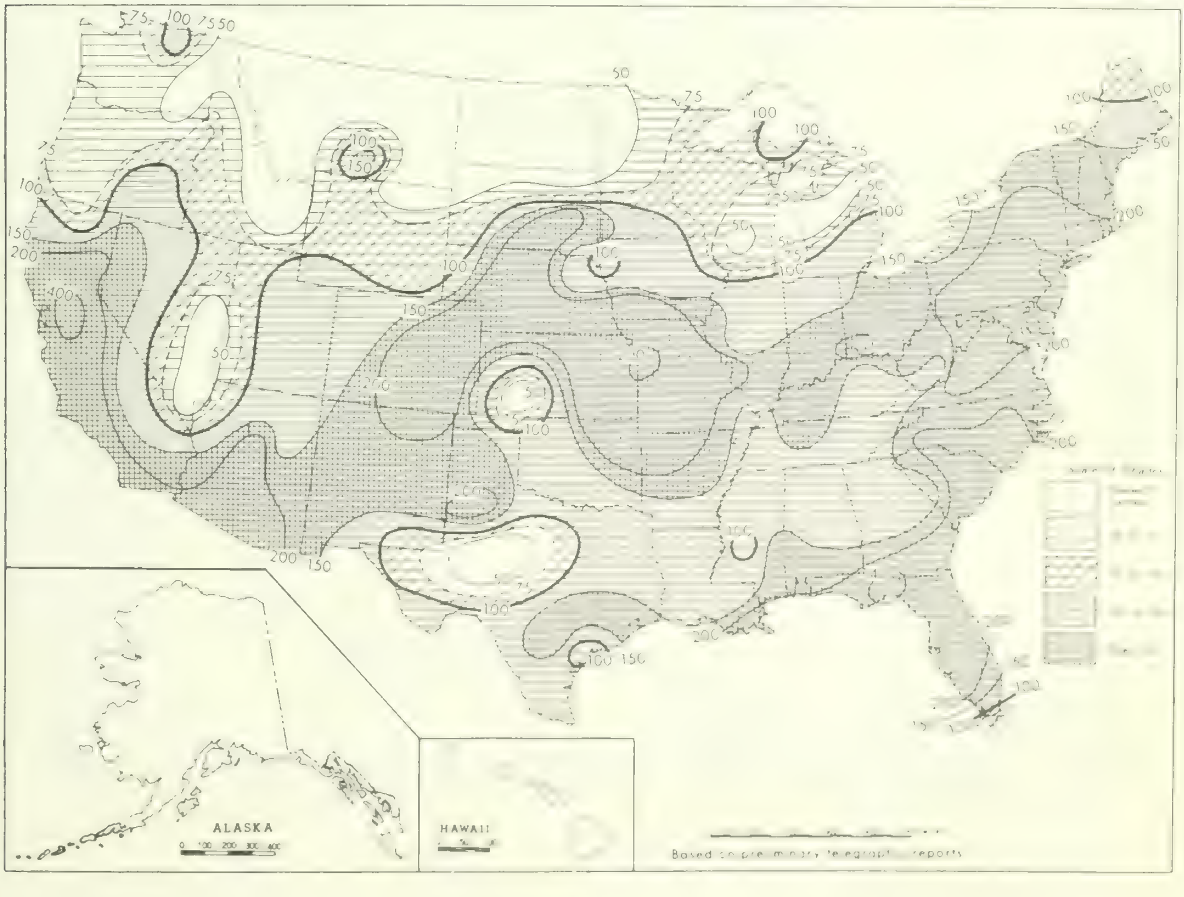
Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), November 1972



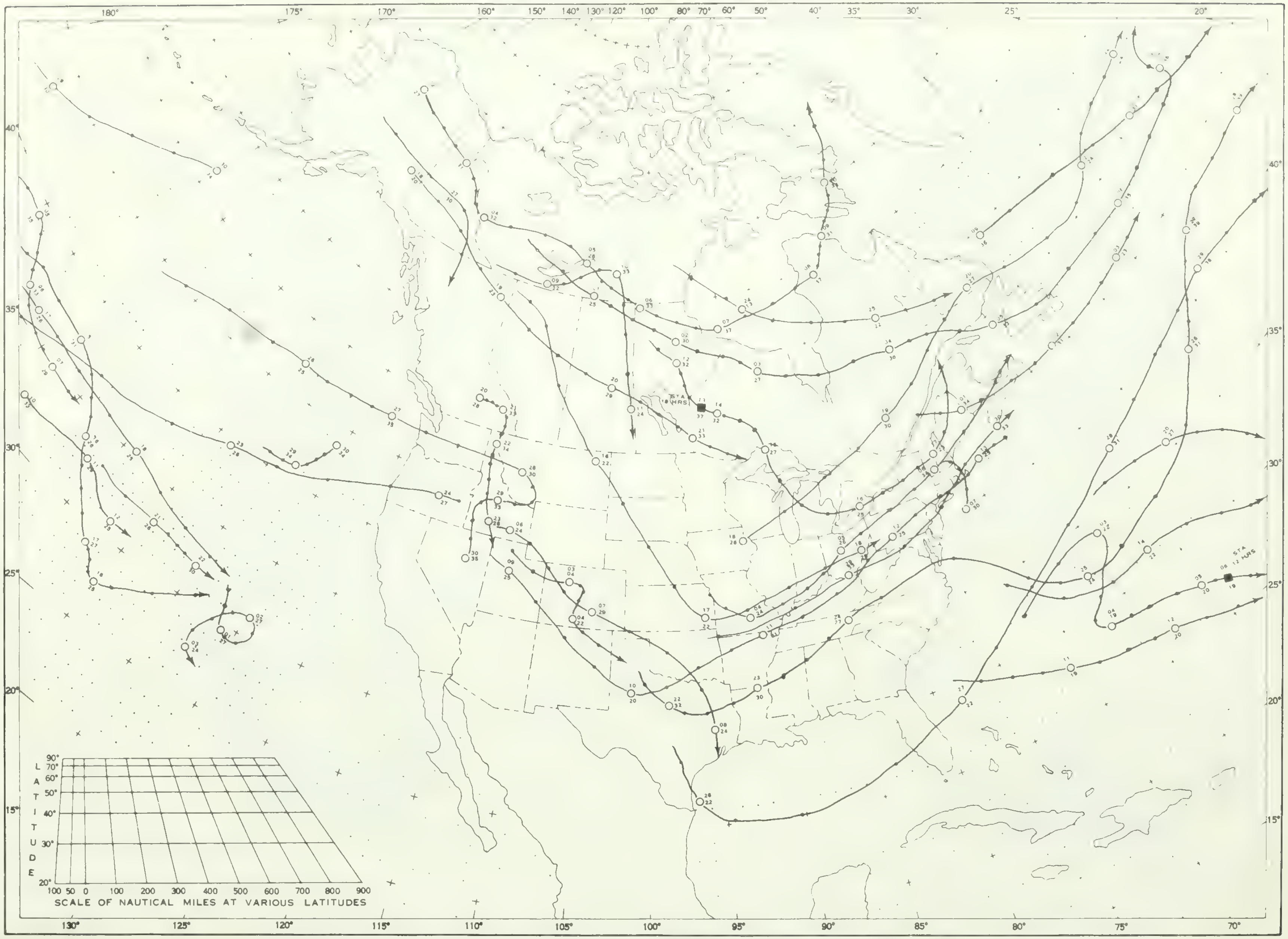
Based on preliminary telegraphic reports

B. Percentage of Normal Precipitation, November 1972



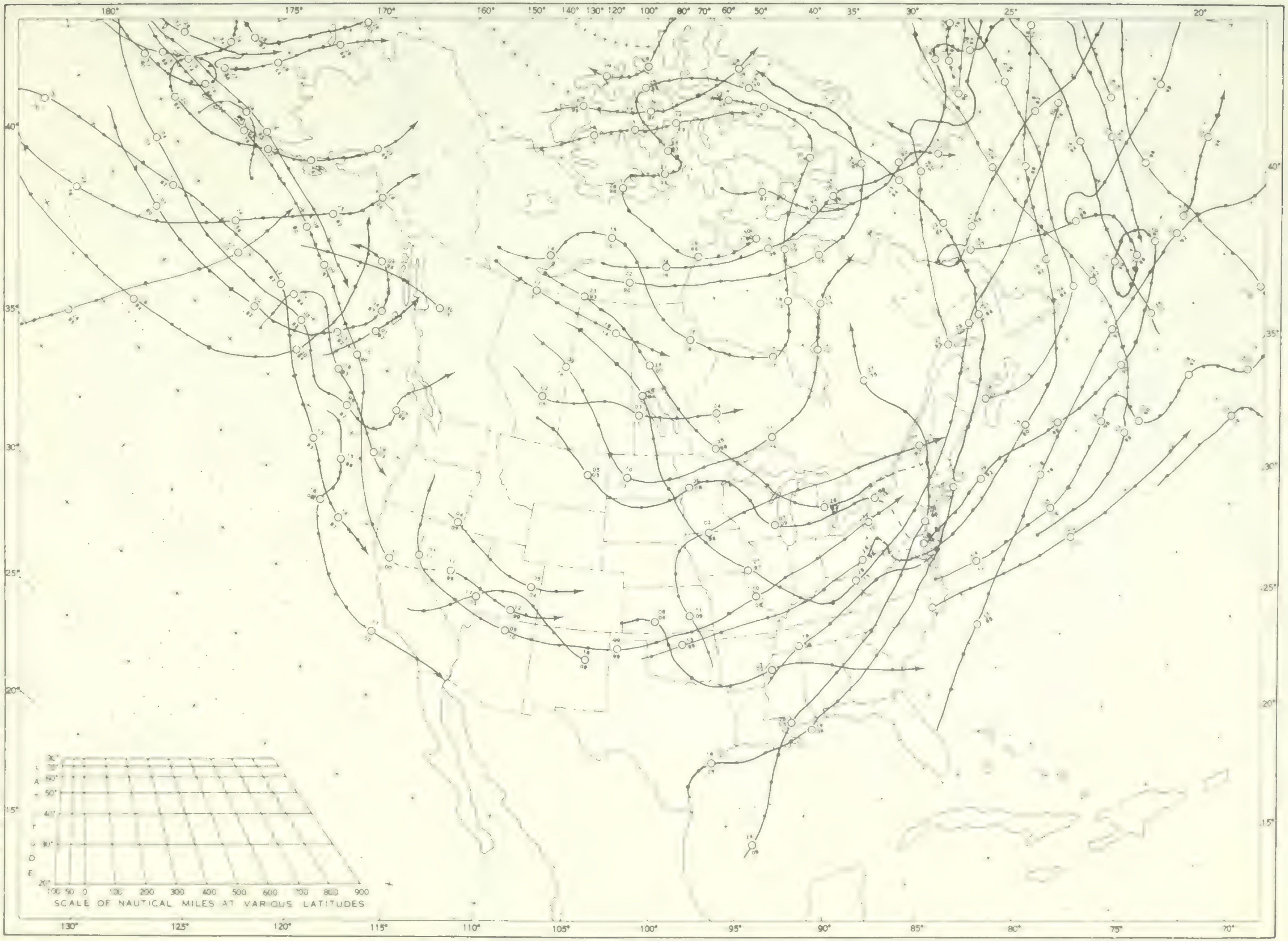
Based on preliminary telegraphic reports

Chart III. Tracks of Centers of Anticyclones at Sea Level, November 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, November 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: $5.50 a year including annual summary; $1.00 additional for foreign mailing; 40¢ single copy; $1.00 annual summary. Make checks payable to Department of Commerce, NOAA; send payments and orders to: National Climatic Center, Federal Building, Asheville, N. C. 28801. Attn: Publications.

I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina, 28801.

William H. Haggard
Director, National Climatic Center

NOTICE

Effective with the July 1972 issue of this publication, the Climatological Data tables in English Units are discontinued.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$$°F. = \frac{9}{5} \times °C + 32$$

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

Snowfall, sunshine, solar radiation, and pressure surface maps are also discontinued. See the explanatory page "Description of Charts," which appears in the July 1972 issue, and will be carried subsequently in the January and July issues.

Effective with the September 1972 issue, the Solar Radiation Totals Table is discontinued.

CLIMATOLOGICAL DATA

NATIONAL SUMMARY
DECEMBER 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

Lucius W. Dye, Climatologist

HIGHLIGHTS:

1. December 1972 was a stormy month.

2. Most of the area west of the Mississippi River averaged colder than normal.

TEMPERATURE--Typical winter weather covered much of the Nation in the first three weeks of December. The weekend of the 2d and 3d brought a cold wave as Canadian air poured southward into the northern Great Plains. Subzero weather struck the northern Great Plains on the 2d, and some spots were still below zero on the morning of the 4th. Winds gusting to 70 m.p.h. at Livingston, Mont., dropped the temperature from 52° to 18° in 20 minutes. The mercury at Glasgow, Mont., plunged to 31° below zero on the 6th and warmed only to -20° on the 7th.

Although cold arctic air covered much of the Nation, the Southwest and the Gulf of Mexico Coast were enjoying balmy weather. McAllen, Texas, registered 93° on the afternoon of the 5th. By the 6th and 7th, cold air covered much of Texas and temperatures remained mostly in the thirties and forties. The highest temperature at Amarillo on the 6th was 19°.

By the 7th, the leading edge of the cold air had reached the Gulf Coast States and the Carolinas. McComb, Miss., registered 33° on the 7th, and on that date the temperatures at Little Rock, Ark., ranged from 23° in the morning to 31° in the afternoon. Bitter cold continued over much of the West. The mercury at West Yellowstone, Mont., plunged to 48° below zero on the 10th. Mild weather continued along the Gulf and middle and southern Atlantic Coasts where afternoon readings ranged generally from the sixties to the eighties. The northern Rocky Mountains and the northern Great Plains continued about 30° to 40° colder than normal.

At midmonth, "Old Man Winter" was still doing his "thing", combining cold temperatures, strong winds, ice, and snow. Record warmth in Florida, 84° at Vero Beach on the 14th, was replaced by maximums in the fifties and sixties by the 16th. A large high centered over Illinois poured cold arctic air into the Nation's midsection. Temperatures in Iowa and Illinois dropped to -15° or colder. As the system moved up through New England, some respite from the severe cold occurred in the Northern Great Plains, but another cold front later in the week dropped temperatures there once again. By the 15th, a frigid airmass was wedged over the Nation's midsection between major storms over northeastern and northwestern portions of the country. While a large low pressure system was settled in over the Northeast, three high pressure systems over the middle U.S. poured cold air southward. One high was located just north of the North Dakota-Canada border, one over the Texas-Oklahoma Panhandle, and the third over Utah and Wyoming. A low pressure system over the Pacific battered the coasts of Washington and Oregon. By the 17th, the large high had brought clear skies and cold temperatures to much of the Nation. The cold arctic air lowered temperatures below the freezing level into the deep South. The only portion of the U.S. not experiencing freezing temperatures were the southern portion of Texas and the southern two-thirds of Florida. On the morning of the 17th Gainesville, Fla., reported 31°.

As the Christmas weekend approached, the western Great Plains warmed to the forties and fifties and Florida emerged from the "deep freeze." In the last week of December, the Southwest averaged slightly cooler than normal. Relatively mild weather continued over most of the rest of the Nation.

PRECIPITATION--The first few days of December brought heavy snow to the Northeast and lighter snow accompanied by high winds from the northern Rocky Mountains to the Upper Mississippi River Valley. Snow at Rumford, Maine. and Bradford, Pa., accumulated to 14 inches, and 10 inches fell at Lebanon, N.H., and Binghamton and Utica, N. Y. A cold wave accompanied the snow in the northern Rocky Mountains and northern Great Plains. The blizzard conditions made travel difficult or impossible. Farm chores became difficult.

Severe weather spread over much of the Nation near the end of the first week of December. Snow blanketed the northern states from Washington to the California Mountains, the northern and Central Great Plains, the Great Lakes Region, and New England. Rain fell over the Southland and thundershowers popped up along the Gulf of Mexico Coast. Heavy fog covered the parts of the Southeast on some mornings. In some places a belt of freezing rain, freezing drizzle, and sleet separated the snow belt on the north from the rains over the South.

Strong winds occurred in places in connection with the massive storm. Winds gusted to 50 m.p.h. or more along portions of the Oregon Coast. Portland, Oreg., clocked gusts of 55 m.p.h. late on the 5th and gusts at Detroit, Mich., reached 61 m.p.h. early on the 6th. Snow accumulated to 4 to 11 inches in the Intermountain Region, to 12 inches in some passes in the Rocky Mountains, and up to 12 inches in spots in the northern Great Plains. Wausau, Wis., measured 12 inches of snow on the ground on the morning of the 6th, when the snow was 9 inches deep at Alexandria, Minn. The snow depth reached 19 inches at Houlton, Maine, on the 6th. The deep snow, the strong winds, and the icy roads made highway travel dangerous in some places and impossible in others. A number of schools were closed because of the inclement weather.

The 11th and 12th were especially stormy. A major storm was centered over the Great Basin. Snow fell from the coastal mountains of Oregon and California to the Great Lakes. Mixtures of snow, freezing rain, and freezing drizzle fell over the middle Mississippi River Valley, the Ohio River Valley, and northeastward to New England. Dense fog covered the western Gulf Coast. Rain fell over the lower Mississippi River Valley. Combinations of the various elements made highway travel difficult and, in some places, dangerous. Flooding occurred in some places where the rain fell on saturated or frozen ground. Freezing rain and snow pelted an area from the southern Great Plains up through the Midwest to New England. Very heavy rains fell over the Southeast and eastern Seaboard, and also along the Pacific Coast.

On the 11th freezing rain glazed portions of the southern Plains into the Lower Mississippi and Tennessee Valleys. As the storm system moved northeastward, freezing rain fell over parts of Illinois, Ohio, and Michigan. By the 13th, freezing rain, combined with snow in some areas, extended well up into New England.

On the 14th an intense low pressure system began developing over the northern Gulf. As this low developed, it moved northward dropping large amounts of rain over the Gulf States. Athens, Georgia, received 4.25 inches during the 24-hour period ending on the afternoon of the 17th. As the low moved northward, it dumped heavy rains all along the Atlantic Seaboard.

The low pressure system combined with a second low over Ontario to drop considerable snow over New England. The heaviest snowfall occurred over northern New York, Vermont, and the northern portions of New Hampshire and Maine. Six to 12 inches fell in many areas. The pressure differences between this storm system and the high located over the Great Plains resulted in gale-force winds and blowing snow, making travel very treacherous.

In the Northwest, the weather was being dominated by a complex low pressure system over the Gulf of Alaska. Gale-force winds were felt along the Washington and Oregon coast. Rain fell along the coastal region from northern California to Washington. The storm pushed moisture well into the interior sections of the Northwest, much of it falling as freezing rain. Freezing rain fell as far eastward as western Montana, Idaho, and Utah.

As the Christmas weekend approached, the Pacific storm intensified and heavy thundershowers drenched parts of the Deep South.

Heavy rains fell in the Pacific Northwest in the last week of the year. Santa Ana winds whipped southern California. Snow spread across the northern Rocky Mountains to the Great Lakes and to New England. In the last few days of the year a storm in the Southwest intensified and dumped heavy snow in many areas west of the Continental Divide. Mixtures of rain and snow fell in southern Rocky Mountains, portions of the Great Plains, the upper and middle portions of the Mississippi River Valley, the Great Lakes Region, the Ohio River Valley, and northeastward to New England. On the last day of 1972, a severe blizzard blocked roads in the central Great Plains, light to heavy showers and few thunderstorms occurred over the southern Great Plains, and freezing rain was sandwiched between the snow and rain areas. The glaze broke tree limbs and powerlines and made travel dangerous.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Chatom 3 N	84	11+	Florence	9	18	Brewton 3 SSE	14.96	Fort Morgan	[illegible]
Alaska	2 Stations	52	8	[illegible] Stations	-54	31+	Little Port Walter	18.62	4 Stations	[illegible]
Arizona	Tucson Univ of Arizona	81	3	Hawley Lake	-17	31	Happy Jack Ranger Sta	[illegible]	[illegible]	.00
Arkansas	Dermott 3 NE	74	4	Gravette	- 1	16	Stuttgart	11.94	Berryville 4 NW	1.04
California	Canoga Park Pierce Col	88	1	Termo	-40	9	Elk Valley	18.46	10 Stations	.00
Colorado	4 Stations	67	28+	Antero Reservoir	-40	15	Wolf Creek Pass 1 E	6.93	Campo 7 S	.10
Connecticut	Groton	63	6	Norfolk 2 SW	2	18	Wigwam Reservoir	11.41	Rocky River Dam	5.45
Delaware	Georgetown 5 SW	70	6	2 Stations	14	18+	Bridgeville 1 NW	6.83	Lewes 1 SW	4.49
Florida	3 Stations	70	9+	Steinhatchee McCain Tr	21	17	Crestview Radio WJSB	10.30	Royal Palm Ranger Sta	.93
Georgia	3 Stations	85	16+	Clayton 1 SSW	7	17	Morgan 5 NW	11.79	Brunswick FAA AP	1.48
Hawaii	3 Stations	89	27+	Mauna Loa Slope Obs,Hawaii	29	20	Kanalohuluhulu 1075,Kauai	8.59	Kaala Iki 12, Hawaii	.57
Idaho	Reynolds	63	2	Idaho Falls 16 SE	-42	5	Pierce	7.60	Chilly Barton Flat	.17
Illinois	Rosiclare	66	5	4 Stations	-20	11	Cairo WSO Ci	6.10	La Harpe	1.05
Indiana	Evans Landing	68	13	2 Stations	-12	11	La Porte	6.02	Auburn 2 SSE	2.08
Iowa	Lamoni	64	2	Elkader 5 SSW	-23	17+	Dorchester	D 3.49	Allison	D .60
Kansas	Kirwin	74	3	Tribune 1 W	-19	10	Chalk	3.94	4 Stations	.12
Kentucky	Pikeville	73	5	4 Stations	2	17	Mammoth Cave Park	9.58	Louisville Upper Gage	4.22
Louisiana	Schriever	84	10	Ashland 2 S	14	17	Pearl River Lock No 1	11.81	Quarantine	2.40
Maine	Bar Harbor	56	7+	3 Stations	-25	4	Belfast	7.63	Fort Kent	3.23
Maryland	3 Stations	72	5	Bittinger 2 NW	4	17	Westminster 2 SSE	7.94	Crisfield Somers Cove	3.29
Massachusetts	2 Stations	65	7+	Lanesboro	- 3	18	Segreganset	8.44	Provincetown 1 N	3.21
Michigan	Willis 5 SSW	56	31	Crystal Falls 6 NE	-27	7	Harbor Beach 3 NW	8.02	Ishpeming	1.65
Minnesota	Marshall	51	23	Tower 3 S	-35	10	Caledonia	2.85	Hallock	.31
Mississippi	Monticello	82	10	Tupelo 2 WNW	11	18	Rockport	12.40	[illegible]	5.08
Missouri	2 Stations	69	6+	2 Stations	-19	11	Charleston	8.82	Marshall	.38
Montana	Norris 3 ENE	62	1	2 Stations	-48	10+	Heron 2 NW	5.92	Alder 17 S	.04
Nebraska	2 Stations	69	2	Agate 3 E	-32	6	Table Rock 5 N	2.43	Ogallala [illegible] W	T
Nevada	Lathrop Wells 16 SSE	74	24+	Rand Ranch Palisade	-39	11	Lamoille 3 E	4.21	Silverpeak	.00
New Hampshire	2 Stations	56	7+	Mount Washington	-24	17	Mount Washington	16.06	Marlow	2.90
New Jersey	Hammonton 2 NNE	66	7	Canoe Brook	7	18	Sussex 1 SE	8.48	Atlantic City WSO AP	3.63
New Mexico	Jal	76	5+	Red River	-17	31	Brazos Lodge	3.44	3 Stations	.00
New York	Rochester WSO AP	64	31	Canton 4 SE	-19	29	Turin 1 N	8.98	Brockport 2 NW	1.92
North Carolina	2 Stations	79	16+	Grandfather Mountain	- 5	17	[illegible] 4 NW	10.22	Grandfather Mtn	1.78
North Dakota	Medora	56	22	Watford City	-36	6	Watauga S Dak 8 N	2.27	Bowbells	.08
Ohio	Steubenville	68	31	3 Stations	- 1	18+	Waterloo	6.10	Greer	1.50
Oklahoma	Waurika 2 NNW	77	29	3 Stations	- 6	16+	Carnasaw Tower	3.30	Boise City 2 E	.06
Oregon	Cape Blanco	70	26	Seneca	-40	9	Valsetz	30.34	Burns Junction	.30
Pennsylvania	Donora 1 SW	74	31	Wellsboro 3 S	- 4	18	Lebanon 2 W	8.66	Greenville	1.83
Puerto Rico & VI	Rincon Power Plant, P.R.	93	17	Adjuntas Substation, P.R.	48	28	Pico Del Este, P.R.	17.24	Hacienda Constanza, P.R.	.00
Rhode Island	Providence WSO AP	64	6	Providence WSO AP	7	17	North Scituate 4 W	8.66	Block Island WSO AP	5.86
South Carolina	McClellanville	88	11	Caesars Head 1 NE	6	17	Hogback Mountain	10.03	Hilton Head	1.89
South Dakota	2 Stations	65	22	Belle Fourche 29 NNW	-37	8	Lemmon	2.30	Interior 3 NE	[illegible]
Tennessee	Moscow	77	13	2 Stations	3	18+	Linden 2	11.17	Unicoi 3 ESE	4.91
Texas	Falfurrias	97	6	Perryton 5 NNE	-12	6	Deweyville 5 S	7.05	38 Stations	.00
Utah	Wah Wah Ranch	65	2	Woodruff	-42	10	Alta	10.63	2 Stations	.06
Vermont	Dorset 1 S	59	6	West Burke	-17	18	Searsburg Station	8.33	Huntington Center	2.99
Virginia	2 Stations	78	5	Pennington Gap	- 1	17	Pennington Gap	8.70	[illegible]	.49
Washington	Whitman Mission	68	22	2 Stations	-19	8+	Quinault Ranger Sta	D33.83	Priest Rapids Dam	.41
West Virginia	Corton	76	31	Seneca State Forest	- 5	18	Pickens 1	9.38	Berkeley Springs	.26
Wisconsin	2 Stations	49	30	Hatfield Hydro Plant	-36	7	Milwaukee N Side	4.31	Superior	.82
Wyoming	Leiter 9 N	61	1	Bondurant 3 NW	-51	10	Bondurant 3 NW	4.95	Antelope Springs	.02

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See indivdual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C.	C	C	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	998.0	1020.9	13.8	3.6	8.7	0.2	22.8	12+	-7.8	18	0	10	5.0	79	146	19	41	16	4	0	0	0.2	26	13.0	SE	30	6	3	22	7.8	34
HUNTSVILLE	190	997.6	1021.1	13.2	3.1	8.2	1.7	22.2	5	-8.9	17	0	12	4.4	80	168	43	37	17	1	T	0	0.1	27	13.4	16	30	8	0	23	7.4	
MOBILE	64	1012.2	1020.3	18.6	7.5	13.1	0.8	26.7	10	-3.3	17	0	5	10.0	84	142	3	53	9	6	0	0	0.7	6	13.9	35	15	3	7	21	7.8	
MONTGOMERY	56	1013.5	1020.9	16.9	5.9	11.4	2.4	27.2	12+	-3.9	18+	0	8	7.2	78	181	59	61	10	3	0	0	0.5	29	11.6	W	15	5	6	20	7.5	31
ALASKA												B															B					
ANCHORAGE	35	1006.8	1011.7	-7.6	-14.2	-10.9	-0.6	0.0	9	-22.8	23+	0	31	-12.8	83	18	-6	12	5	0	165	356	1.5	1	11.6	2	16	6	6	19	7.0	40
ANNETTE	34	1008.8	1013.[illegible]	3.4	-2.2	0.6	-1.6	7.8	31	-9.4	7	0	20	-3.3	75	240	-68	45	17	0	290	51	1.9	9	16.5	17	29+	7	5	19	7.2	
BARROW	9			-16.2	-22.6	-19.4	4.6	0.0	6	-37.8	31	0	31			4	0	2	7	0	48	152	1.2	24	15.6	22	12					
BARTER ISLAND	12	1019.6	1021.8	-16.9	-23.9	-20.4	3.2	0.6	7+	-37.8	28+	0	31	-22.8	81	5	-3	1	7	0	53	229	3.7	26	20.1	26	14					
BETHEL	38	1007.8	1013.8	-9.6	-15.3	-12.4	2.7	5.0	5	-28.9	31	0	30	-15.0	80	16	-10	8	10	0	69	51	3.6	3	17.0	3	15	7	7	17	6.7	
BETTLES	196	994.9	1021.0	-16.7	-25.6	-21.1		-3.3	11	-46.7	31	0	31	-25.6	67	37		10	13	0	549	1092	1.8	33	13.4	24	12	12	5	14	5.5	
BIG DELTA	386			-14.7	-22.1	-18.4		-3.3	10+	-37.8	15	0	31			6			6	0	173											
COLD BAY	29	1004.4	1008.1	1.4	-3.3	-0.9	0.9	7.2	8+	-13.3	16	0	25	-2.8	86	165	99	49	19	0	371	127	1.4	8	23.7	16	8	0	4	27	9.2	
FAIRBANKS	133	1000.3	1018.7	-15.1	-23.3	-19.2	2.9	-1.1	9	-37.8	31	0	31	-25.0	61	29	15	9	12	0	683	584	1.0	2	14.8	29	13	12	2	17	6.1	
GULKANA	479			-18.4	-26.5	-22.4		-6.1	9	-42.8	23	0	31			2		1	2	0	25	152			13.0	4	14	8	9	14	6.2	
HOMER	20			-2.1	-9.3	-5.7		4.4	28+	-16.1	21	0	30			6	-61	2	4	0	48	51			11.2	23	13	5	7	19	7.2	
JUNEAU	4	1012.5	1013.3	-1.9	-7.5	-4.7	-2.7	3.3	30	-19.4	22	0	27	-7.8	80	90	-17	19	18	0	803	432	2.3	8	15.6	12	25	7	3	21	7.5	34
KING SALMON	15	1008.5	1010.5	-4.9	-12.7	-8.8	1.7	6.7	9+	-25.0	31	0	29	-11.7	77	15	-11	6	10	0	53	25	2.4	3	13.9	9	22	6	6	19	7.4	
KOTZEBUE	3	1018.0	1018.5	-14.0	-19.7	-16.8	2.9	0.6	6	-31.1	31+	0	31	-22.2	65	7	-1	4	6	0	165	330	2.4	10	23.7	26	11	14	1	16	5.4	
MC GRATH	105	1003.4	1016.9	-15.3	-23.4	-19.4	2.3	4.4	9	-38.9	31	0	31	-23.3	67	32	7	10	11	0	315	330	0.6	34	9.4	3	16+	10	4	17	6.2	
NOME	4	1015.9	1016.6	-8.4	-15.5	-11.9	2.3	1.7	6+	-28.3	28+	0	31	-16.7	69	29	4	17	8	0	114	203	2.2	7	20.6	6	17	16	2	13	4.6	45
ST. PAUL ISLAND	7	1009.1	1010.1	0.8	-3.1	-1.1	2.0	6.1	4	-9.4	28+	0	23	-3.3	85	37	-10	10	20	0	140	51	3.1	6	21.5	6	21+	0	5	26	9.1	
SHEMYA	37	1002.7	1006.4	1.9	-0.4	0.8	1.1	4.4	30	-7.8	25	0	18	-2.2	79	48	-7	23	19	0	132	51	2.5	18	28.2	18	30	1	4	26	8.8	
SUMMIT	732	924.1	1018.3	-13.5	-19.7	-16.6		-1.1	7	-28.9	19+	0	31	-19.4	76	27		14	11	0	437	610	5.0	4	14.8	8	30	14	3	14	5.5	
TALKEETNA	105			-7.6	-17.6	-12.6	-0.1	0.0	9	-27.8	21	0	31			9	-33	4	6	0	119	229			15.6	36	15	12	5	14	5.6	
UNALAKLEET	5			-10.3	-16.5	-13.4		1.7	6+	-34.4	30	0	31			16		6	7	0	132	229			17.0	27	11	13	5	13	5.3	
YAKUTAT	9	1008.8	1009.7	-1.3	-7.4	-4.4	-2.2	4.4	30+	-24.4	22	0	25	-6.1	87	241	-71	53	19	0	1074	610	2.7	9	15.6	8	16	6	4	21	7.4	
ARIZONA																																
FLAGSTAFF	2135	785.6	1020.5	1.2	-12.4	-5.6	-4.7	10.6	18	-25.6	14	0	31	-16.7	44	105	63	44	9	1	734	356	0.8	21	15.2	SW	28	13	7	11	4.8	65
PHOENIX	340	978.0	1017.6	17.9	4.4	11.2	0.3	24.4	4	-1.7	12	0	3	0.6	54	40	18	29	5	1	0	0	0.8	12	18.3Y	W	5	14	7	10	4.5	73
TUCSON	788	927.2	1016.6	16.2	2.6	9.4	-1.6	23.3	3	-3.3	15	0	8	-1.7	54	15	-8	8	4	0	0	0	1.3	16	16.5	SE	15	16	4	11	4.2	74
WINSLOW	1492	852.4	1020.6	7.3	-5.1	1.1	0.8	17.8	22	-9.4	12	0	30	-6.1	65	19	5	10	4	1	15	T	1.2	24	19.2	23	4	15	8	8	4.1	
YUMA	59	1010.5	1018.0	18.4	5.6	12.1	-0.7	24.4	4+	-1.1	31+	0	2	-2.2	40	2	-7	1	3	0	0	0	2.5	36	14.8	NW	5	15	9	7	4.0	83
ARKANSAS																																
FORT SMITH	136	1003.4	1020.6	8.1	-3.6	2.3	-3.4	22.8	3	-9.4	6	0	28	-2.2	76	41	-31	11	11	5	18	25	0.9	35	11.6	W	29	12	3	16	6.0	48
LITTLE ROCK	78	1010.8	1020.7	9.7	0.3	5.0	-0.5	22.2	3	-7.8	17	0	16	0.6	76	131	27	55	14	4	18	T	0.7	34	15.2	NW	5	9	5	17	6.7	50
CALIFORNIA																																
BAKERSFIELD	145	1004.1	1022.1	10.3	2.5	6.4	-2.9	19.4	22+	-3.3	12	0	12	3.9	86	17	-8	8	5	0	0	0	0.5	34	13.0	35	4	7	7	17	6.8	
BISHOP	1252	875.4		10.1	-7.1	1.6	-2.5	21.7	20	-14.4	14+	0	30			T	-30	T	1		0	0										
BLUE CANYON	1609			4.2	-3.2	0.5	-4.1	16.1	26+	-16.1	9	0	20			246	-14	65	17		815	737			12.5	18	6+	11	5	15	6.2	
EUREKA U	13			10.9	4.3	7.6	-1.8	19.4	20	-6.1	9	0	8			188	18	43	17		48	25			17.0	SE	15	6	4	21	7.4	57
FRESNO	100	1010.2	1022.2	8.6	1.2	4.9	-3.4	17.8	19	-5.0	9	0	15	3.3	92	36	-14	11	9	1	T	0	0.0	12	12.1	NW	28	6	6	19	7.3	33
LONG BEACH	8	1017.3	1018.8	18.6	5.8	12.2	-1.1	27.2	25+	0.0	12	0	1	2.8	57	35	-15	14	4	0	0	0	0.9	30	12.5	26	4	17	4	10	3.8	
LOS ANGELES	30	1014.6	1018.2	18.7	8.8	13.8	-0.1	26.7	20	2.8	11+	0	0	2.2	53	48	-13	20	4	0	0	0	1.1	33	20.1Y	W	4	19	5	7	3.5	
LOS ANGELES U	82			20.3	8.7	14.5	-0.1	29.4	1	1.7	11	0	0			60	-13	36	4		0	0			12.1	NW	28	20	5	6	2.8	77
MT SHASTA R	1080	894.0	1021.8	2.7	-5.5	-1.4	-3.6	18.9	1	-20.6	10+	0	24			79	-79	20	15		290	152										
OAKLAND	2	1022.0	1022.1	10.2	4.1	7.1	-2.6	16.1	31+	-3.3	11+	0	7	3.3	81	64	-27	22	13	0	T	0	0.7	3	11.6	16	6+	11	6	14	5.7	
RED BLUFF	104	1009.1	1022.0	8.0	0.6	4.3	-4.1	18.9	25	-6.7	10+	0	12	-0.6	75	78	-29	24	13	0	272	229	1.3	34	18.8	SE	21	8	6	17	6.6	49
SACRAMENTO	5	1021.0	1021.9	8.2	1.3	4.8	-3.2	15.6	22+	-6.7	13+	0	13	1.1	80	48	-35	25	11	0	T	T	0.6	32	14.3	N	31	12	2	17	6.2	46
SANDBERG R	1377	863.2		7.1	-1.1	3.0	-2.9	17.2	21+	-11.7	9	0	16			11	-52	8	5		33	T			18.3	9	25	14	5	12	4.6	
SAN DIEGO	4	1017.3	1018.2	18.9	9.4	14.2	0.2	27.2	25	5.0	15	0	0	3.3	53	41	-11	25	4	0	0	0	1.2	30	12.5	NW	8	14	4	13	4.9	68
SAN FRANCISCO	2	1021.3	1022.0	10.9	3.4	7.2	-2.9	17.8	25	-4.4	9	0	9	3.3	77	61	-43	20	14	0	T	T	0.4	2	11.6	19	6	9	9	13	5.8	
SAN FRANCISCO U	16			10.9	6.0	8.4	-2.9	18.3	25	-1.1	9	0	2			90	-19	31	14		T	0			12.5	SW	6					46
SANTA MARIA	72			15.4	2.3	8.9	-2.4	23.9	20	-3.9	10	0	11			29	-37	15	6		0	0						15	10	6	3.8	
STOCKTON	7	1021.0	1022.0	8.8	2.2	5.6	-2.2	17.2	19	-5.0	9	0	12	2.2	81	60	-7	21	12	0	T	T	0.4	16	13.9	15	6	9	4	18	6.9	
COLORADO																																
ALAMOSA	2297	769.4		-2.4	-21.8	-12.1	-5.0	3.3	23+	-31.1	31	0	31			12	5	4	4		193	102						13	10	8	4.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
COLORADO	M	Mb	Mb	C	C	C	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
COLORADO SPRINGS	1873	807.7	1019.3	1.5	-10.9	- 4.7	- 4.6	11.7	27	-26.7	5	0	29	-13.3	56	21	15	17	6	0	290	203	2.6	2	15.6	34	11+	12	7	12	5.3	
DENVER	1610	833.1	1016.9	3.2	-11.1	- 3.9	- 3.7	18.3	27	-27.8	10	0	28	-12.8	53	18	6	8	6	0	249	127	1.1	20	14.3	NW	1	12	8	11	5.3	62
GRAND JUNCTION	1476	853.4	1022.7	0.3	-10.7	- 5.2	- 3.6	10.0	4+	-21.1	31	0	31	- 8.3	79	19	4	9	10	0	246	76	0.6	9	15.2	S	28	6	14	11	6.1	64
PUEBLO	1428	853.7	1019.0	2.3	-12.2	- 4.9	- 5.6	17.2	2	-28.3	6	0	29	- 9.4	73	10	3	6	7	0	234	178	1.1	2	15.6	NE	4	13	8	10	5.3	63
CONNECTICUT																																
BRIDGEPORT	2	1019.0	1019.6	4.7	- 1.3	1.7	1.1	13.9	6+	- 9.4	18+	0	19	- 2.2	77	200	111	42	18	0	38	25	2.9	34	19.7	8	15	3	6	22	8.2	
HARTFORD	52	1012.5	1019.4	2.3	- 3.7	- 0.7	1.1	13.9	3	-13.9	18	0	26	- 4.4	78	180	92	35	20	0	305	152	1.9	32	14.8	W	16	3	5	23	8.2	30
DELAWARE																																
WILMINGTON	23	1016.9	1019.9	8.8	1.8	5.3	3.6	19.4	6	- 6.7	17	0	10	0.6	73	152	75	39	16	0	T	T	1.2	34	18.8	29	16	3	4	24	8.3	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1008.1	1020.2	8.7	- 0.6	4.1		17.8	5+	-11.7	17	0	16	1.1	83	154		44	13	0	0	0	1.2	30	14.3	28	16	5	4	22	7.7	
WASHINGTON NATIONAL	3	1018.0	1020.2	10.3	2.5	6.4	3.1	19.4	5	- 7.2	18	0	7	0.6	70	116	45	36	13	0	0	0	1.0	33	13.0	W	16+	6	5	20	7.5	33
FLORIDA																																
APALACHICOLA U	4			17.9	10.8	14.4	1.2	25.0	15	0.0	17	0	1			110	35	71	8	1	0	0			12.1	N	16+	5	10	16	6.6	73
DAYTONA BEACH	9	1019.6	1021.0	22.7	12.2	17.5	1.8	29.4	6	1.1	17	0	0	11.7	73	63	13	40	7	2	0	0	0.3	31	10.3	32	16	6	8	17	6.6	
FORT MYERS	5	1019.6	1019.9	25.7	13.6	19.7	1.3	31.1	8	2.8	28	0	0	14.4	77	36	4	23	5	2	0	0	1.7	7	13.0	28	21	8	12	11	5.5	
JACKSONVILLE	8	1020.3	1021.3	21.3	9.8	15.6	2.2	28.3	15	- 1.1	17	0	2	10.6	78	36	- 20	18	8	1	0	0	0.4	33	13.4	NW	16	6	8	17	6.7	51
KEY WEST	1	1018.0	1018.5	25.7	20.5	23.1	1.7	28.9	14+	12.8	28	0	0	18.3	75	80	37	39	9	2	0	0	3.4	7	16.1		21	9	13	9	5.5	75
LAKELAND U	65			23.1	12.9	18.0	1.1	28.9	6	1.1	17	0	0			86	39	61	7		0	0						8	16	7	5.3	67
MIAMI	2	1019.0	1019.3	24.8	18.2	21.6	1.5	27.8	10	7.8	26+	0	0	16.7	75	106	64	38	13	1	0	0	2.1	6	10.3	8	12	6	13	12	5.9	
ORLANDO	33	1016.3	1020.7	24.3	13.6	18.9	2.9	30.0	14+	2.8	17	0	0	13.3	74	48	0	39	6	3	0	0	0.6	3	10.3	35	16	9	10	12	6.[illegible]	
PENSACOLA	34	1016.3	1020.5	18.5	8.9	13.7	1.3	25.0	13+	- 2.8	17	0	3	10.6	84	133	25	80	12	5	0	0	1.3	6	10.7	35	15	4	4	23	7.8	
TALLAHASSEE	17	1018.6	1021.[illegible]	20.6	7.4	14.0	1.7	27.2	12+	- 3.3	28	0	5	10.0	82	123	36	77	5	2	0	0	0.3	9	9.4	35	16	2	12	17	7.2	
TAMPA	6	1020.7	1020.8	24.4	12.3	18.4	1.6	30.0	14+	1.1	17	0	0	12.8	73	55	7	48	5	1	0	0	1.4	7	10.3	1	16	7	12	12	6.1	54
WEST PALM BEACH	5	1018.6	1019.5	26.5	17.9	22.2	2.1	30.6	6	6.7	28+	0	0	16.1	68	53	- 12	23	8	1	0	0	1.7	9	12.5	4	17+	10	9	12	5.7	
GEORGIA																																
ATHENS	244	991.5	1020.9	14.6	5.1	9.8	2.8	24.4	10	- 7.2	17	0	6	6.1	80	214	99	110	14	2	0	0	0.6	28	9.4	28	15	8	3	20	7.1	
ATLANTA	308	983.1	1020.6	13.9	4.2	9.1	1.9	23.3	10	- 8.9	17	0	10	5.0	78	194	82	82	13	1	0	0	0.2	30	15.2	NW	15	8	1	22	7.4	38
AUGUSTA	41	1015.6	1020.7	16.8	4.9	10.9	2.4	26.1	10	- 7.8	18	0	7	5.6	77	134	49	56	11	2	0	0	0.4	29	10.7	27	16	6	5	20	7.5	
COLUMBUS	117	1006.8		17.7	7.4	12.6	3.8	26.1	10	- 3.3	17	0	9	8.3	81	238	122	102	9	2	0	0	0.4	36	13.0	33	15	5	7	19	7.3	
MACON	108	1007.8	1020.9	18.8	6.8	12.8	3.4	27.8	13+	- 6.1	18	0	9	7.8	77	264	161	114	10	4	0	0	0.1	26	12.5	NW	15	5	7	19	7.5	49
ROME	194			13.4	3.1	8.3	2.5	22.8	5	-10.6	18	0	11			150	19	45	15		0	0										
SAVANNAH	14	1019.6	1021.3	19.6	8.3	13.9	3.2	27.8	11+	- 5.0	18	0	4	9.4	80	70	- 1	49	6	1	0	0	0.5	27	15.6	NW	6	5	4	22	7.6	36
HAWAII																																
HILO	8	1013.9	1015.2	26.2	17.6	21.9	- 0.1	30.0	18	14.4	20	0	0	17.8	80	102	-284	31	15	0	0	0	0.4	30	11.6	SE	31	5	12	14	6.7	39
HONOLULU	2	1014.6	1015.1	26.7	17.3	22.0	- 1.1	28.9	30+	12.8	11	0	0	15.6	69	91	15	64	8	0	0	0	1.3	36	12.5	NE	23	9	14	8	5.5	38
KAHULUI	15	1012.5	1014.7	26.6	16.9	21.8	- 0.8	28.9	25+	12.8	13	0	0	16.7	77	55	13	19	12	0	0	0	1.6	7	12.5	SW	18+	9	17	5	4.9	63
LIHUE	31	1010.8	1016.1	25.4	17.3	21.4	- 0.9	27.2	30	12.8	11	0	0	16.1	74	32	99	15	12	0	0	0	0.9	36	10.3	SW	16	9	14	8	5.6	46
IDAHO																																
BOISE	865	918.7	1022.8	0.1	- 9.2	- 4.6	- 4.7	12.2	2	-30.6	10	0	20	- 8.9	70	45	12	10	14	0	320	178	0.8	11	14.8	W	22	6	3	22	7.6	38
LEWISTON	431			2.4	- 5.8	- 1.7	- 3.3	15.6	21	-23.3	9	0	20			42	7	13	14		94	51			19.7Y		2	5	3	23	8.0	
POCATELLO	1358	863.9	1022.7	- 2.6	-12.7	- 7.6	- 5.1	11.7	2+	-33.3	10	0	22	-13.3	63	48	23	19	16	0	442	178	2.1	22	16.5	SW	22	3	4	24	8.4	27
ILLINOIS																																
CAIRO U	96			5.9	- 0.9	2.5	- 1.7	18.3	5	-10.0	17	0	15			155	62	70	15		43	25			16.1	SW	1	7	4	20	7.3	31
CHICAGO O'HARE	201	993.6	1019.6	- 0.6	- 8.4	- 4.5	- 1.9	9.4	2	-25.0	11	0	26	- 6.7	84	73	27	28	11	0	284	102	1.8	25	13.4	25	31+	5	5	21	7.7	
CHICAGO MIDWAY	185	995.9	1019.4	0.1	- 7.6	- 3.8	- 2.2	11.1	30	-20.6	17+	0	27	- 6.1	82	120	72	45	13	1	262	102	1.7	24	13.4	SW	12	4	6	21	7.9	29
MOLINE	177	997.3	1019.8	- 1.3	- 9.4	- 5.4	- 2.6	13.9	2	-27.8	11	0	28	- 8.3	80	50	8	20	9	2	168	127	1.5	26	15.2	SW	31	4	6	21	7.7	37
PEORIA	199	995.3	1020.2	- 1.2	- 8.1	- 4.6	- 2.9	13.9	2	-22.8	11	0	30	- 7.2	80	63	14	47	13	1	119	76	1.3	24	11.6	NW	26+	3	3	25	8.3	29
ROCKFORD	221	991.2	1019.4	- 1.8	- 9.8	- 5.8	- 2.2	8.3	2	-27.8	11	0	27	- 8.7	82	60	17	33	10	0	221	178	1.3	27	11.2	24	30	4	8	19	7.7	
SPRINGFIELD	179	997.3	1020.4	0.3	- 6.3	- 2.9	- 2.9	15.6	2	-17.2	11	0	28	- 5.0	88	85	37	48	14	1	79	25	1.5	24	12.1	W	15	4	5	22	8.1	39
INDIANA																																
EVANSVILLE	116	1006.1	1020.7	5.2	- 2.5	1.3	- 0.9	16.7	5	-17.2	17	0	21	- 2.8	77	114	36	53	14	0	89	76	0.8	26	13.0	SW	1	5	2	24	8.0	44

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
	Elevation ground	Station ⊙	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C.	C	C	C	C		C				C	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
INDIANA																																
FORT WAYNE	241	988.2	1019.2	2.2	- 4.6	- 1.2	0.8	13.9	30	-16.7	17	0	24	- 4.4	81	72	19	30	14	0	102	25	1.9	24	15.2	W	13	2	3	26	8.9	23
INDIANAPOLIS	241	989.8	1020.1	3.8	- 4.0	- 0.1	0.4	15.6	30+	-16.7	17	0	25	- 3.3	80	72	4	18	16	1	28	T	1.1	24	13.9	W	15	2	6	23	8.4	30
SOUTH BEND	236	989.5	1018.5	1.4	- 5.0	- 1.8	0.1	11.7	2	-21.1	11	0	23	- 3.9	85	121	66	39	16	1	500	254	2.0	24	11.6	27	13+	0	2	29	9.4	
IOWA																																
BURLINGTON	211			- 1.1	- 9.3	- 5.2	- 3.2	16.1	2	-23.3	11	0	29	- 8.9	75	34	- 6	13	6	1	165	102	1.4	28	12.5	19	17	7	3	21	7.5	
DES MOINES	286	983.7	1020.2	- 3.7	-11.5	- 7.6	- 3.8	10.6	30	-23.3	14	0	30	-10.6	80	50	21	18	11	2	241	203	1.2	29	16.1	S	30	4	9	18	7.6	43
DUBUQUE	322	978.7		- 4.3	-12.1	- 8.2	- 3.4	8.3	30	-25.6	17	0	31			49	1	19	12		264	178						4	4	23	8.1	
SIOUX CITY	334	978.7	1020.4	- 3.3	-12.3	- 7.8	- 3.9	10.6	27	-24.4	13	0	30	-12.8	66	49	30	25	8	0	246	152	1.0	33	15.2	NW	30	4	7	20	7.7	44
WATERLOO	265	986.5	1020.0	- 4.6	-13.1	- 8.8	- 3.9	8.9	30	-27.8	14	0	30	-12.8	72	47	18	19	11	2	269	229	1.0	30	13.4	21	31+	4	7	20	7.8	
KANSAS																																
CONCORDIA	448	964.8	1019.9	0.9	- 8.9	- 3.9	- 3.9	17.8	2	-21.1	16	0	28	- 7.8	77	29	11	14	6	0	147	102	1.1	30	14.8	S	28	8	6	17	6.5	57
DODGE CITY	787	925.2	1019.0	2.9	- 8.2	- 2.6	- 4.1	20.0	2	-21.1	6	0	30	- 8.9	69	9	- 3	5	7	0	81	76	1.1	29	18.8	N	23	11	6	14	5.6	60
GOODLAND	1114	887.2	1019.1	- 0.5	-11.6	- 6.0	- 5.1	17.2	27	-25.6	10	0	30	- 9.4	78	24	13	9	10	0	414	229	2.2	27	16.5	33	23	12	6	13	5.7	
TOPEKA	267	987.5	1020.7	2.1	- 6.8	- 2.4	- 3.2	18.3	2	-18.9	6	0	26	- 7.8	70	45	10	22	8	1	102	51	1.0	30	12.1	SW	30	7	7	17	6.6	48
WICHITA	403	970.2	1019.8	2.4	- 6.3	- 1.9	- 4.1	18.3	29	-16.7	6	0	30	- 6.7	71	25	1	15	6	0	69	51	0.6	35	15.6	N	23	11	4	16	6.0	49
KENTUCKY																																
COVINGTON	265	987.1	1019.6	6.3	- 1.8	2.3	1.6	17.2	12	-16.1	17	0	17	- 0.6	83	107	38	40	14	0	48	25	1.6	23	13.4	21	1	5	2	24	8.4	
LEXINGTON	294	984.1	1020.2	9.3	0.6	4.9	2.8	20.0	5	-13.9	17	0	13	0.6	76	176	88	73	18	0	10	T	1.7	22	11.2	19	30	4	3	24	8.2	
LOUISVILLE	145	1002.0	1020.1	7.9	- 0.1	3.9	1.6	19.4	12	-13.9	17	0	15	- 0.6	76	134	53	48	15	0	56	25	1.4	25	13.4	S	30	5	2	24	7.9	31
LOUISIANA																																
ALEXANDRIA	28	1016.3	1020.5	15.4	3.8	9.6	- 1.1	26.7	8	- 6.7	18+	0	8			278	133	137	15	5	0	0	0.6	4	10.3	14	29	8	4	19	6.9	
BATON ROUGE	20	1017.6	1020.2	18.3	7.2	12.7	0.7	27.8	12	- 3.9	17	0	5	8.9	81	209	79	66	10	5	0	0	0.9	9	13.0	34	15	7	3	21	7.2	
LAKE CHARLES	3	1018.6	1019.8	17.2	6.2	11.7	- 0.9	25.6	9	- 4.4	17	0	5	8.9	86	139	- 7	52	12	4	0	0	1.5	7	12.5	35	6	8	3	20	7.1	
NEW ORLEANS	1	1019.3	1020.0	18.4	7.4	12.9	- 0.1	27.2	10+	- 3.3	28	0	6	10.0	83	220	116	70	14	7	0	0	1.1	6	11.2	35	15	4	9	18	7.4	
SHREVEPORT	77	1010.5	1020.1	13.1	1.8	7.5	- 2.3	22.8	5	- 6.7	17	0	14	2.8	77	106	- 19	46	12	5	0	0	0.6	36	11.6	32	6+	6	6	19	7.0	40
MAINE																																
CARIBOU	190			- 8.3	-18.8	-13.6	- 4.4	2.2	6	-30.0	4	0	31			134	72	28	18		1521	940						5	3	23	7.7	
PORTLAND	13	1016.9	1019.3	- 0.7	- 8.2	- 4.4	- 1.0	7.2	3	-18.3	18	0	31	- 8.3	75	165	67	38	20	0	892	457	2.5	34	15.2	NW	17+	3	5	23	8.2	31
MARYLAND																																
BALTIMORE	45	1014.6	1020.2	8.4	0.9	4.7	2.6	18.3	6	-10.0	1[illegible]	0	13	0.6	77	128	52	41	16	0	T	0	1.2	31	17.0	W	16	4	5	22	8.2	36
MASSACHUSETTS																																
BLUE HILL OBS R	192			3.3	- 4.1	- 0.4	0.7	15.6	6	-12.8	18+	0	28			193	92	38	22		231	76			25.5	NW	13					27
BOSTON	5	1018.0	1019.0	3.8	- 2.7	0.6	- 0.2	16.7	6	-10.0	17	0	25			154	62	31	19	0	84	51	3.1	32	16.5	W	16	3	4	24	8.4	21
WORCESTER	301	980.7	1019.0	0.8	- 5.8	- 2.4	0.2	13.9	6	-14.4	17	0	30	- 6.7	75	139	48	35	19	0	351	152	2.1	31	14.8	30	17	4	2	25	8.2	
MICHIGAN																																
ALPENA	210	991.5	1018.0	- 0.9	- 8.8	- 4.8	- 0.4	6.1	31+	-22.2	12+	0	31	- 7.2	83	97	51	31	20	0	1080	432	0.7	26	10.7	SE	29	1	3	27	9.0	20
DETROIT	189			2.1	- 3.2	- 0.6	0.6	12.2	31+	-12.8	7	0	23	- 4.4	76	75	22	26	14	1	269		1.9	25	11.6	25	31					
DETROIT METRO	193	993.2	1018.2	1.3	- 4.3	- 1.4	0.3	12.8	31	-13.9	7	0	23	- 3.9	84	79	30	23	17	1	318	102	1.7	26	22.4	W	6	0	6	25	9.0	13
FLINT	235	989.2	1017.9	0.8	- 4.4	- 1.8	0.7	11.1	31+	-15.6	17+	0	23	- 5.6	76	102	56	29	19	0	465	178	1.9	26	14.3	29	16	0	2	29	9.4	
GRAND RAPIDS	239	988.2	1018.4	- 0.6	- 5.4	- 3.0	- 0.2	6.7	30	-20.0	7	0	28	- 5.6	83	126	74	49	19	0	503	305	1.3	22	17.0	NW	16	0	0	31	9.8	09
HOUGHTON LAKE	350	973.9	1017.7	- 2.1	- 9.1	- 5.6	- 0.8	6.1	30	-20.0	7	0	31	- 6.7	86	88	46	28	20	0	742	356	0.9	26	10.7	29	6	2	2	27	9.1	
LANSING	256	985.4	1018.2	- 0.1	- 6.0	- 3.1	- 0.6	10.6	31+	-20.0	7	0	29	- 6.1	79	106	55	33	17	0	465	229	1.7	24	15.2	NW	16	0	2	29	9.4	15
MARQUETTE U	206			- 4.2	-10.4	- 7.3	- 2.9	2.2	31	-22.2	7	0	31			77	28	19	21		958	457			13.0	SW	17	3	2	26	8.7	16
MUSKEGON	191	994.9	1018.7	- 0.1	- 4.9	- 2.5	- 1.3	8.3	30	-16.7	7	0	29	- 5.0	84	104	53	38	18	0	627	330	1.0	25	15.6	23	17	0	0	31	9.7	
SAULT STE MARIE	220	989.8	1017.5	- 3.7	-11.1	- 7.4	- 1.2	3.3	31	-21.1	7	0	30	- 9.4	86	92	34	19	25	0	973	508	0.5	7	15.2	NW	6	2	0	29	9.2	22
MINNESOTA																																
DULUTH	435	964.8	1019.2	-10.0	-17.6	-13.8	- 3.8	- 2.2	31+	-28.9	10+	0	31	-16.1	80	51	22	25	13	0	508	483	1.0	29	20.1	NE	30	6	3	22	7.6	28
INTERNATIONAL FALLS	359	973.9	1019.8	-10.6	-20.7	-15.7	- 3.1	- 2.2	23	-31.7	10	0	31	-20.6	64	25	3	17	8	0	312	305	1.0	25	11.2	4	30+	7	1	23	7.2	
MINNEAPOLIS	254	988.2	1020.2	- 7.5	-15.6	-11.5	- 3.8	4.4	27	-28.9	7	0	31	-15.0	72	40	18	20	12	1	389	127	0.5	29	16.1	NE	30	5	4	22	7.7	29
ROCHESTER	395	969.5	1020.1	- 7.2	-16.2	-11.7	- 4.2	5.6	30	-33.3	7+	0	31	-13.9	80	37	12	14	11	1	437	229	1.2	27	13.4	14	29+	4	5	22	7.7	
ST CLOUD	313	981.0	1020.7	- 8.3	-18.7	-13.5	- 4.9	3.9	27	-32.8	6	0	31			33	15	13	9		356	229						6	5	20	7.4	

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation ground	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
MISSISSIPPI	M	Mb	Mb	C	C	C	C	C		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s		M.p.s							%
JACKSON	94	1008.5	1020.6	16.1	4.1	10.1	0.4	26.7	12+	- 8.3	17	0	8	6.7	83	246	111	65	13	5	0	0	0.5	13	13.9	N	6	6	6	19	7.2	36
MERIDIAN	88	1009.8	1021.0	16.4	4.7	10.6	1.6	27.2	9	- 6.7	18	0	8	5.0	72	212	77	68	12	5	0	0	0.4	6	9.4	13	30	5	5	21	7.5	
MISSOURI																																
COLUMBIA REGIONAL	270	987.1	1020.7	1.1	- 6.4	- 2.7	- 3.1	15.6	2	-16.7	7	0	29	- 5.6	80	69	19	43	12	2	130	127	0.8	25	13.9	NW	15	4	7	20	7.4	43
KANSAS CITY	309	981.7	1020.1	1.4	- 6.4	- 2.5	- 3.3	18.3	2	-17.8	10+	0	24	- 8.3	68	37	- 1	21	8	1	79	76	0.8	27	21.9	SW	30	8	8	15	6.7	58
ST JOSEPH	247			1.2	- 8.2	- 3.5	- 3.2	18.9	2	-26.1	11	0	29			25	- 9		8				1.0	30	11.2	33	5	7	7	17	6.9	
ST LOUIS	163	999.3	1020.6	3.0	- 4.8	- 0.9	- 2.4	19.4	2	-13.9	11+	0	27	- 2.8	88	90	40	38	13	1	25	25	1.2	26	12.5	SE	30	3	9	19	7.9	29
SPRINGFIELD	386	973.2	1020.2	4.7	- 5.2	- 0.2	- 2.8	18.9	2	-15.0	6	0	27	- 4.4	75	43	- 12	27	10	2	38	51	0.5	18	13.0	S	30+	8	7	16	6.4	42
MONTANA																																
BILLINGS	1087	890.3	1019.6	- 3.9	-11.6	- 7.7	- 5.7	13.9	1	-31.7	8	0	27	-14.4	60	27	12	12	10	0	328	229	3.8	25	20.1	W	1	6	6	19	7.4	30
GLASGOW	696	934.0	1020.6	- 9.2	-19.3	-14.2	- 6.3	6.7	21	-38.3	8	0	31	-17.8	72	15	4	8	9	0	353	254	1.0	2	12.5	12	19	5	9	17	7.0	
GREAT FALLS	1116	886.9	1020.1	- 2.9	-12.7	- 7.8	- 5.2	13.3	26	-37.8	8	0	24	-13.3	65	43	27	21	12	0	411	203	5.9	23	22.4	SW	26	4	3	24	8.0	28
HAVRE	788	923.1	1019.7	- 5.4	-16.6	-11.0	- 4.8	10.6	26+	-36.1	8	0	26	-14.4	72	15	3	5	9	0	236	127	2.9	25	13.9	SW	26	5	5	21	7.3	42
HELENA	1167	880.8	1022.5	- 5.1	-15.3	-10.2	- 5.9	13.3	26	-37.2	8	0	28	-15.0	65	12	- 2	6	8	0	198	127	2.1	26	16.1	W	1	4	4	23	8.0	35
KALISPELL	904	912.6	1021.4	- 3.5	-11.7	- 7.6	- 3.7	11.1	1	-28.9	8	0	23	-12.2	67	41	7	23	16	0	239	127	0.6	13	23.2	3	2+	3	3	25	8.4	
MILES CITY	801	922.1	1019.8	- 5.2	-15.7	-10.4	- 5.6	11.7	21	-32.8	6	0	31	-13.9	74	26	17		13	0	254		1.3	29								
MISSOULA	972	905.9	1022.5	- 3.1	-11.1	- 7.1	- 2.3	12.8	1	-30.0	9	0	23	-11.1	75	37	10	15	13	0	226	127	0.8	11	13.9	N	2	2	6	24	8.3	28
NEBRASKA																																
GRAND ISLAND	561	950.9	1020.1	- 1.9	-11.4	- 6.7	- 4.0	13.3	2	-25.0	13	0	29	-12.8	64	52	37	29	6	0	445	279	1.7	31	14.3	32	30	8	6	17	6.5	
LINCOLN	363	975.6	1022.2	- 0.4	-11.2	- 5.8	- 3.2	15.6	2	-25.0	16	0	30	-11.1	68	35	16	17	7	0	165	127	1.4	32	17.4	NW	30	5	10	16	6.9	42
NORFOLK	471			- 2.7	-13.0	- 7.8	- 4.1	11.1	27+	-26.7	16	0	31			30	12	14	6		376	203						6	7	18	7.2	
NORTH PLATTE	846	918.1	1020.6	- 1.7	-14.8	- 8.2	- 5.7	13.9	2	-26.1	14+	0	31	-12.8	72	11	1	4	7	0	221	127	1.6	33	15.2	NW	30	8	7	16	6.5	58
OMAHA	298	983.1	1020.1	- 1.3	-10.8	- 6.1	- 3.9	12.8	29+	-22.2	14	0	29	- 9.4	76	41	21	15	9	0	150	127	1.3	33	16.1	NW	23	4	10	17	7.3	39
SCOTTSBLUFF	1206	878.1	1019.7	- 0.2	-12.7	- 6.4	- 4.6	16.1	2	-28.9	10	0	28	-13.3	61	20	9	13	6	0	259	127	2.3	32	16.1	31	30	8	6	17	6.6	
VALENTINE	789			- 1.9	-14.7	- 8.3	- 4.4	15.0	22	-30.6	6	0	30			8	- 1	6	5		193	127			18.8	NW	30	7	7	17	6.8	43
NEVADA																																
ELKO	1539	845.2	1022.7	- 1.5	-12.9	- 7.2	- 4.1	12.2	2	-33.3	11	0	29	-12.2	68	20	- 6	5	11	0	218	51	0.7	28	8.0	27	22+	6	10	15	6.7	
ELY	1906	807.7	1020.7	1.7	-14.9	- 6.6	- 3.7	13.9	2	-33.3	10	0	31	-12.2	69	18	T	6	6	0	267	178	1.9	20	14.8	SE	6	8	10	13	6.1	72
LAS VEGAS	659	941.8	1020.[illegible]	10.9	- 0.7	5.2	- 2.1	19.4	20	- 7.2	12	0	16	- 7.2	44	5	- 5	4	4	0	10	0	1.7	27	17.4	NW	4	18	5	8	3.4	72
RENO	1342	867.6	1021.9	3.2	-10.9	- 3.8	- 3.8	17.8	2	-26.7	9	0	31	- 9.4	68	23	- 5	12	8	0	224	127	0.5	27	17.9	SW	21	8	9	14	6.0	59
WINNEMUCCA	1311	870.6	1023.4	0.6	-13.1	- 6.3	5.0	15.6	2	-36.7	9	0	28	- 8.9	80	25	1	6	14	0	338	229	0.4	24	13.4	SW	22	4	9	18	6.9	43
NEW HAMPSHIRE																																
CONCORD	104	1006.4	1019.6	- 0.8	- 8.8	- 4.8	- 0.9	7.8	3	-19.4	8	0	31	- 7.2	84	116	33	29	20	0	589	366	1.7	32	17.9	NW	17	4	4	23	8.3	24
MT WASHINGTON OBS	1909			- 6.9	-16.7	-11.8	1.1	3.9	6	-31.1	17	0	31			408	248	65	27	0	2327	711			58.6Y	W	13	2	4	25	8.9	17
NEW JERSEY																																
ATLANTIC CITY	20	1016.9	1019.4	9.7	1.9	5.8	3.3	17.2	6	- 8.3	18	0	10	1.1	76	92	10	33	13	0	T	0	1.5	31	13.9	30	17+	2	5	24	8.2	24
ATLANTIC CITY C	3			9.3	3.5	6.4	2.9	16.1	5	- 5.6	18+	0	4			126	38	37	13						21.0	NW	17					
NEWARK	2	1018.9	1019.4	7.2	1.3	4.3	2.9	18.3	6	- 7.2	18+	0	9	- 0.6	74	104	22	23	19	0	T	T	2.2	32	16.5	28	17	3	4	24	8.5	
TRENTON	17			7.2	1.6	4.4	2.6	17.2	31	- 6.1	18+	0	7			122	50	31	19		T	T			17.0	W	16	3	4	24	8.5	22
NEW MEXICO																																
ALBUQUERQUE	1619	837.5	1018.1	8.5	- 5.2	1.7	- 1.1	17.8	4	- 9.4	6	0	31	- 7.8	54	9	- 3	7	3	0	30	25	1.3	35	24.1	NW	5	15	9	7	3.9	74
CLAYTON	1515			6.7	- 6.8	- 0.1	- 2.3	18.3	27	-21.1	6	0	30			4	- 5	4	2		43	76						11	10	10	5.0	
ROSWELL	1101			12.3	- 4.1	4.2	0.3	22.8	2	-15.0	16	0	24			7	- 7	5	5		122	51										
NEW YORK																																
ALBANY	84	1008.8	1019.8	2.3	- 5.8	- 1.7	1.3	11.1	5	-17.2	17	0	26	- 4.4	83	106	41	26	20	0	572	229	1.1	28	13.0	NW	17+	3	1	27	8.8	17
BINGHAMTON	489	957.7	1018.5	1.8	4.7	1.4	1.4	15.0	31	-15.6	17	0	27	- 3.3	86	123	58	23	20	0	546	254	1.4	23	16.1	W	16	0	3	28	9.5	15
BUFFALO	215	991.7	1018.2	2.8	- 4.2	- 0.7	1.7	13.3	13	-12.8	17	0	25	- 2.8	89	98	22	16	24	0	503	178	1.5	26	15.2	SW	13	0	1	30	9.8	07
NEW YORK C	40	1015.9	1019.4	6.4	0.8	3.6	1.4	16.1	5	- 7.2	18+	0	9	- 1.1	76	155	72	38	19	0	T	0	1.5	1	15.6	NW	16					24
NEW YORK KENNEDY	4	1019.0	1019.6	7.8	2.4	5.1	3.5	16.1	5	- 5.6	18+	0	8	- 0.6	68	108	46	25	17	0	T	T	2.3	33	19.7	26	16	4	5	22	8.1	
NEW YORK LA GUARDIA	3	1018.6	1019.6	6.2	0.9	3.6	1.2	15.0	6	- 6.7	18+	0	9	- 1.7	72	118	52	27	18	0	T	T	2.0	34	21.9	NW	17	2	7	22	8.4	
ROCHESTER	167	998.0	1018.6	3.8	- 2.7	0.6	2.4	17.8	31	-11.1	17	0	22	- 1.7	88	66	5	16	24	0	577	203	1.2	25	18.8	SW	13	[illegible]	[illegible]	[illegible]	9.8	23
SYRACUSE	125	1003.1	1018.4	2.8	- 4.2	- 0.7	1.7	15.6	6	-12.8	29+	0	26	- 2.8	85	100	20	15	21	0	757	254	0.7	28	17.0	[illegible]	6	2	1	28	9.3	09

See footnotes at end of table.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days sunrise to sunset			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile 1.6 kilometers							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm.	Mm			Mm	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
ASHEVILLE	652	943.1	1020.6	12.8	1.9	7.3	4.1	20.6	9	-11.7	18	0	13	3.9	83	99	7	46	15	0	T	T	0.4	32	15.6	35	15	8	4	19	6.9	45
CAPE HATTERAS R	2	1020.3	1020.7	16.2	8.4	12.3	3.3	22.8	9+	- 2.8	18	0	3	8.3	80	123	7	63	13	0	0	0	2.0	31	17.4	22	6	10	1	20	6.7	37
CHARLOTTE	224	992.9	1020.9	12.8	3.3	8.1	2.1	22.2	10	- 9.4	18	0	8	3.9	78	148	56	73	14	0	0	0	0.3	27	9.8	NW	16+	9	2	20	7.0	39
GREENSBORO	273	988.5	1021.0	11.5	1.9	6.7	2.3	20.6	10	-11.1	18	0	9	2.2	79	114	35	49	17	0	0	0	0.6	27	14.8	NW	16	9	2	20	6.8	37
RALEIGH	132	1004.7	1021.0	13.1	2.7	7.9	2.4	24.4	10	-10.6	18	0	9	2.8	74	127	51	37	13	1	0	0	0.9	26	13.0	30	16	9	3	19	6.6	40
WILMINGTON	9	1019.6	1021.0	16.7	5.4	11.1	2.1	24.4	10	- 6.7	18	0	4	7.2	83	134	47	54	8	0	0	0	0.8	30	13.0	NW	16	8	1	22	7.4	40
NORTH DAKOTA																																
BISMARCK	502	957.3	1020.7	- 7.8	-18.8	-13.3	- 5.4	6.1	26+	-33.3	7+	0	31	-16.1	80	17	8	5	10	0	259	152	1.3	32	16.1	NW	30	6	9	16	6.7	45
FARGO	273	986.1	1021.1	-10.7	-20.7	-15.7	- 5.9	0.6	27	-32.2	6	0	31	-18.3	76	38	24	18	10	1	470	330	0.6	27	17.0	NW	31	5	11	15	6.9	42
WILLISTON	579	948.2	1020.7	- 8.4	-19.7	-14.1	- 5.3	6.7	21	-35.0	9	0	31	-16.7	80	20	8	11	6	0	292	152	1.1	29	13.0	NW	18	11	5	15	6.2	38
OHIO																																
AKRON	368	972.9	1018.7	5.7	- 1.7	2.0	2.8	16.7	30	-11.7	16	0	18	- 2.2	75	85	27	17	18	0	165	102	1.9	23	13.4	18	12	0	2	29	9.6	
CINCINNATI ABBE OB	232			6.3	- 1.4	2.5	0.7	17.8	30	-14.4	17	0	17			105	34	37	17		30	25			11.2	S	30					16
CLEVELAND	237	988.8	1018.8	4.4	- 1.6	1.4	2.2	16.1	30+	-10.0	16	0	19	- 2.2	79	83	23	17	16	1	386	203	2.3	23	13.9	SW	13	0	1	30	9.7	05
COLUMBUS	247	988.8	1019.6	6.0	- 1.4	2.3	2.6	16.7	30+	-13.9	17	0	16	- 1.7	78	89	29	21	14	0	71	51	1.4	24	15.2	W	16	1	2	28	9.3	12
DAYTON	305	982.4	1019.5	5.3	- 3.5	0.9	1.3	18.3	6	-18.3	17	0	22	- 2.8	80	71	11	20	14	0	132	102	1.6	22	13.0	W	16+	3	2	26	8.8	26
MANSFIELD	395			4.6	- 2.8	0.9	1.4	16.7	6	-15.0	17	0	22	- 1.7	85	71	4	20	16	0	231	152	2.4	23	14.3	18	30	1	1	29	9.5	
TOLEDO	204	992.9	1018.8	2.5	- 4.4	- 0.9	1.1	13.9	30	-15.6	7	0	28	- 5.0	76	78	29	27	14	0	196	76	1.7	25	15.2	W	16	0	4	27	9.2	16
YOUNGSTOWN	359	974.6	1018.5	4.2	- 2.8	0.7	2.2	15.6	31	-11.7	17+	0	22	- 1.7	88	79	11	16	16	0	211	102	1.9	24	12.1	26	16	0	1	30	9.7	
OKLAHOMA																																
OKLAHOMA CITY	392	972.2	1020.1	6.5	- 3.8	1.3	- 3.3	23.3	29	-13.3	6	0	24	- 3.3	74	21	14	11	6	3	36	25	0.6	34	15.6	W	29+	12	4	15	5.6	44
TULSA	198	995.3	1020.6	5.7	- 3.8	0.9	- 3.3	18.3	29+	-13.3	6	0	24	- 2.8	78	26	- 15	14	7	1	43	25	0.2	25	15.6	SE	29	13	3	15	5.7	47
OREGON																																
ASTORIA	2	1017.3	1017.9	6.6	0.7	3.7	- 2.5	14.4	18	-14.4	8	0	12	0.0	77	337	- 9	67	24	0	137	102	2.1	16	13.0	8	5	5	3	23	7.9	
BURNS U	1265	873.7	1021.7	- 1.4	-11.1	- 6.3	- 4.7	15.6	1	-32.2	9	0	29	-10.0	74	54	17	19	15		259	229	1.0	27				4	5	22	7.7	
EUGENE	109	1005.4	1019.5	5.3	- 2.8	1.3	- 4.2	16.1	21	-24.4	8	0	15	- 0.6	87	274	106	57	21	1	251	178	2.0	18	12.5	21	21	3	1	27	8.6	
MEACHAM	1234	875.7	1021.0	- 2.9	- 9.2	- 6.0	- 4.8	11.7	1	-26.7	9+	0	23			129	13	26	21		579	203			9.4	30	2	4	4	23	8.0	
MEDFORD	396	972.6	1021.8	3.8	- 4.3	- 0.3	- 3.0	12.8	21	-21.1	10+	0	18	- 2.2	87	82	- 4	29	18	0	310	178	0.3	31	13.0	15	16	4	1	26	8.4	
PENDLETON	452	965.1	1020.9	1.4	- 6.9	- 2.7	- 5.2	18.9	21	-25.0	10	0	19	- 8.9	65	59	21	20	16	0	320	203	1.4	23	11.6	25	24	6	3	22	7.6	
PORTLAND	6	1018.3	1019.5	6.2	- 0.2	3.0	- 2.2	16.1	21	-13.3	8	0	14	- 1.1	77	223	61	46	19	0	155	127	3.7	13	18.8	E	5	4	3	24	8.1	26
SALEM	60	1011.5	1019.0	5.8	- 2.3	1.8	- 3.5	16.7	21	-24.4	8	0	16	- 1.7	78	221	34	41	20	0	371	203	1.9	19	11.6	18	27+	4	2	25	8.1	
SEXTON SUMMIT R	1169	883.5	1019.4	1.9	- 3.8	- 0.9	- 3.6	16.1	1	-16.7	8	0	20			215	94	34	24		541	279			20.6	27	21	5	1	25	8.1	
PACIFIC AREA																																
GUAM TAGUAC R	110			28.7	22.7	25.7	- 0.2	30.0	2	20.0	25	0	0			161	6	49	22	0	0	0			11.6	E	22					56
JOHNSTON	2	1013.9	1014.3	26.6	22.8	24.7	- 0.9	27.8	15+	20.6	8	0	0	18.9	71	44	- 32	17	12	0	0	0	7.5	6	18.8	E	8	4	17	10	6.2	47
KOROR R	29	1006.8	1010.4	31.2	24.2	27.7	0.6	32.8	4	23.3	27+	3	0	23.9	84	192	-106	81	20	1	0	0	3.4	6	22.4	N	2	0	10	21	8.1	57
KWAJALEIN	2	1008.8	1009.6	29.4	25.3	27.4	0.3	30.6	21+	22.2	17	0	0	22.8	79	577	349	436	15	2	0	0	7.1	6	14.8	9	17	1	1	29	9.5	
MAJURO	3	1009.1	1009.3	28.9	25.3	27.1	0.3	30.6	16	22.8	11	0	0	23.3	80	593	311	454	13	0	0	0	5.4	6	17.0	E	12	0	1	30	9.8	52
PAGO PAGO	4	1008.8	1008.9	30.9	25.3	28.1		33.3	14	22.8	16	10	0	23.9	80	516		149	16	2	0	0	3.3	9	21.0	NW	31	3	7	21	8.1	50
PONAPE R	37	1004.1	1009.1	30.6	24.4	27.5	0.7	31.7	15+	21.1	13+	0	0	23.3	80	196	-270	71	20	2	0	0	3.4	6	9.8	NE	19	1	3	27	9.3	78
TRUK MOEN ISLAND	2	1009.8	1009.9	29.7	25.2	27.4	0.3	31.7	2	23.3	14+	0	0	23.9	80	235	-101	103	22	2	0	0	4.3	6	12.1	SE	2	0	4	27	9.5	47
WAKE	3	1015.6	1015.8	28.1	22.4	25.2	- 0.8	30.0	3+	20.0	19	0	0	19.4	73	105	59	53	18	2	0	0	6.3	7	19.2	E	19	9	19	3	5.0	68
YAP R	13			30.2	23.9	27.1	- 0.1	31.1	31	22.8	14+	0	0			131	-128	49	24	0	0	0			9.4	NE	15	2	16	13	6.8	80
PENNSYLVANIA																																
ALLENTOWN	118	1005.4	1019.9	4.7	- 1.4	1.7	2.1	16.1	31+	- 9.4	17	0	20	- 2.8	75	138	55	24	21	0	15	51	1.1	32	15.6	26	16	3	3	25	8.8	
ERIE	223	990.5	1018.2	3.8	- 2.4	0.7	2.4	15.6	6	-10.0	18+	0	24	- 1.7	85	94	27	19	19	1	470	203	2.3	23	14.3	28	1	0	0	31	9.8	
HARRISBURG	103	1006.8	1019.9	5.9	- 0.6	2.7	2.1	17.2	31	- 7.2	18+	0	15			135	61	26	15	0	13	76	0.8	31	14.3	W	16+	2	7	22	8.4	21
PHILADELPHIA	2	1018.6	1019.7	7.6	1.2	4.4	3.3	16.7	31+	- 6.7	17	0	10	1.1	82	132	57	32	17	0	T	T	0.9	33	17.9	W	16	5	2	24	8.2	23
PITTSBURGH	347	973.9	1018.9	6.6	- 0.8	2.9	3.6	19.4	31	-11.7	17	0	18	- 1.1	77	77	16	18	19	1	74	76	2.0	26	14.3	27	16	0	3	28	9.6	12
SCRANTON	283	983.7	1019.0	3.6	- 2.6	0.5	1.9	16.7	31	-12.8	17	0	23	- 2.2	81	92	29	21	18	0	99	152	1.0	27	15.2	NW	16	1	5	25	9.0	18
WILLIAMSPORT	160	1000.0	1019.6	4.2	- 1.7	1.3	2.2	16.7	31	-10.6	17	0	18	- 2.2	78	122	44	32	17	0	130	229	0.5	30	13.4	16	31+	2	1	28	9.2	
RHODE ISLAND																																
BLOCK ISLAND	34			6.9	0.5	3.7	1.6	14.4	6	- 9.4	17	0	13			149	58	36	18		23	T										
PROVIDENCE	16	1016.9	1019.2	5.3	- 2.8	1.3	1.3	17.8	6	-13.9	17	0	23	- 2.2	78	196	104	41	22	0	104	51	2.6	34	14.3	30	16	3	5	23	8.3	27

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average max mum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile 1.6 kilometers: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm.	Mm			Mm	Mm	Mps		Mps							%
SOUTH CAROLINA																																
CHARLESTON	12	1019.3	1021.2	19.0	7.3	13.2	3.2	28.3	11	- 6.7	18	0	3	8.9	81	111	38	47	6	1	0	0	0.7	30	15.6Y	NW	16+	5	8	18	7.2	28
CHARLESTON [illegible]	3			16.9	9.4	13.2	2.3	25.0	10	- 2.2	17	0	2			82	12	43	7		0	0			18.8	SE	6					
COLUMBIA	65	1012.9	1021.2	16.7	4.7	10.7	2.7	27.2	10	- 8.3	18	0	9	6.1	78	137	47	35	13	0	0	0	0.5	33	8.0	28	16+	7	3	21	7.3	42
GRNVLLE-SPRTNBRG	292	985.4	1020.7	13.8	4.1	8.9	2.5	23.3	10	- 8.9	18	0	9	4.4	80	170	67	76	15	1	0	0	0.4	30	9.4	NW	27	8	4	19	7.0	35
SOUTH DAKOTA																																
ABERDEEN	395	970.9	1020.5	- 6.6	-17.4	-11.9	- 4.2	6.7	22	-34.4	6	0	31	-15.0	76	22	7	9	8	0	381	203	1.2	34	17.9	36	[illegible]	4	8	19	[illegible]	
HURON	390	970.9	1019.9	- 4.6	-13.9	- 9.2	- 1.9	12.2	22	-31.1	6	0	31	-13.9	68	31	17	17	8	0	351	178	1.3	35	16.5	NW	[illegible]	4	5	22	7.9	38
RAPID CITY	964	903.5	1019.1	- 1.3	-13.6	- 7.4	- 4.8	17.8	22	-30.6	8	0	30	-13.9	62	9	1	3	8	0	152	152	3.2	33	[illegible]	NW	[illegible]	7	6	18	6.7	64
SIOUX FALLS	432	965.8	1019.8	- 4.8	-14.3	- 9.6	- 3.5	12.2	22	-30.0	6	0	30	-13.9	69	32	13	15	4	0	157	76	1.0	[illegible]	[illegible]	35	[illegible]	4	5	22	7.6	
TENNESSEE																																
BRISTOL	459	965.1	1020.2	11.1	1.9	6.5	3.0	22.2	31	-11.1	18+	0	13	3.3	79	163	82	60	18	0	T	T	0.8	28	11.2	30	16	4	6	21	7.9	
CHATTANOOGA	203	995.6	1020.6	10.9	1.3	6.2	0.3	20.0	5	-11.1	18+	0	13	2.2	79	180	48	33	17	0	0	0	0.4	27	12.5	SE	31	[illegible]	1	[illegible]	[illegible]	25
KNOXVILLE	299	984.8	1020.6	11.2	3.0	7.1	1.8	20.6	31	-10.6	17	0	10	3.3	79	178	71	52	16	1	T	0	1.1	29	14.8	NW	15	5	2	24	8.0	25
MEMPHIS	79	1011.5	[illegible]	8.9	0.0	4.4	- 1.4	21.1	5	- 8.3	17	0	16	0.0	75	238	113	75	17	5	T	T	0.2	11	16.1	30	6	7	3	[illegible]	7.2	[illegible]
NASHVILLE	180	998.3	1020.6	10.6	1.4	6.0	0.8	21.1	5	-12.8	17	0	12	1.1	74	207	100	42	17	3	15	T	0.9	24	15.2	NW	6	8	1	22	[illegible]	31
OAK RIDGE R	276			11.0	2.5	6.8	2.3	18.3	10	-11.1	17	0	11			234	84	90	18		T	T			14.8Y		[illegible]	6	1	24	8.0	
TEXAS																																
ABILENE	544	955.3	1019.4	12.7	- 1.5	5.6	- 2.2	26.1	5	-11.1	16	0	22	- 1.7	65	T	- 32	T	0	0	0	T	1.1	23	19.2	W	29+	12	10	9	4.9	72
AMARILLO	1098	890.6	[illegible]	7.4	- 6.4	0.5	- 3.6	21.7	27	-18.3	6	0	28	- 7.2	63	8	- 11	3	5	1	71	51	1.6	26	16.5	NW	[illegible]	15	5	11	[illegible]	[illegible]
AUSTIN	182	997.6	1019.9	14.9	3.2	9.1	- 2.4	27.2	3	- 5.6	17	0	10	2.2	68	13	- 51	6	7	1	0	0	1.5	1	[illegible]	NW	21	11	2	18	[illegible]	[illegible]
BROWNSVILLE	6	1017.6	1018.3	20.8	9.7	15.3	- 1.9	28.3	10+	2.2	11	0	0	11.1	78	19	- 25	12	5	0	0	0	[illegible]	30	[illegible]	[illegible]	5	5	6	[illegible]	[illegible]	[illegible]
CORPUS CHRISTI	13	1017.3	[illegible]	20.1	6.8	13.4	1.7	32.2	5	- 2.2	27	1	2	8.9	80	4	- 49	1	4	0	0	0	1.7	4	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DALLAS	147	1002.4	[illegible]	12.2	1.3	6.7	- 2.2	23.3	29+	- 6.1	16+	0	13	1.1	73	21	- 47	8	8	1	T	T	0.6	31	[illegible]	NW	5	12	[illegible]	[illegible]	[illegible]	54
DEL RIO	313	982.4	1019.3	17.7	3.3	10.5	- 0.8	27.8	23	- 6.1	16	0	6	1.1	59	T	- 21	T	1	0	0	T	0.9	6	13.4	31	[illegible]	[illegible]	2	14	5.5	
EL PASO	1194	883.4	1017.0	15.9	0.3	8.1	1.4	22.2	4	- 6.7	16	0	16	- 3.9	46	11	- 2	7	4	0	T	T	[illegible]	26	[illegible]	W	29+	16	9	6	[illegible]	87
FORT WORTH	164	[illegible]	1020.4	12.5	0.8	6.7	- 2.1	23.9	29	- 7.8	16	0	15	0.6	71	15	- 44	8	5	2	36	25	0.8	30	15.6	35	5	12	5	14	[illegible]	
GALVESTON	2			16.6	9.7	13.2	- 0.8	22.8	19	0.6	16	0	0			92	- 6	35	12		0	0			13.9	NW	15+					44
HOUSTON INTERCON	29	1016.3	1019.9	18.0	4.2	11.1	- 0.8	28.3	3	- 5.6	17	0	7	6.7	80	56	- 59	35	11	0	0	0	1.0	1	9.4	[illegible]	[illegible]	7	[illegible]	[illegible]	7.5	[illegible]
LUBBOCK	992	[illegible]	1017.9	10.8	- 4.2	3.3	- 1.7	21.1	22+	-14.4	6	0	24	- 5.0	64	8	- 8	5	2	0	10	T	1.1	23	[illegible]	21	6	15	6	10	[illegible]	
MIDLAND	869	917.7	1017.8	14.6	- 1.8	6.4	- 1.3	23.9	5	- 9.4	16+	0	20	- 3.9	58	4	- 13	4	1	1	T	T	0.8	22	14.8	12	23	14	7	10	[illegible]	
PORT ARTHUR	5			17.0	5.7	11.4	- 1.3	25.6	9	- 4.4	17	0	4	8.9	88	100	- 29	31	10	4	0	0	1.3	6	12.5	N	6	6	4	[illegible]	[illegible]	[illegible]
SAN ANGELO	[illegible]	951.2	1019.1	16.4	- 0.7	7.9	- 0.8	28.3	3	-12.2	16	0	19	- 1.1	62	1	- 21	1	2	0	T	T	0.8	25	14.8	[illegible]	[illegible]	11	9	11	[illegible]	
SAN ANTONIO	[illegible]	991.2	1019.8	17.3	3.0	10.2	- 1.9	28.3	23	- 7.2	17	0	10	3.3	68	11	- 33	3	10	0	T	T	1.5	36	13.0	NW	21	9	4	18	6.4	45
VICTORIA	32	1015.2	1019.2	18.3	5.0	11.7	- 2.3	27.8	3	- 4.4	17	0	4	6.7	77	9	- 57	4	8	0	0	0	1.8	2	13.2Y	N	5	6	6	[illegible]	[illegible]	
WACO	153	1001.7	[illegible]	12.4	1.0	6.7	- 3.4	26.7	3	- 6.1	16	0	15	1.1	73	20	- 50	14	6	1	T	T	0.8	32	[illegible]	34	5	11	4	16	[illegible]	
WICHITA FALLS	303	982.1	1019.8	11.1	- 2.3	4.4	- 2.6	25.6	29	-11.1	6	0	23	- 1.7	72	13	- 24	11	3	1	T	T	0.6	30	17.4	36	5	15	5	[illegible]	[illegible]	
UTAH																																
MILFORD	1533	846.9		- 1.2	-16.8	- 9.0	- 6.9	13.9	2	-35.6	10	0	31			56	38	26	8		777	508			18.8	N	4	14	6	11	5.2	[illegible]
SALT LAKE CITY	1286	873.4	1022.6	- 0.1	-10.3	- 5.2	- 4.1	13.3	2	-26.1	15	0	25	-10.0	68	82	50	46	14	0	894	381	0.9	17	16.1	SE	4	4	6	21	[illegible]	36
WENDOVER	1291	872.7	1023.1	- 0.3	- 9.6	- 4.9	- 3.7	11.1	2	-21.1	10	0	30	- 9.4	77	8	T	4	8		66	51						[illegible]	[illegible]	17	6.4	
VERMONT																																
BURLINGTON	101	[illegible]	1019.1	- 1.1	- 9.5	- 5.3	0.6	9.4	6	16.7	17+	0	31	- 7.8	84	87	33	12	21	0	991	254	0.4	[illegible]	15.2	[illegible]	13	1	5	25	8.8	[illegible]
VIRGINIA																																
LYNCHBURG	279			10.6	1.7	6.2	2.6	21.1	5	-10.6	18	0	11			110	30	31	15		0	0			13.9	W	16	7	6	18	7.0	40
NORFOLK	7	1019.3	1020.3	13.8	5.3	9.6	3.7	22.8	5	- 7.2	18	0	3	4.4	74	105	35	48	14	0	0	[illegible]	[illegible]	27	18.8	W	16	10	[illegible]	18	[illegible]	44
RICHMOND	50	1013.9	1020.3	12.4	2.9	7.7	3.4	23.3	5	-10.0	18	0	6	2.2	74	74	- 2	22	12	0	0	0	0.8	28	12.5	NW	16	7	6	18	7.1	[illegible]
ROANOKE	[illegible]	977.7	1020.4	11.8	2.1	6.9	3.4	22.2	5	- 9.4	17	0	6	0.6	68	117	42	48	14	0	T	0	1.3	29	17.4	32	16	6	5	20	7.5	
WALLOPS ISLAND	3			11.5	3.8	7.7		19.4	10	- 6.7	18	0	5			83		28	15		0	[illegible]			21.8Y	WNW	17					
WASHINGTON																																
OLYMPIA	59	1010.2	1017.7	4.9	- 1.1	1.9	- 2.9	13.3	21	-19.4	8	0	17	- 1.1	82	271	41	68	22	2	147	102	2.0	19	13.4	18	24+	5	3	23	[illegible]	
QUILLAYUTE	55	1008.8	1016.2	5.9	[illegible]	3.1	- 2.1	12.2	20+	-13.9	8	0	14	1.1	85	564	137	172	23	0	295	152	1.6	12	15.2	SW	19	4	3	24	9.1	[illegible]
SEATTLE-TACOMA	122	[illegible]	1017.5	[illegible]	1.4	3.4	- 1.5	12.2	21+	-10.6	8	0	13	- 2.2	69	228	68	40	19	1	142	127	1.8	14	13.4	SW	25	2	6	23	[illegible]	[illegible]
SPOKANE	718	932.6	1019.1	- 0.3	- 7.0	- 3.7	2.6	11.1	21	-23.9	8	0	29	- 8.3	70	49	- 13	9	12	0	119	102	1.5	20	16.8	SW	26	8	4	19	[illegible]	[illegible]
STAMPEDE PASS R	1206	876.4		- 3.6	- 8.2	- 5.9	3.1	6.7	21+	-20.0	8+	0	29			478	67	76	25		2454	1168						3	3	25	[illegible]	

See footnotes at end of table.

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation ground	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M	Mb.	Mb.	C	C	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
WASHINGTON																																
WALLA WALLA J	289			2.7	- 4.4	- 0.8	- 4.1	18.9	21	-20.0	9	0	18			68	21	14	17		183	127			11.6	NW	22	6	4	21	7.6	43
YAKIMA	321	981.0	1021.0	2.3	- 8.1	- 2.9	- 2.6	19.4	1	-22.2	14+	0	27	- 8.3	68	33	5	14	13	0	122	76	0.8	33	13.4	20	24	8	6	17	6.8	
WEST INDIES																																
SAN JUAN	+	1013.9	1016.3	29.1	23.4	26.2	1.7	30.6	16+	21.7	26+	0	0	20.6	73	191	53	51	23	3	0	0	3.0	11	12.5	E	13	5	21	5	5.3	26
WEST VIRGINIA																																
BECKLEY	763	929.2	1019.8	8.6	0.1	4.3	3.2	21.7	31	-14.4	17	0	17	1.1	81	109	28	30	19	0	58	25	2.3	21	14.3	29	16	2	4	25	8.5	
CHARLESTON	286	984.8	1019.5	10.2	1.1	5.6	2.8	23.3	31	-12.8	18	0	15	0.0	70	161	79	47	20	0	36	25	1.3	24	13.4	29	16	1	2	28	9.1	
ELKINS	594	947.2		9.0	- 1.0	4.0	3.4	21.1	31	-20.0	18	0	17			153	75	46	16		170	76						1	2	28	9.2	
HUNTINGTON	252	989.2	1020.1	8.6	0.7	4.7	1.7	20.6	5	-13.3	17	0	15	0.6	78	140	69	61	16	0	20	T	1.4	23	10.3	28	16	2	4	25	8.9	
PARKERSBURG U	187			8.4	0.9	4.7	2.6	19.4	31	-10.6	17+	0	15			123	51	46	17		5	T			18.8	W	16					16
WISCONSIN																																
GREEN BAY	208	992.2	1018.9	- 3.9	-12.4	- 8.2	- 2.6	3.9	30+	-29.4	7	0	30	-11.1	78	63	33	26	17	0	439	330	1.7	29	12.5	SW	31	6	1	24	7.9	32
LA CROSSE	198	994.9	1020.7	- 5.0	-13.2	- 9.1	- 3.4	6.7	30+	-28.3	7	0	31	-11.7	78	62	33		15	0	472		0.5	29								
MADISON	262	986.1	1019.1	- 3.7	-12.7	- 8.2	- 2.7	6.7	30	-27.2	11	0	30	-10.0	81	49	15	18	12	0	414	279	1.2	27	14.3	SW	31	5	3	23	8.1	25
MILWAUKEE	205	992.6	1018.9	- 2.8	-10.3	- 6.6	- 2.4	5.6	30	-23.3	11+	0	31	- 8.9	81	63	21	28	15	0	348	229	2.7	27	14.3	NW	16	3	5	23	8.4	32
WYOMING																																
CASPER	1627	834.4	1019.2	- 3.1	-12.9	- 7.9	- 5.3	7.8	22	-32.8	5	0	30	-13.9	63	10	- 2	4	6	0	231	102	4.8	22	17.9	21	24+	7	5	19	7.0	
CHEYENNE	1867	807.3	1017.9	- 0.4	-11.8	- 6.1	- 4.7	12.2	22	-31.1	5	0	27	-14.4	56	10	- 1	4	6	0	193	127	4.8	29	20.6	NW	30+	9	9	13	6.0	63
LANDER	1696	826.3	1021.3	- 5.1	-16.6	-10.8	- 5.9	12.2	2	-32.2	11+	0	30	-17.2	63	37	26	19	4	0	691	305	0.6	24	20.1	NW	2	10	10	11	5.6	60
SHERIDAN	1208	877.1	1020.3	- 1.9	-15.4	- 8.6	- 5.4	15.6	26	-34.4	8+	0	31	-15.6	59	23	7	9	9	0	396	178	2.3	31	14.8	SW	1	7	5	19	7.0	46

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	[illegible]	1164	1017
HUNTSVILLE	[illegible]	1310	1228
MOBILE	[illegible]	[illegible]	641
MONTGOMERY	[illegible]	842	925
ALASKA			
ANCHORAGE	[illegible]	5005	4789
ANNETTE	[illegible]	3091	2981
BARROW	[illegible]	[illegible]	8511
BARTER ISLAND	2164	8002	8260
BETHEL	1721	[illegible]	5667
BETTLES	2199	6720	
BIG DELTA	2049	5964	
COLD BAY	1365	4216	4236
FAIRBANKS	2091	5992	6435
GULKANA	2277	6457	
HOMER	1332	4511	
JUNEAU	1275	4027	3903
KING SALMON	1508	4766	4952
KOTZEBUE	1964	5925	6654
MCGRATH	2107	5857	6386
NOME	1686	[illegible]	6039
ST. PAUL ISLAND	1077	4765	4778
SHEMYA	974	4221	[illegible]
SUMMIT	1946	6376	
TALKEETNA	1719	5302	5201
UNALAKLEET	1767	5289	
YAKUTAT	1258	4129	[illegible]
ARIZONA			
FLAGSTAFF	1330	3310	2813
PHOENIX	395	638	671
TUCSON	489	943	662
WINSLOW	957	1891	[illegible]
YUMA	344	504	467
ARKANSAS			
FORT SMITH	887	1726	1293
LITTLE ROCK	736	1416	1317
CALIFORNIA			
BAKERSFIELD	[illegible]	[illegible]	[illegible]
BISHOP	[illegible]	1964	1663
BLUE CANYON	990	2502	[illegible]
EUREKA U	[illegible]	1997	2027
FRESNO	[illegible]	[illegible]	975
LONG BEACH	334	[illegible]	496
LOS ANGELES	[illegible]	401	559
LOS ANGELES U	230	341	398
MT SHASTA R	1096	2646	2186
OAKLAND	621	1153	1065
RED BLUFF	774	1383	926
SACRAMENTO	[illegible]	1321	1033
SANDBERG R	848	1991	1403
SAN DIEGO	224	[illegible]	432
SAN FRANCISCO	[illegible]	1275	[illegible]
SAN FRANCISCO U	546	1352	1205
SANTA MARIA	521	1230	1095
STOCKTON	[illegible]	[illegible]	1029
COLORADO			
ALAMOSA	1695	4059	[illegible]
COLORADO SPRINGS	1281	3017	2479
DENVER	1239	2760	2414
GRAND JUNCTION	1303	2501	[illegible]
PUEBLO	1294	2697	2116
CONNECTICUT			
BRIDGEPORT	920	2081	1974
HARTFORD	1054	2427	[illegible]
DIST.OF COLUMBIA			
WASHINGTON DULLES	788	1931	
WASHINGTON NATIONAL	654	1483	1603
DELAWARE			
WILMINGTON	[illegible]	1678	[illegible]
FLORIDA			
APALACHICOLA	232	415	488
DAYTONA BEACH	[illegible]	201	286
FORT MYERS	82	107	133
JACKSONVILLE	204	383	466
KEY WEST	8	8	28
LAKELAND U	127	203	221
MIAMI	30	33	65
ORLANDO	105	[illegible]	270
PENSACOLA	[illegible]	555	567
TALLAHASSEE	275	[illegible]	[illegible]
TAMPA	[illegible]	195	231
WEST PALM BEACH	[illegible]	[illegible]	71
GEORGIA			
ATHENS	472	1008	[illegible]
ATLANTA	511	1115	1185
AUGUSTA	410	847	963
COLUMBUS	336	721	963
MACON	324	702	870
ROME	[illegible]	1225	1360
SAVANNAH	[illegible]	525	730
IDAHO			
[illegible]	1270	[illegible]	[illegible]
LEWISTON	1112	2429	[illegible]
POCATELLO	1445	3152	[illegible]
ILLINOIS			
CAIRO U	876	1705	1504
CHICAGO O HARE	1269	2695	2483
CHICAGO MIDWAY	1224	2616	2273
MOLINE	1319	2697	2398
PEORIA	1271	2702	2291
ROCKFORD	1338	2836	2587
SPRINGFIELD	1181	[illegible]	2082
INDIANA			
EVANSVILLE	940	2029	1788
FORT WAYNE	1081	2498	2410
INDIANAPOLIS	1018	2225	2180
SOUTH BEND	1115	[illegible]	2391
IOWA			
BURLINGTON	1303	2688	2318
DES MOINES	1442	3019	2539
DUBUQUE	1476	3200	[illegible]
SIOUX CITY	1452	2926	2593
WATERLOO	1509	3234	2802
KANSAS			
CONCORDIA	1236	2540	[illegible]
DODGE CITY	1164	[illegible]	1889
GOODLAND	1355	2958	2351
TOPEKA	1152	2322	1979
WICHITA	1123	2240	1785
KENTUCKY			
COVINGTON	891	2057	2018
LEXINGTON	739	[illegible]	1804
LOUISVILLE	793	1735	1801
LOUISIANA			
ALEXANDRIA	483	988	760
BATON ROUGE	[illegible]	609	616
LAKE CHARLES	377	753	570
NEW ORLEANS	314	635	533
SHREVEPORT	597	1114	821
MAINE			
CARIBOU	1775	4249	[illegible]
PORTLAND	1264	3034	[illegible]
MARYLAND			
BALTIMORE	759	1783	1802
MASSACHUSETTS			
BLUE HILL OBS R	1038	2519	2286
BOSTON	985	2121	1971
WORCESTER	1152	2899	2583
MICHIGAN			
ALPENA	1287	[illegible]	3206
DETROIT	1048	2434	2273
DETROIT METRO	1096	2622	2417
FLINT	1118	2740	2550
GRAND RAPIDS	1185	2824	2614
HOUGHTON LAKE	1326	3386	3154
LANSING	1186	2971	[illegible]
MARQUETTE	1423	3555	3111
MUSKEGON	1152	2681	2410
SAULT STE MARIE	1432	3701	3378
MINNESOTA			
DULUTH	1792	[illegible]	3854
INTERNATIONAL FALLS	1893	4400	4207
MINNEAPOLIS	1664	3593	3215
ROCHESTER	1671	3672	3162
ST CLOUD	1775	3962	3414
MISSISSIPPI			
JACKSON	466	[illegible]	851
MERIDIAN	434	[illegible]	938
MISSOURI			
COLUMBIA REGIONAL	[illegible]	2294	1965
KANSAS CITY	1155	2299	1964
ST JOSEPH	1211	2455	2098
ST LOUIS	1069	2168	1874
SPRINGFIELD	[illegible]	2071	1745
MONTANA			
BILLINGS	1451	3448	2726
GLASGOW	1814	[illegible]	3526
GREAT FALLS	1458	3445	2972
HAVRE	1635	3766	3414
HELENA	1588	[illegible]	3252
KALISPELL	1444	3747	3384
MILES CITY	1603	3539	2956
MISSOULA	1416	3560	[illegible]
NEBRASKA			
GRAND ISLAND	1389	2908	[illegible]
[illegible]	[illegible]	2818	[illegible]
[illegible]	1457	3063	2624
[illegible]	1479	3301	[illegible]
OMAHA	1357	2795	2346
SCOTTSBLUFF	1379	3116	2601
VALENTINE	1483	3368	[illegible]
[illegible]			
ELKO	1419	3339	2950
ELY	1384	3424	3020
[illegible]	727	1288	1082
RENO	1229	2818	2651
WINNEMUCCA	[illegible]	3012	2747
NEW HAMPSHIRE			
[illegible]	1284	3318	2800
MT WASHINGTON OBS	1677	5989	5889
NEW JERSEY			
[illegible]	691	[illegible]	1719
[illegible]	658	1564	1597
NEWARK	776	1753	1842
TRENTON	[illegible]	1825	1821
NEW MEXICO			
ALBUQUERQUE	[illegible]	1926	1751
CLAYTON	1018	2445	1980
ROSWELL	785	1674	1599
NEW YORK			
ALBANY	1113	2801	2568
BINGHAMTON	[illegible]	2962	2753
BUFFALO	1054	2650	2570
NEW YORK U	812	[illegible]	1705
NEW YORK KENNEDY	[illegible]	1623	1781
NEW YORK LA GUARDIA	813	1896	1665
ROCHESTER	982	2472	[illegible]
SYRACUSE	1053	2583	2478
NORTH CAROLINA			
ASHEVILLE	605	[illegible]	1821
CAPE HATTERAS	335	653	[illegible]
CHARLOTTE	564	1252	1259
GREENSBORO	642	1528	1516
RALEIGH	576	1327	1351
WILMINGTON	399	779	886
NORTH DAKOTA			
BISMARCK	1762	3938	3407
FARGO	1897	[illegible]	[illegible]
WILLISTON	1805	4163	3571
OHIO			
AKRON	905	2255	2282
CINCINNATI ABBE OB	878	1974	1835
CLEVELAND	937	2328	2262
COLUMBUS	[illegible]	2206	2190
DAYTON	967	2265	2135
MANSFIELD	966	2315	2160
TOLEDO	1073	2624	2469
YOUNGSTOWN	[illegible]	[illegible]	2432
OKLAHOMA			
OKLAHOMA CITY	940	1828	1443
TULSA	964	1800	1485
OREGON			
ASTORIA	810	2117	2101
[illegible]	1369	3252	2754
EUGENE	945	2157	1867
MEACHAM	1354	3585	3085
MEDFORD	1031	2206	[illegible]
PENDLETON	[illegible]	2429	2056
PORTLAND	848	1877	1834
SALEM	919	2240	[illegible]
[illegible]	1068	2735	2316
PENNSYLVANIA			
ALLENTOWN	924	2266	2181
ERIE	976	2588	[illegible]
[illegible]	[illegible]	1972	2001
PHILADELPHIA	[illegible]	1810	1936
[illegible]	853	2222	2278
[illegible]	988	2617	2451
WILLIAMSPORT	942	2439	[illegible]
RHODE ISLAND			
BLOCK ISLAND	808	1914	[illegible]
PROVIDENCE	[illegible]	2217	2167
SOUTH CAROLINA			
CHARLESTON	[illegible]	603	812
CHARLESTON U	286	535	669
COLUMBIA	423	871	1006
GRNVLLE-SPRTNBRG	519	1188	1213
SOUTH DAKOTA			
[illegible]	1688	[illegible]	3261
HURON	1530	3383	3140
RAPID CITY	1436	3405	2749
SIOUX FALLS	1555	3436	3007
TENNESSEE			
[illegible]	652	1510	1688
CHATTANOOGA	674	[illegible]	[illegible]
KNOXVILLE	622	1404	1415
MEMPHIS	766	1533	[illegible]
[illegible]	[illegible]	1393	[illegible]
OAK RIDGE R	642	1429	[illegible]
TEXAS			
ABILENE	702	1427	1051
AMARILLO	987	2157	[illegible]
[illegible]	513	934	644
BROWNSVILLE	217	361	[illegible]
CORPUS CHRISTI	[illegible]	491	[illegible]
DALLAS	642	1179	907
DEL RIO	429	733	643
EL PASO	563	1133	1146
FORT WORTH	644	1189	925
[illegible]	289	537	408
HOUSTON INTERCON	410	782	622
LUBBOCK	851	[illegible]	1449
MIDLAND	660	[illegible]	1060
PORT ARTHUR	390	787	[illegible]
[illegible]	577	[illegible]	922
[illegible]	457	820	[illegible]
[illegible]	376	654	426
WACO	638	1157	769
WICHITA FALLS	771	1543	1112
UTAH			
MILFORD	1523	3029	[illegible]
SALT LAKE CITY	1307	2525	[illegible]
[illegible]	1295	2619	[illegible]
VERMONT			
[illegible]	1310	3293	3079
VIRGINIA			
[illegible]	671	1596	1636
NORFOLK	486	1093	1242
RICHMOND	588	1403	1529
ROANOKE	628	1645	1654
WALLOPS ISLAND	588	[illegible]	
WASHINGTON			
[illegible]	[illegible]	2579	2148
QUILLAYUTE	845	2631	2340
[illegible]	825	2199	2054
SPOKANE	1219	2905	2656
[illegible]	1345	4023	3844
WALLA WALLA U	1062	2233	1921
YAKIMA	[illegible]	2677	2473
WEST VIRGINIA			
[illegible]	776	2107	2158
CHARLESTON	701	1753	1773
ELKINS	793	2161	2290
[illegible]	757	1874	[illegible]
PARKERSBURG U	755	1818	1835
WISCONSIN			
[illegible]	1469	3241	2993
LA CROSSE	1523	3222	2884
MADISON	1475	3241	2973
MILWAUKEE	1381	2979	2863
WYOMING			
CASPER	1461	3487	2849
CHEYENNE	[illegible]	3421	[illegible]
LANDER	[illegible]	3722	3103
[illegible]	1502	3503	2962

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

YEAR 1972

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
ALABAMA														
BIRMINGHAM	4	6	7	88	93	291	379	434	318	40	8	2	1670	
HUNTSVILLE	0	0	5	71	91	262	359	354	291	15	2	1	1451	
MOBILE	47	15	40	173	309	478	513	575	505	224	46	20	2945	
MONTGOMERY	11	4	13	117	196	408	476	514	417	115	17	15	2303	
ALASKA														
ANCHORAGE	0	0	0	0	0	0	5	0	0	0	0	0	5	
ANNETTE	0	0	0	0	0	0	15	0	1	0	0	0	16	
BARROW	0	0	0	0	0	0	0	0	0	0	0	0	0	
BARTER ISLAND		0	0	0	0	0	0	0	0	0	0	0	0	
BETHEL	0	0	0	0	0	0	17	1	0	0	0	0	18	
BETTLES	0	0	0		0	42	47	0	0	0	0	0		
BIG DELTA	0	0	0	0	0	22	34	1	0	0	0	0	57	
COLD BAY	0	0	0	0	0	0	0	0	0	0	0	0	0	
FAIRBANKS	0	0	0	0	0	40	55	0	0	0	0	0	95	
GULKANA	0	0	0	0	0	0	5	0	0	0	0	0	5	
HOMER	0	0	0	0	0	0	0	0	0	0	0	0	0	
JUNEAU	0	0	0	0	0	0	0	0	0	0	0	0	0	
KING SALMON	0	0	0	0	0	0	0	0	0	0	0	0	0	
KOTZEBUE	0	0	0	0	0	0	14	1	0	0	0	0	15	
MC GRATH	0	0	0	0	0	0	24	0	0	0	0	0	24	
NOME	0	0	0	0	0	0	19	7	0	0	0	0	26	
ST. PAUL ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	
SHEMYA	0	0	0	0	0	0	0	0	0	0	0	0	0	
SUMMIT	0	0	0	0	0	0	0	0	0	0	0	0	0	
TALKEETNA	0	0	0	0	0	0	19	0	0	0	0	0	19	
UNALAKLEET	0	0	0	0	0	0	29	6	0	0	0	0	35	
YAKUTAT	0	0	0	0	0	0	0	0	0	0	0	0	0	
ARIZONA														
FLAGSTAFF	0	0	0	0	0	4	76	20	0	0	0	0	100	
PHOENIX	0	11	200	212	419	691	919	780	599	259	4	0	4094	
TUCSON	0	1	82	82	236	506	678	563	414	150	1	0	2713	
WINSLOW	0	0	0	0	30	210	449	347	144	30	0	0	1210	
YUMA		21	206	230	428	683	929	784	603	226	1	0	4111	
ARKANSAS														
FORT SMITH		0	0	58	107	369	404	471	338	55	0	0	1802	
LITTLE ROCK	2	0	3	81	174	440	484	507	341	76	3	0	2111	
CALIFORNIA														
BAKERSFIELD	0	0	52	42	261	466	627	559	313	90	0	0	2410	
BISHOP	0	0	1	0	45	237	437	306	53	0	0	0	1079	
BLUE CANYON	0	0	0	0	14	60	199	178	24	0	0	0	475	
EUREKA U	0	0	0	0	0	0	0	1	0	0	0	0	1	
FRESNO	0	0	17	18	195	383	518	464	213	42	0	0	1850	
LONG BEACH	0	0	0	12	97	177	299	285	224	72	0	0	1166	
LOS ANGELES	0	0	8	3	34	68	173	251	151	65	1	4	758	
LOS ANGELES U	0	4	27	34	122	223	409	391	225	89	21	25	1570	
MT SHASTA R	0	0	0	0	5	58	140	160	15	0	0	0	378	
OAKLAND	0	0	3	0	11	15	51	37	12	18	0	0	147	
RED BLUFF	0	0	9	7	165	416	560	533	225	54	0	0	1969	
SACRAMENTO	0	0	6	5	129	245	351	349	147	30	0	0	1262	
SANDBERG R	0	0	2	0	55	147	335	215	62	0	0	0	816	
SAN DIEGO	0	0	0	4	33	68	247	230	117	53	0	1	753	
SAN FRANCISCO	0	0	1	0	7	14	49	16	8	14	0	0	109	
SAN FRANCISCO U	0	0	3	0	1	4	22	0	13	20	0	0	63	
SANTA MARIA	0	0	2	0	1	2	19	30	19	10	0	0	83	
STOCKTON	0	0	6	12	144	286	411	413	194	43	0	0	1509	
COLORADO														
ALAMOSA	0	0	0	0	0	1	36	18	0	0	0	0	55	
COLORADO SPRINGS	0	0	0	2	0	96	168	124	17	0	0	0	407	
DENVER	0	0	0	0	6	110	210	207	28	1	0	0	562	
GRAND JUNCTION	0	0	0	0	86	288	479	381	130	3	0	0	1367	
PUEBLO	0	0	0	2	34	255	316	294	109	3	0	0	1013	
CONNECTICUT														
BRIDGEPORT	0	0	0	0	8	53	298	253	116	1	0	0	729	
HARTFORD	0	0	0	3	30	83	286	203	70	1	0	0	676	
DELAWARE														
WILMINGTON	0	0	2	0	35	143	346	268	134	[illegible]	0	0	909	
DIST.OF COLUMBIA														
WASHINGTON DULLES	0	0	6	3	25	123	393	346	195	8	2	0	1186	
WASHINGTON NATIONAL	0	0	3	5	50	184	376	334	165	8	0	0	1063	
FLORIDA														
APALACHICOLA U	24	1	28	166	282	441	520	553	498	230	75	20	2838	
DAYTONA BEACH	107	16	67	193	299	447	494	477	415	317	138	98	3068	
FORT MYERS	210	97	190	278	420	504	564	570	536	419	222	165	4175	
JACKSONVILLE	54	8	24	158	255	346	486	491	400	222	73	55	2572	
KEY WEST	314	216	331	396	501	496	583	610	544	511	398	284	5184	
LAKELAND U	151	35	112	229	330	443	515	520	479	322	159	117	3412	
MIAMI	262	144	227	307	398	454	498	523	471	408	261	217	4170	
ORLANDO	181	44	146	243	391	524	570	561	509	374	179	148	3870	
PENSACOLA	43	16	35	149	287	449	521	592	524	236	62	27	2941	
TALLAHASSEE	40	6	16	146	254	395	477	533	433	181	62	40	2583	
TAMPA	131	20	90	204	365	487	528	536	497	352	168	141	3519	
WEST PALM BEACH	223	112	192	277	436	511	547	573	534	486	296	261	4448	
GEORGIA														
ATHENS	0	0	0	60	81	239	395	413	329	37	9	4	1567	
ATLANTA	0	0	3	56	72	227	370	396	297	25	7	0	1453	
AUGUSTA	3	2	2	73	126	283	461	486	325	39	10	3	1813	
COLUMBUS	6	4	21	118	181	360	458	526	397	105	14	22	2212	
MACON	2	3	13	102	151	323	455	488	374	80	18	25	2034	
ROME	0	0	1	56	78	226	390	416	304	18	9	0	1498	
SAVANNAH	28	8	14	130	214	328	505	503	379	125	38	23	2295	

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MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

YEAR 1972

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
HAWAII														
HILO	163	171	281	236	256	316	330	365	349	348	256	207	3278	
HONOLULU	178	170	249	307	386	425	484	506	470	450	357	209	4191	
KAHULUI	149	162	222	264	308	338	408	446	413	410	312	199	3631	
LIHUE	174	178	237	278	368	383	423	472	420	417	341	180	3871	
IDAHO														
BOISE	0	0	0	[illegible]	62	129	283	303	40	0	0	0	817	
LEWISTON	0	0	0	0	52	114	277	321	46	0	0	0	810	
POCATELLO	0	0	0	0	7	26	150	152	6	0	0	0	341	
ILLINOIS														
CAIRO U	0	0	1	47	174	348	417	398	280	31	8	0	1704	
CHICAGO O HARE	0	0	0	0	64	106	289	289	72	0	0	0	820	
CHICAGO MIDWAY	0	0	0	1	83	120	312	278	94	0	0	0	888	
MOLINE	0	0	0	3	102	165	312	294	138	6	0	0	1020	
PEORIA	0	0	0	0	103	140	273	253	[illegible]	3	0	0	902	
ROCKFORD	0	0	0	0	89	104	214	229	75	0	0	0	711	
SPRINGFIELD	0	0	0	6	114	199	347	291	178	10	0	0	1145	
INDIANA														
EVANSVILLE	0	0	2	21	99	214	337	285	196	2	4	0	1160	
FORT WAYNE	0	0	0	0	60	106	262	202	88	0	0	0	718	
INDIANAPOLIS	0	0	0	8	95	156	313	266	141	0	0	0	979	
SOUTH BEND	0	0	0	0	47	74	226	180	55	0	0	0	582	
IOWA														
BURLINGTON	0	0	0	2	91	158	288	265	144	7	0	0	955	
DES MOINES	0	0	0	3	77	184	289	247	109	0	0	0	909	
DUBUQUE	0	0	0	0	95	110	189	234	61	0	0	0	689	
SIOUX CITY	0	0	0	3	93	241	284	259	98	1	0	0	979	
WATERLOO	0	0	0	0	74	128	188	224	50	0	0	0	664	
KANSAS														
CONCORDIA	0	0	2	10	59	270	347	315	171	12	0	0	1186	
DODGE CITY	0	0	4	11	72	275	356	334	156	26	0	0	1234	
GOODLAND	0	0	0	1	41	183	251	224	85	4	0	0	789	
TOPEKA	0	0	5	22	74	297	308	309	169	20	0	0	1204	
WICHITA	0	0	2	26	88	358	385	421	234	34	0	0	1548	
KENTUCKY														
COVINGTON	0	0	0	7	65	96	334	268	142	0	0	0	912	
LEXINGTON	0	0	0	11	47	130	287	250	171	0	4	0	900	
LOUISVILLE	0	0	3	25	81	193	386	351	242	2	4	0	1287	
LOUISIANA														
ALEXANDRIA	21	14	32	129	205	427	442	487	453	153	12	1	2376	
BATON ROUGE	31	15	44	183	307	519	507	558	506	250	46	33	2999	
LAKE CHARLES	20	22	53	172	289	499	479	503	445	184	18	11	2695	
NEW ORLEANS	50	26	38	175	281	479	453	507	446	200	48	19	2722	
SHREVEPORT	22	10	31	128	235	480	501	553	467	167	1	0	2595	
MAINE														
CARIBOU	0	0	0	0	21	35	51	11	9	0	0	0	127	
PORTLAND	0	0	0	0	0	3	114	71	8	0	0	0	196	
MARYLAND														
BALTIMORE	0	0	5	1	29	140	379	331	166	7	0	0	1058	
MASSACHUSETTS														
BLUE HILL OBS R	0	0	0	0	9	46	190	131	38	0	0	0	414	
BOSTON	0	0	0	0	26	74	279	213	79	0	0	0	671	
WORCESTER	0	0	0	0	9	41	215	109	20	0	0	0	394	
MICHIGAN														
ALPENA	0	0	0	0	1	9	98	57	0	0	0	0	165	
DETROIT	0	0	0	0	41	83	288	190	81	1	0	0	684	
DETROIT METRO	0	0	0	0	36	73	222	160	59	0	0	0	550	
FLINT	0	0	0	0	18	50	199	130	30	0	0	0	427	
GRAND RAPIDS	0	0	0	[illegible]	37	61	200	163	42	0	0	0	503	
HOUGH ON LAKE	0	0	0	0	11	19	131	78	4	0	0	0	245	
LANSING	0	0	0	0	12	46	161	127	26	1	0	0	373	
MARQUETTE U	0	[illegible]	0	0	14	26	76	73	0	0	0	0	189	
MUSKEGON	0	0	0	0	43	41	144	149	41	1	0	0	419	
SAULT STE MARIE	0	0	0	0	12	7	36	24	0		0	0	79	
MINNESOTA														
DULUTH	0	0	[illegible]	0	8	22	24	59	0	0	0	0	113	
INTERNATIONAL FALLS	0	0	0	0	70	51	41	100	0	0	0	0	262	
MINNEAPOLIS	0	0	0	0	94	109	148	208	13	0	0	0	572	
ROCHESTER	[illegible]	0	0	0	73	112	130	178	14	0	0	0	507	
ST CLOUD	0	0	0	0	56	70	115	152	7	0	0	0	400	
MISSISSIPPI														
JACKSON	20	17	30	126	221	445	487	561	506	169	15	16	2613	
MERIDIAN	8	6	21	106	182	393	449	536	475	121	21	10	2328	
MISSOURI														
COLUMBIA REGIONAL	0	[illegible]	0	35	106	256	351	375	211	10	0	0	1344	
KANSAS CITY	0	3	7	41	146	368	386	[illegible]	219	[illegible]	0	0	[illegible]	
ST JOSEPH	0	0	0	20	97	334	344	304	193	6	[illegible]	0	1298	
ST LOUIS	0	0	5	35	129	268	394	358	219	9	0	0	1417	
SPRINGFIELD	0	0	0	53	94	288	385	366	224	16	0	0	1426	
MONTANA														
BILLINGS	0	0	0	0	12	102	139	191	[illegible]	[illegible]	0	0	453	
GLASGOW	0	0	0	0	20	80	69	205	4	0	0		378	
GREAT FALLS	0	0	0	0	19	87	108	175	5	0	0		394	
HAVRE	0	0	0	0	19	108	110	249	3	0	0		489	
HELENA	0	0	0	0	2	30	42	89	0	0	0		163	
KALISPELL	0	0	0	0	7	26	41	113	0	0	0	0	187	
MILES CITY	0	0	0	0	34	143	157	238	20	0	0		592	
MISSOULA	0	0	0	0	11	47	85	85	0	0	0	0	228	

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MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

YEAR 1972

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
NEBRASKA														
GRAND ISLAND	0	0	0	8	70	251	287	257	111	0	0	0	984	
LINCOLN U	0	0	0	12	99	304	365	333	119	2	0	0	936	
NORFOLK	0	0	0	2	72	225	269	243	90	0	0	0	901	
NORTH PLATTE	0	0	0	0	43	137	199	202	64	0	0	[illegible]	645	
OMAHA	0	0	0	3	74	249	314	280	124	1	0	0	1045	
SCOTTSBLUFF	0	0	0	0	16	121	203	207	36	0	0	0	583	
VALENTINE	0	0	0	0	56	132	202	231	63	0	0	0	684	
NEVADA														
ELKO	0	0	0	0	3	38	102	96	3	0	0	0	242	
ELY	0	0	0	0	0	16	117	58	0	0	0	0	191	
LAS VEGAS	0	2	66	80	308	597	876	675	398	69	0	[illegible]	3071	
RENO	0	0	0	0	12	65	191	113	4	0	0	0	385	
WINNEMUCCA	0	0	0	0	40	136	287	250	17	1	0	0	731	
NEW HAMPSHIRE														
CONCORD	0	0	0	0	17	52	167	60	5	0	0	0	301	
MT WASHINGTON OBS	0	0	0	0	0	0	0	0	0	0	0	[illegible]	[illegible]	
NEW JERSEY														
ATLANTIC CITY	0	0	0	0	11	83	341	282	132	4	0	0	853	
ATLANTIC CITY U	0	0	0	0	0	39	258	224	103	2	0	0	626	
NEWARK	0	0	3	4	41	142	406	347	175	3	0	0	1121	
TRENTON U	0	0	3	1	31	115	362	313	139	1	0	0	965	
NEW MEXICO														
ALBUQUERQUE	0	0	0	5	52	267	428	294	113	23	0	0	1182	
CLAYTON	0	0	0	13	19	160	208	169	71	15	[illegible]	0	655	
ROSWELL	0	0	7	68	133	382	438	350	197	42	[illegible]	0	1616	
NEW YORK														
ALBANY	0	0	0	0	12	58	208	112	31	0	0	0	421	
BINGHAMTON	0	0	0	0	19	36	228	90	27	0	0	0	400	
BUFFALO	0	0	0	0	12	48	210	123	57	0	0	0	450	
NEW YORK U	0	0	0	5	47	118	384	338	169	3	0	0	1064	
NEW YORK KENNEDY	0	0	0	0	11	107	378	309	159	4	0	0	968	
NEW YORK LA GUARDIA	0	0	0	2	8	77	311	274	129	0	0	0	801	
ROCHESTER	0	0	0	0	24	94	261	179	79	0	0	0	637	
SYRACUSE	0	0	0	0	9	78	262	160	61	0	0	0	570	
NORTH CAROLINA														
ASHEVILLE	0	0	0	24	6	84	236	237	134	0	1	0	722	
CAPE HATTERAS R	7	0	2	12	74	218	406	422	271	63	17	[illegible]	1500	
CHARLOTTE	0	0	0	40	43	208	377	385	241	17	10	0	1321	
GREENSBORO	0	0	3	23	21	147	352	328	188	2	7	0	1071	
RALEIGH	0	0	5	37	36	170	382	336	177	6	6	2	1157	
WILMINGTON	5	0	2	64	101	241	477	453	298	66	19	2	1728	
NORTH DAKOTA														
BISMARCK	0	0	0	0	37	76	98	227	24	0	0	0	462	
FARGO	0	0	0	0	74	125	135	217	23	0	0	0	574	
WILLISTON	0	0	0	0	28	80	52	167	15	0	0	0	342	
OHIO														
AKRON	0	0	0	0	13	63	223	169	77	0	0	0	545	
CINCINNATI ABBE OB	0	0	1	12	83	129	330	296	145	0	0	0	996	
CLEVELAND	0	0	0	1	5	63	239	157	64	0	0	0	529	
COLUMBUS	0	0	0	1	24	67	245	183	71	0	0	0	591	
DAYTON	0	0	0	4	42	130	324	237	94	0	0	0	831	
MANSFIELD	0	0	0	0	35	109	279	198	102	0	0	0	723	
TOLEDO	0	0	0	0	22	67	236	148	55	[illegible]	0	0	528	
YOUNGSTOWN	0	0	0	0	8	38	184	125	39	0	0	0	394	
OKLAHOMA														
OKLAHOMA CITY	0	2	11	97	133	429	470	483	351	109	0	[illegible]	2085	
TULSA	0	6	11	99	144	446	487	524	339	64	0	0	2120	
OREGON														
ASTORIA	0	0	0	0	0	1	19	23	16	0	0	0	59	
BURNS U	0	0	0	0	14	38	124	141	16	0	0	0	333	
EUGENE	0	0	0	0	11	6	156	159	26	0	[illegible]	0	358	
MEACHAM	0	0	0	0	7	9	71	116	4	0	0	0	207	
MEDFORD	0	0	0	0	27	70	315	265	58	0	0	0	735	
PENDLETON	0	0	0	0	50	134	314	358	55	0	0	0	911	
PORTLAND	0	0	0	0	27	39	200	221	44	0	0	0	531	
SALEM	0	0	0	0	10	6	122	148	21	[illegible]	0	0	307	
SEXTON SUMMIT R	0	0	0	0	13	16	143	155	49	0	0	0	376	
PACIFIC AREA														
GUAM TAGUAC R	370	343	387	390	440	437	449	436	438	448	440	419	4997	
JOHNSTON	366	334	403	408	420	447	469		492	484	436	361		
KOROR R	499	456	502	512	553	509	539	523	510	551	528	530	6212	
KWAJALEIN	497	477	545	496	548	515	536	549	518	530	528	513	6252	
MAJURO	480	466	498	483	509	504	502	508	499	500	506	498	5953	
PAGO PAGO	446	433	503	490	468	461	421	456	436	480	480	551	5625	
PONAPE R	492	465	499	458	472	488	461	469	455	477	493	521	5750	
TRUK MOEN ISLAND	500	456	506	487	521	499	492	493	496	521	519	518	6008	
WAKE	302	279	335	323	463	513	545	571	545	535	477	391	5279	
YAP R	478	449	483	491	503	503	561	505	490	509	488	496	5956	
PENNSYLVANIA														
ALLENTOWN	0	0	0	0	18	106	318	208	69	0	0	0	719	
ERIE	0	0	0	0	2	32	165	88	35	0	0	0	322	
HARRISBURG	0	0	0	0	33	133	357	287	137	3	0	0	950	
PHILADELPHIA	0	0	3	0	47	143	381	344	153	3	0	0	1074	
PITTSBURGH	0	0	0	0	34	68	219	192	76	0	0	[illegible]	589	
SCRANTON	0	0	0	0	20	53	232	167	42	0	0	[illegible]	514	
WILLIAMSPORT	0	0	0	0	25	67	236	183	40	0	[illegible]	0	551	
RHODE ISLAND														
BLOCK ISLAND	0	0	0	0	0	8	208	174	38	0	0	[illegible]	428	
PROVIDENCE	0	0	0	1	7	60	248	190	76	1	0	0	583	

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SOUTH CAROLINA														
CHARLESTON	7	3	5	93	163	275	475	488	[illegible]	110	[illegible]	[illegible]	[illegible]	
CHARLESTON U	6	1	6	95	173	[illegible]	[illegible]	498	[illegible]	133	42	[illegible]	[illegible]	
COLUMBIA	1	0	5	86	126	274	[illegible]	445	[illegible]	35	14	4	1753	
GRNVLLE SPRTNBRG	0	0	0	48	49	197	[illegible]	356	[illegible]	15	9	[illegible]	[illegible]	
SOUTH DAKOTA														
ABERDEEN	0	0	[illegible]	[illegible]	73	112	166	245	43	[illegible]	[illegible]	[illegible]	639	
HURON	0	0	0	0	62	94	181	[illegible]	46	[illegible]	[illegible]	[illegible]	[illegible]	
RAPID CITY	0	0	0	0	21	70	98	178	[illegible]	0	[illegible]	[illegible]	401	
SIOUX FALLS	0	0	0	0	60	[illegible]	197	219	[illegible]	0	[illegible]	[illegible]	619	
TENNESSEE														
BRISTOL	0	0	0	11	22	113	[illegible]	274	[illegible]	3	[illegible]	0	[illegible]	
CHATTANOOGA	0	0	0	51	35	[illegible]	[illegible]	316	[illegible]	8	[illegible]	0	1118	
KNOXVILLE	0	0	0	53	51	193	332	347	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MEMPHIS	0	0	3	95	179	[illegible]	449	464	346	[illegible]	6	0	1991	
NASHVILLE	0	0	1	62	117	250	[illegible]	387	341	[illegible]	[illegible]	0	1573	
OAK RIDGE R	0	0	0	41	40	168	322	[illegible]	[illegible]	5	[illegible]	[illegible]	1137	
TEXAS														
ABILENE	0	12	41	188	[illegible]	474	497	436	330	128	1	[illegible]	[illegible]	
AMARILLO	0	0	4	44	59	[illegible]	[illegible]	285	182	[illegible]	0	[illegible]	1212	
AUSTIN	6	34	111	269	272	510	547	571	[illegible]	239	16	[illegible]	3107	
BROWNSVILLE	148	91	246	382	398	475	512	542	517	[illegible]	95	53	[illegible]	
CORPUS CHRISTI	93	61	187	360	380	520	594	[illegible]	561	368	68	28	3808	
DALLAS	6	15	62	182	329	518	561	661	518	[illegible]	[illegible]	[illegible]	[illegible]	
DEL RIO	3	37	161	317	315	521	[illegible]	496	473	241	18	1	3149	
EL PASO	0	4	15	70	159	404	[illegible]	[illegible]	247	120	0	[illegible]	1963	
FORT WORTH	2	14	57	185	249	498	[illegible]	618	[illegible]	[illegible]	[illegible]	[illegible]	2859	
GALVESTON U	30	20	91	234	369	510	540	597	[illegible]	194	[illegible]	[illegible]	[illegible]	
HOUSTON INTERCON	58	20	71	208	275	480	[illegible]	482	447	[illegible]	[illegible]	12	2756	
LUBBOCK	0	0	14	120	119	362	366	297	211	[illegible]	[illegible]	[illegible]	[illegible]	
MIDLAND	0	0	31	187	183	423	446	338	249	[illegible]	[illegible]	[illegible]	1945	
PORT ARTHUR	21	18	52	164	262	461	449	479	[illegible]	209	[illegible]	[illegible]	2581	
SAN ANGELO	0	20	65	232	191	488	574	468	[illegible]	140	[illegible]	[illegible]	2593	
SAN ANTONIO	11	31	105	276	252	465	[illegible]	[illegible]	515	249	12	6	[illegible]	
VICTORIA	58	28	134	299	[illegible]	519	562	582	541	285	37	13	[illegible]	
WACO	3	24	72	203	266	539	541	608	[illegible]	178	6	[illegible]	2939	
WICHITA FALLS	0	4	26	145	174	517	[illegible]	[illegible]	377	[illegible]	2	[illegible]	2507	
UTAH														
MILFORD	0	0	0	0	15	103	338	185	18	0	[illegible]	0	[illegible]	
SALT LAKE CITY	0	0	0	0	34	213	386	340	[illegible]	0	0	[illegible]	[illegible]	
WENDOVER	0	0	0	0	49	236	442	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1149	
VERMONT														
BURLINGTON	0	0	0	0	14	64	169	81	[illegible]	[illegible]	[illegible]	0	358	
VIRGINIA														
LYNCHBURG	0	0	0	25	20	126	324	290	159	[illegible]	[illegible]	[illegible]	949	
NORFOLK	0	0	8	20	40	183	[illegible]	[illegible]	217	[illegible]	[illegible]	2	1243	
RICHMOND	0	0	7	30	52	180	381	326	178	[illegible]	[illegible]	[illegible]	1171	
ROANOKE	0	0	0	26	13	118	305	262	118	0	2	[illegible]	844	
WALLOPS ISLAND	0	0	0	2	7	101	319	334	193	15	[illegible]	[illegible]	[illegible]	
WASHINGTON														
OLYMPIA	0	0	0	0	8	[illegible]	25	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	
QUILLAYUTE	0	0	0	0	11	[illegible]	31	21	11	[illegible]	[illegible]	0	74	
SEATTLE TACOMA	0	0	0	0	22	3	85	91	11	0	[illegible]	[illegible]	[illegible]	
SPOKANE	0	0	0	0	28	41	138	213	10	0	[illegible]	[illegible]	430	
STAMPEDE PASS R	0	0	0	0	0	0	9	47	[illegible]	0	[illegible]	[illegible]	59	
WALLA WALLA U	0	0	0	0	65	144	305	[illegible]	55	1	0	[illegible]	914	
YAKIMA	0	0	0	0	42	80	187	221	19	0	0	0	[illegible]	
WEST INDIES														
SAN JUAN P.R.	400	376	431	458	525	569	[illegible]	578	543	554	490	446	5962	
WEST VIRGINIA														
BECKLEY	0	0	0	2	4	34	165	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	
CHARLESTON	0	0	0	24	56	[illegible]	283	[illegible]	132	[illegible]	[illegible]	0	[illegible]	
ELKINS	0	0	0	0	3	36	131	111	36	[illegible]	[illegible]	[illegible]	317	
HUNTINGTON	0	0	1	16	30	[illegible]	308	234	147	[illegible]	3	[illegible]	[illegible]	
PARKERSBURG U	0	0	2	8	61	115	308	261	132	[illegible]	3	0	[illegible]	
WISCONSIN														
GREEN BAY	0	0	0	0	52	75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	495	
LA CROSSE	0	0	0	0	113	112	191	230	[illegible]	[illegible]	[illegible]	[illegible]	685	
MADISON	0	0	0	0	41	61	156	[illegible]	27	[illegible]	[illegible]	[illegible]	[illegible]	
MILWAUKEE	0	0	0	0	3	42	180	166	26	[illegible]	[illegible]	[illegible]	417	
WYOMING														
CASPER	0	0	0	0	0	54	[illegible]	142	7	[illegible]	[illegible]	[illegible]	304	
CHEYENNE	0	0	0	0	0	11	69	69	2	[illegible]	[illegible]	[illegible]	151	
LANDER	0	0	0	0	1	43	123	127	3	[illegible]	[illegible]	[illegible]	297	
SHERIDAN	0	0	0	0	9	55	74	[illegible]	11	[illegible]	[illegible]	[illegible]	294	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural sites.

Note: "Cooling Degree Days" has been discontinued in the December issues of this publication. Data which would usually be shown in that table for December are shown in the last two columns of the above Table.

STORM SUMMARY

DECEMBER 1972

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	1	1		3	3																								
Alaska											1	4																	
Arizona*																													
Arkansas*																													
California												5																	8
Colorado																		2								2			
Connecticut																				5				5					
Delaware*																													
Florida	2	2			4																								
Georgia																												5	4
Hawaii																										1			
Idaho												3								3				3			2	6	5
Illinois																								°6	C			°5	C
Indiana												3	4							4			10	4	5				
Iowa																				5	5								
Kansas								3				5				4								4					
Kentucky																										6	?	?	?
Louisiana																								?				5	6
Maine												4								5				5					
Maryland												4																3	
Massachusetts												3								4				5					
Michigan																								4	?				
Minnesota*																													
Mississippi	1	1			3																			?	?			5	8
Missouri	2	1		2	4							4											?	6	5				
Montana												4														1			
Nebraska												?	?			?		2	?	?	?			?	?			?	
Nevada																				5									
New Hampshire												5								5				5					
New Jersey												4																4	
New Mexico											4	5	C																
New York												5																	
North Carolina												4				4												4	
North Dakota																				?									
Ohio																			?	5	4								
Oklahoma	2	1			5			6				5								?	?							4	
Oregon												4								?	?			?	?	2		6	
Pacific Area																												?	?
Pennsylvania												5								3									
Puerto Rico & V I*																													
Rhode Island																				4				5					
South Carolina																												4	4
South Dakota*																													
Tennessee																												5	6
Texas												5												5	6				
Utah																				5									
Vermont												4								5				5					
Virginia*																													
Washington										2		6												2				7	C
West Virginia*																													
Wisconsin																								5					
Wyoming*																													

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

Category	Damage
1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5 Million
7	$5 Million to $50 Million
8	$50 Million to $500 Million
9	$500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

DECEMBER 1972

Elmer R. Nelson, Office of Hydrology

The most damaging flooding during December occurred in the Ohio Basin. Crests along the main stem of the Ohio River ranged up to 15 feet above flood stage at Shawneetown, Ill. Although flood damage was high, it was less than might have been expected, as many crops had already been destroyed or damaged by the heavy rainfall during the harvest season.

Severe flash flooding occurred in Knoxville, Tenn. It was the worst in the last 10 years. Damages were estimated at near $1 million.

Severe ice conditions in the Snake River necessitated the evacuation of about 125 families. At Weiser, Idaho, the crest was over 3.5 feet above flood stage. A state of emergency was declared in Malheur County of Oregon and the counties of Washington, Payette, and Bingham in Idaho.

Only flood events resulting in loss of life and/or flood damage during the month are summarized. They are listed by drainage basins below:

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	ST. LAWRENCE DRAINAGE		
	Lake Michigan		
Dec. 31-3	One to 2 feet of overflow occurred on the Red Cedar River in Michigan. Flood damage was confined to rural and low lying land areas.	0	Minor
	Lake Huron		
Dec. 30-4	Stream overflow was due to the melting of a 4- to 6-inch snow cover, plus heavy rains in excess of 1 inch, on Dec. 29-31. Some damage resulted to farmfields and crops. Rural and low lying roads were flooded with some damage. Numerous basements of homes and buildings in both city and rural areas were flooded.	0	Minor
	Lake Erie		
6-8	Minor flooding was due to rains and rapid melting of snow cover. Flooded streets and basements were reported in the Buffalo, N. Y., metropolitan area. Scattered road areas were temporarily under water.	0	Minor
	Lake Ontario		
6	Frequent periods of rain, plus snowmelt, caused nearly 3.5 feet of flooding on Canaseraga Creek at Groveland, N.Y.	0	Minor

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	ATLANTIC SLOPE DRAINAGE		
7	Two to 3 feet of overflow occurred on the Chemung River at Elmira and Chemung, N. Y. Damage was confined to low lying areas.	0	Minor
15-Jan. 4	Moderate flooding occurred on some streams in eastern North Carolina due to heavy rain on the 13th-15th. Some flash flooding occurred in local areas. Damage was due mostly to flash flooding.	0	Minor
15-Jan. 3	Moderage flooding occurred on the Pee Dee, Rocky, and Lumber Rivers in the Carolinas. The heaviest flooding occurred on the Rocky River at Norwood, N.C., where flood stage was exceeded by 15 feet. Most of the losses were to unharvested soybeans andto small grain.	0	$47
15-18	The Broad River, a tributary of the Savannah River, rose rapidly to a crest of nearly 8 feet above flood stage at Carlton, Ga., on the 15th. The Ocmulgee River at Macon, Ga., crested nearly 2.5 feet above flood stage on the 17th.	0	Minor
21	Some flash flooding was reported on small streams in west-central Georgia.	0	Minor
27-Jan. 27	The Savannah River in Georgia rose slowly in its lower reaches to 1 to 3.5 feet above flood stage by Jan. 1-7.	0	Minor
	EAST GULF OF MEXICO DRAINAGE		
26-27	Heavy rains on the 21st-22d caused light overflow on streams that flow into Escambia Bay, East Bay, and Choctawhatchee Bay. The Choctawhatchee River at Carryville, Fla., exceeded flood stage by 0.3 feet on the 26th-27th.	0	175
16	The Etowah River at Canton, Ga., crested nearly 2 feet above flood stage. Nearly $27,000 damage was reported to Agriculture.	0	32

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	EAST GULF OF MEXICO DRAINAGE (Continued)		
22-25	Very heavy rain over southern Alabama on the 21st and 22d caused nearly 1 foot overflow on the lower Tombigbee River.	0	$279
15-1/	Locally heavy rains during the first half of the month caused the Pearl River to rise over 11 feet above flood stage at Jackson, Miss., on the 22d. Crests at other points ranged from 2 to 5 feet above flood stage. Lowland flooding was confined to farm and timber lands adjacent to the river. Locally heavy rains produced some local flash flooding, especially in areas of poor drainage.	0	346
	MISSISSIPPI SYSTEM		
	Upper Mississippi Basin		
30-31	The flooding on the Root River at Hokah, Minn., and on the upper Iowa River at Dorchester, Iowa, was due mostly to ice jams. Rainfall ranging from 0.75 inch to 1 inch fell over the basins during the last 3 days of the month.	0	Minor
30-31	The flooding on the Maquoketa and Wapsipinicon Rivers in Iowa and the Wapsipinicon and Rock Rivers in Illinois was due to a combination of snowmelt runoff, rainfall, and ice action. The heavy snowfall (exceeded 6 inches) on the 11th-12th provided the runoff caused by the late month warming trend.	0	Minor
31-1/	The flooding on the Illinois River during the latter part of December and the first part of January was due to heavy rains (around 1 inch) on the 29th-31st falling on frozen ground.	0	Minor
	Missouri Basin		
30-31	Heavy rains (1 to 2 inches) over northeast Kansas caused substantial flooding in the upper reaches of Soldier Creek and minor overflows in headwater areas	0	168

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	MISSISSIPPI SYSTEM		
	Missouri Basin-Cont.		
	of the Delaware River and Stranger Creek and lower Soldier Creek. The heavy rain was followed by 1 to 3 inches of new snow. Eight to 10 inches of new snow occurred over a small area on the headwaters of the Big Blue River.		
16-29	The flooding on the lower Missouri River was due to ice action. Damage was held to a minimum at Rulo, Nebr., as the water did not top the agriculture levee. Several homes in St. Joseph, Mo., were flooded.	0	Minor
	Ohio Basin		
9-11	Heavy precipitation (2.75 inches) on the 9th-10th caused moderate overflow in the Little Kanawha River Basin in northwestern West Virginia. The Corps of Engineers estimated $50,000 damage along the main stem of the Little Kanawha. The damage at Reedy on Reedy Creek was estimated at $75,000. In Jackson County damages were estimated at $213,500 and in Roane County, $90,000.	0	$429
7-11	Flood stages in the Scioto Basin in Ohio were generally not exceeded by more than 2 feet, except at Piketon where flood stage was exceeded by nearly 5 feet.	0	27
9-12	Moderate to heavy rains on the 7th-8th caused flooding on tributaries in the Salt River Basin in Kentucky. Flood stage on Brashears Creek at Taylorsville, Ky., was exceeded by over 7 feet.	0	N.A.
9-26	General rain, beginning on the 4th and continuing almost daily through the 16th, caused 4.5 to 6.5 feet of overflow along the Green River in Ohio. The precipitation total for the 13 days averaged nearly 3.5 inches. A good percentage of crops were still in the fields.	0	946

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	MISSISSIPPI SYSTEM		
	Ohio Basin-Continued		
29-Jan. 9	Excessive rains over east-central Illinois and extreme west-central Indiana on saturated and frozen ground caused moderate flooding along the Wabash River in the reach from Lafayette to Terre Haute, Ind. Crests occurred early in January. Lowland agricultural and recreational areas and some secondary roads were flooded.	0	$1,000
9-14	Moderate to heavy rains caused flooding along the Cumberland River above Lake Cumberland in Kentucky. Flooding at Barbourville was the most severe where the crest was almost 11 feet above flood stage and 5 feet below the record flood of 42.8 feet of 1946. Flood stage along the Red and Harpeth Rivers in middle Tennessee was exceeded by 4.5 to 7 feet.	0	116
10	Locally heavy rains in eastern Tennessee produced flash flooding in Knox and Blount Counties. It was the worst flash flooding at Knoxville, Tenn., in the past 10 years.		
11-Jan. 1	Flooding occurred along the main stem of the Ohio River at and below Ashland, Ky. Crests on the 11th-24th ranged up to 15 feet above flood stage at Shawneetown, Ill. The crest of 46.98 feet at Cairo, Ill., was the highest December stage ever recorded. Uninterrupted records go back to 1872, with scattered reports as early as 1859. Due to the unusually wet autumn, many crops remained in the field and heavy damage resulted. Some residents along the Ohio River were forced to abandon their homes.	3	6,600
	White Basin		
Oct. 29-1/	The Cache River at Patterson, Ark., continued above flood stage from Oct. 29 through December into January. There were two periods of flooding on the Black River at Black Rock, Ark., and	0	Minor

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	MISSISSIPPI SYSTEM		
	White Basin-Cont.		
	on the White River at St. Charles, Ark. Damage estimates collected for the October through November floods assumed a complete loss of crops, so the December flooding produced little additional loss.		
12-31	Locally heavy rain during the first half of the month caused flooding of farm and timber lands along some streams in the White Basin. Farming and logging operations along the Big Black River were at a standstill during the latter half of the month. Locally heavy rains produced some local flash flooding in Mississippi, especially in areas of poor drainage such as underpasses, etc.	0	N.A.
	Red Basin		
13-24	Minor flooding occurred along bottomland of the Sulphur River in Texas. Minor damage occurred to pastures.	0	Minor
	Lower Mississippi Basin		
16- Jan 11	Nearly 3 feet of overflow along the Mississippi River at Caruthersville, Mo., caused heavy crop damage.	0	1,378
	WEST GULF OF MEXICO DRAINAGE		
7-10	Slight to moderate flooding occurred on the upper Calcasieu River in Louisiana. The crest at Hineston, La., on the 18th was 3.6 feet above flood stage.	0	N.A.
	GULF OF CALIFORNIA DRAINAGE		
	Colorado Basin		
27-29	Flash flooding occurred in Sabino Canyon near Tucson, Ariz. The rain and melting snow on Mt. Lemmon at the head of the canyon contributed the greatest amount to this local flooding. Forty-four people were trapped in the upper sections but were rescued. One late model car was washed off a bridge and seriously damaged.	0	Minor

DECEMBER 1972

Date (December)	Flood Event	Lives Lost	Preliminary estimate of property damage (thousands of dollars)
	PACIFIC SLOPE DRAINAGE		
	Columbia Basin		
	December was one of the coldest months on record. The prolonged cold spell during the first half of December set many record lows and caused streams to become frozen. The arctic outbreak was followed by rapid warming weather beginning in most areas on the 17th. This warm up brought rain and increased streamflow.		
12-31	The flooding on the Portneuf, Salmon, and Snake Rivers in Idaho was due to ice plugging the river channel, causing water to rise above the stream banks. On the Snake River, some 75 families on the Oregon side had to leave their homes and nearly 50 families on the Idaho side. Due to the severity of conditions, the Governor of Idaho and the Governor of Oregon on Dec. 16 declared a state of emergency in Malheur County of Oregon, and Washington, Payette, and Bingham Counties in Idaho.	0	$183
21-31	Heavy precipitation on the 17th-24th caused flooding on the lower Willamette tributaries and Oregon Coastal Basins. Precipitation totals were generally 12 inches at Oregon coastal locations, except about 20 inches in the north, 6 inches in the Willamette Valley, and near 10 inches in the Oregon Cascades. The heaviest precipitation on the 20th - 21st resulted in the highest peak stages on the flashier streams.	0	582
	North Coastal Basins		
21-28	The flooding on streams in western Washington during the latter part of December was due to a prolonged period of warm rain. Precipitation was nearly continuous from the 15th to the 27th. Temperatures were near or above 50° much of the time. Snowmelt in the Olympic and	0	450

Date (December)	Flood Event	Preliminary estimate of property damage (thousands of dollars)

PACIFIC SLOPE DRAINAGE
(Continued)

North Coastal Basins
(Continued)

Cascade Mountains added slightly to the runoff from the excessive rain. Flooding from coastal rivers draining the northern Olympic Mountains closed part of the state highways and county roads. Several people were evacuated from the coastal village of La Push because of flooding from the Quillayute River. A combination of high tide, heavy rain, and swollen creeks and rivers in the Grays Harbor and northern Willapa Bay areas caused flooding in parts of the coastal towns of Aberdeen, Cosmopolis, and Raymond.

1/ Flooding continued at the end of the month

FLOOD STAGE DATA

(All dates in December unless otherwise specified)

DECEMBER 1972

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
ST. LAWRENCE DRAINAGE					
Lake Michigan					
Red Cedar:					
Williamston, Mich.	7	31	Jan 3	8.9	31
East Lansing, Mich.	7	31	Jan 3	8.1	31
Lake Huron					
Shiawassee:					
Owosso, Mich.	7	30	Jan 4	8.3	31
Flint:					
Flint, Mich.	11	31	Jan 1	13.0	31
Lake Erie					
St. Marys:					
Decatur, Ind.	15	6	8	16.4	7
St. Joseph:					
Montpelier, Ohio	10	31	Jan 7	11.5	Jan 2
Lake Ontario					
Canaseraga Creek:					
Groveland, N. Y.	11	6	6	14.3	6
Oatka Creek:					
Garbutt, N. Y.	5	8	8	5.1	8
ATLANTIC SLOPE DRAINAGE					
Chenango:					
Sherburne, N. Y.	8	6	6	8.75	6
Chemung:					
Elmira, N. Y.	10	7	7	12.0	7
Chemung, N. Y.	12	7	7	15.5	7
Susquehanna:					
Bainbridge, N. Y.	13	7	8	14.2	7
Conklin, N. Y.	11	7	9	11.5	8
Roanoke:					
Randolph, Va.	21	22	23	22.6	23
Williamston, N. C.	10	1	1	11.3	22
Fishing Creek:					
Enfield, N. C.	14	17	19	14.8	19
Tar:					
Louisburg, N. C.	20	16	17	20.5	17
Rocky Mount, N. C.	9	17	20	10.2	20
Tarboro, N. C.	19	20	23	20.6	22
Greenville, N. C.	13	22	25	14.3	24
Neuse:					
Neuse, N. C.	14	15 23	21 25	18.9 15.3	18 25
Smithfield, N. C.	13	15	28	20.3	18
Goldsboro, N. C.	14	19	Jan 2	20.2	24-25
Kinston, N. C.	14	23	Jan 4	17.4	28-29
Cape Fear:					
Moncure, N. C.	20	15	17	20.7	16
Fayetteville, N. C.	35	16	19	40.1	17
Lock No. 3, William O. Huske L & D, N. C.	42	15	27	55.3	19
Lock No. 2, Elizabethtown, N.C.	20	16	28	30.4	19
Rocky:					
Norwood, N. C.	15	15	16	30.0	15
Lumber:					
Lumberton, N. C.	9	Nov 24 17	12 1	10.0 12.3	Nov 27 23
Pee Dee:					
Cheraw, S. C.	30	15	18	37.2	16
ATLANTIC SLOPE DRAINAGE (Continued)					
Pee Dee: (Continued)					
Pee Dee, S. C.	19	17	Jan 3	22.8	27
Reedy:					
Greenville, S. C.	9	15	[illegible]	10.1	15
Saluda:					
West Pelzer, S. C.	9	15	16	10.0	15
Chappells, S. C.	14	23	23	14.4	23
Broad:					
Gaffney (nr), S. C.	10	15	16	10.9	15
Blair, S. C.	14	15 22	19 24	23.9 18.1	17 23
Congaree:					
Columbia, S. C.	19	17	17	19.1	17
Wateree:					
Lake Wateree, S. C.	100	16	20	101.8	[illegible]
Broad:					
Carlton, Ga.	15	15	16	22.8	15
Savannah:					
Plantation, Ga.	15	27	Jan 10	15.9	Jan 1
Clyo, Ga.	11	27	Jan 27	14.4	Jan [illegible]
Ocmulgee:					
Macon, Ga.	18	17	18	20.3	17
EAST GULF OF MEXICO DRAINAGE					
Choctawhatchee:					
Caryville, Fla.	12	26	27	# 12.3	26
Etowah:					
Canton, Ga.	17	16	16	# 18.8	16
Black Warrior:					
Bankhead L & D, Ala.	14	15	16	# 14.3	15
Tombigbee:					
Amory, Miss.	20	11	17	22.7	16
Coffeeville L & D, Ala.	43	22	25	# 43.9	23-24
Yockanooky:					
Ofahoma, Miss.	14	16	23	16.2	16
Pearl:					
Carthage, Miss.	17	20	26	19.0	22
Jackson, Miss.	18	15	Jan 21	29.2 30.4	22 Jan 12
Monticello, Miss.	19	21	Jan 21	24.1 21.7	23 Jan 11
Columbia, Miss.	17	22	28	18.7	24
Bogalusa, La.	15	8 18	10 1	16.6 19.7	8 26
Pearl River, La.	12	23	Jan 29	15.1	26
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Root:					
Hokah, Minn.	47	31	31	47.8	31
Upper Iowa:					
Dorchester, Iowa	14	30	30	14.7	30
Maquoketa:					
Maquoketa, Iowa	13	31	31	18.0	31
Wapsipinicon:					
DeWitt, Iowa	10	31	31	10.9	31
Pacatonica:					
Martintown, Wisc.	11	30	Jan 8	15.3	Jan 4
Freeport, Ill.	12	31	Jan 7	14.2	Jan 1
Shirland, Ill.	12	Jan 1	Jan 9	14.2	Jan 4

FLOOD STAGE DATA

(All dates in December unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM-Continued					
Upper Mississippi Basin-Cont.					
Green:					
Genesco, Ill.	8	31	Jan 1	11.3	Dec 30
Rock:					
Joslin, Ill.	12	31	Jan 9	14.85	Jan 2
Moline, Ill.	12	Jan 1	Jan 13	13.2	Jan 6-7
Black Hawk Creek:					
Hudson, Iowa	12	30	Jan 9	14.8	31
Iowa:					
Marshalltown, Iowa	13	30	Jan 5	17.1	31
Skunk:					
Ames, Iowa	10	30	31	10.8	30
North:					
Norwalk, Iowa	18	30	30	U	
Middle:					
Indianaola (nr), Iowa	19	30	30	20.5	30
South:					
Ackworth, Iowa	19	29	30	26.4	30
Illinois:					
Morris, Ill.	13	31	Jan 6	20.3	Jan 1
LaSalle, Ill.	20	31	Jan 14	27.0	Jan 1
Havana, Ill.	14	Nov 15	7	16.5	Nov 25
		31	1/	18.0	Jan 10
Beardstown, Ill.	14	31	1/	19.4	Jan 8
Mississippi:					
Keithsburg, Ill.	12	31	Jan 7	13.8	Jan 2
Missouri Basin					
Floyd:					
Alton, Iowa	12	30	31	12.2 12.5	30 31
Nishnabotna:					
Hamburg, Iowa	18	30	31	24.8	30
Black Vermillion:					
Frankfort, Kans.	19	30	31	20.1	30
Soldier Creek:					
Delia 4 SE, Kans.	17	30	31	21.4	31
Topeka 4 NW, Kans.	12	30	31	13.35	31
Delaware:					
Muscotah, Kans.	25	30	30	27.4	30
Stranger Creek:					
Easton, Kans.	15	30	30	17.1	30
Grand:					
Chillicothe, Mo.	24	30	Jan 1	26.6	31
Sumner, Mo.	26	30	Jan 3	30.9	31
Missouri:					
Rulo, Nebr.	17	16	29	20.95	26
St. Joseph, Mo.	17	29	30	22.4	29
Ohio Basin					
Allegheny:					
Olean, N. Y.	10	7	9	11.4	7
Tygart:					
Belington, W. Va.	14	9	10	15.2	9
Philippi, W. Va.	17	9	10	19.0	9
West Fork:					
Weston, W. Va.	17	9	9	18.0	9
Clarksburg, W. Va.	7	8	10	11.1	9

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM-Continued					
Ohio Basin - Continued					
Monongahela:					
Lock 7, Greensboro, Pa.	21	9	9	21.6	9
Lock 4, Charleroi, Pa.	26	9	10	31.4	9
Lock 3, Elizabeth, Pa.	20	9	10	23.3	9
Lock 2, Braddock, Pa.	19	9	10	20.9	9
Little Kanawha:					
Glenville, W. Va.	23	9	10	28.3	9
Creston, W. Va.	20	9	11	U	U
Tug Fork:					
Williamson, W. Va.	27	10	11	27.8	11
Paint Creek:					
Bourneville, Ohio	10	9	9	11.95	9
Scioto:					
LaRue, Ohio	11	7	77	11.05	7
Piketon, Ohio	16	9	11	20.9	10
Brashears Creek:					
Taylorsville, Ky.	20	9	9	27.1	9
Rolling Fork:					
Boston, Ky.	40	10	12	42.8	12
Green:					
Lock 2, Calhoun, Ky.	23	10	26	28.0	16
Lock 4, Woodbury, Ky.	33	9	14	39.4	11
Lock 6, Brownsville, Ky.	18	9	12	22.6	11
Mumfordville, Ky.	28	9	11	32.8	10
Vermillion:					
Danville, Ill.	18	30	Jan 1	19.5	Jan 1
Embarrass:					
Lawrenceville, Ill.	11	14	15	11.75	14
		31	Jan 10	16.9	Jan 6
White:					
Elliston, Ind.	18	14	16	18.7	15
Edwardsport, Ind.	15	10	12	15.6	11
		14	17	16.2	16
Petersburg, Ind.	16	11	19	17.8	16
Little Wabash:					
Wilcox, Ill.	16	13	16	17.75	14
		31	Jan 8	21.1	Jan 4
Wabash:					
Lafayette, Ind.	11	20	20	11.4	20
		29	Jan 6	18.4	Jan 1
Covington, Ind.	16	14	16	17.4	15
		30	Jan 7	22.5	Jan 2
Montezuma, Ind.	14	12	17	18.2	14
		29	Jan 9	23.7	Jan 2
Terre Haute, Ind.	14	13	17	16.1	16
		30	Jan 9	20.0	Jan 4
Harpeth:					
Kingston Springs, Tenn.	15	10	10	21.8	10
Red:					
Port Royal, Tenn.	30	9	10	34.4	9
Cumberland:					
Baxter, Ky.	16	10	10	18.6	10
Pineville, Ky.	1002	10	11	1002.4	10
Barbourville, Ky.	27	10	13	37.8	11
Williamsburg, Ky.	21	10	14	27.3	11
Emory:					
Oakdale, Tenn.	25	10	10	27.7	10
Elk:					
Fayetteville (abv),Tenn.	18	10	10	19.5	10
Fayetteville, Tenn.	662	10	11	662.85	10

FLOOD STAGE DATA

(All dates in December unless otherwise specified)

DECEMBER 1972

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
	Ft			Ft	
MISSISSIPPI SYSTEM–Continued					
Ohio Basin – Continued					
Duck:					
Shelbyville (nr),Tenn.	23	10	11	26.8	11
Shelbyville, Tenn.	722	10	11	724.6	10
Columbia, Tenn.	32	10	13	37.6	12
Ohio:					
Ashland, Ky	52	11	12	53.0	11
Portsmouth, Ohio	50	11	13	51.4	12
Maysville, Ky.	50	11	13	52.0	12
Chilo-Meldahl Dam,Ohio	51	11	13	51.7	13
Cincinnati, Ohio	52	11	14	53.8	13
Cannelton Dam:					
Hawesville, Ky. (Upper)	16	M	M	25.0	15
(Lower)	43	12	18	45.6	15
Tell City, Ind.	38	11	21	44.3	16
Dam No. 46, Owensboro, Ky.	41	13	19	43.4	16
Dam No. 47, Newburgh, Ind.	38	10	24	45.1	17
Evansville, Ind.	42	15	19	42.7	17
Dam No. 48, Cypress, Ind.	38	11	29	45.1	17
Mt. Vernon, Ind.	35	11	31	42.9	18
Dam No. 49, Uniontown, Ky.	37	12	31	45.0	18
Shawneetown, Ill.	33	11	Jan 3	44.9	20
Dam No. 50, Fords Ferry, Ky.	34	11	Jan 4	48.1	20
Dam No. 51, Golconda, Ill.	40	14	29	45.7	20
Paducah, Ky.	39	14	Jan 1	43.9	21
Dam No. 52, Brookport, Ill.	37	12	Jan 10	45.7	20
Dam No. 53, Grand Chain, Ill.	42	12	Jan 11	50.0	22
Cairo, Ill.	40	13	Jan 12	47.0	24
White Basin					
Cache:					
Patterson, Ark.	7	Oct 29	1	10.0 9.4	Nov 9 16
Black:					
Black Rock, Ark.	14	9 31	24 Jan 11	17.5 17.0	15 Jan 4
White:					
Clarendon, Ark.	26	Nov 11	3	27.5	Nov 25
St. Charles, Ark.	25	Nov 17 12	7 Jan 2	25.8 25.7	Nov 25 21
Red Basin					
Sulphur:					
Hagansport, Tex.	44	13	16	45.9	15
Naples, Tex.	22	17	24	25.6	21
Lower Mississippi Basin					
St. Francis:					
St. Francis, Ark.	18	9 21	17 22	19.7 18.1	10 21
Tallahatchie:					
Swan Lake, Miss.	26	16	Jan 6	27.1	22
Big Black:					
West, Miss.	12	12 31	24 Jan 17	18.5 21.4	16 Jan 8
Bovina, Miss.	28	21	31	31.3	25
Lower Mississippi:					
New Madrid, Mo.	34	17	31	36.0	24
Caruthersville, Mo.	32	16	Jan 11	34.9	24

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
	Ft.			Ft.	
WEST GULF OF MEXICO DRAINAGE					
Calcasieu:					
Hineston, La.	12	7 12	8 28	12.0 15.6	7 18
Lake Charles, La.	3	8 12 21	10 13 22	3.6 3.0 3.0	8 12 21
Navasota:					
Bryan 17 NE, Tex.	12	19	21	12.3	21
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Portneuf:					
Pocatello, Idaho	8	14 20	16 22	8.3 8.5	15 20
Salmon:					
Salmon, Idaho	7	12	13	7.7	13
Snake:					
Blackfoot, Idaho	U	14	20	U	
Weiser, Idaho	12	12	31	15.6	21
Luckiamute:					
Suver, Oreg.	27	21	23	28.3	22
South Yamhill:					
Whiteson, Oreg.	38	21	25	H41.8	22
Pudding:					
Aurora, Oreg.	20	22	30	23.4	24
Tualatin:					
Farmington, Oreg.	29	24	31	30.2	27-28
Clackamas:					
Clackamas, Oreg.	13	21	21	H14.0	21
Johnson Creek:					
Sycamore, Oreg.	8	21	21	H10.9	21
North Coastal Basins					
Chehalis:					
Centralia, Wash.	63	27	28	64.3	27
Snoqualmie:					
Carnation, Wash.	54	26	27	54.6	27
Snohomish:					
Snohomish, Wash.	25	21 26	22 27	25.3 26.3 28.2	21 22 26
Nooksack:					
Deming, Wash.	12	26	26	12.0	26
Stillaguamish:					
Arlington, Wash.	16	26	26	16.6	26

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* Provisional
# Highest Stage Observed
1 Continued at end of month
H Hydrograph Analysis
M Missing
U Unknown

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	-2.8	-5.2	29	.9
1000	26	180	-3.2	-5.8	25	1.0
950	31	562	-2.8	-4.9	24	4.1
900	31	990	-3.4	-5.1	26	7.9
850	31	1,442	-4.1	-7.8	27	11.1
800	31	1,921	-4.6	-10.0	27	13.9
750	31	2,428	-5.6	-13.1	27	16.6
700	31	2,968	-7.7	-15.9	27	18.5
650	31	3,542	-10.2	-17.7	27	21.0
600	31	4,155	-13.5	-22.0	27	23.5
550	31	4,812	-17.2	-26.2	26	26.5
500	31	5,521	-21.7	-30.2	26	29.8
450	31	6,289	-26.5	-33.2	26	32.8
400	31	7,131	-32.2	-38.9	26	35.4
350	31	8,063	-38.5	-44.2	26	37.5
300	31	9,104	-45.7		27	39.6
250	31	10,299	-53.1		27	40.3
200	31	11,719	-57.8		27	42.9
175	31	12,561	-58.1		27	39.0
150	31	13,531	-58.9		26	34.4
125	31	14,673	-59.5		26	31.2
100	30	16,068	-60.8		27	30.6
80	29	17,453	-61.6		26	27.2
70	28	18,277	-61.5		27	26.8
60	28	19,233	-61.4		27	24.5
50	27	20,365	-61.2		27	20.8
40	27	21,753	-60.8		28	15.2
30	25	23,540	-60.4		29	18.0
25	23	24,688	-59.4		29	15.1
20	16	26,081	-59.5		28	13.5
15	13	27,914	-57.8		27	19.9
10	8	30,471	-55.3			

ALBUQUERQUE, N. MEX.
837 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	1,619	-1.7	-8.3	35	1.6
1000						
950						
900						
850						
800	27	1,979	.5	-11.0	29	2.7
750	27	2,495	-1.5	-14.2	27	6.2
700	27	3,042	-3.8	-18.3	28	9.1
650	27	3,625	-6.1	-21.9	27	12.8
600	27	4,248	-9.2	-25.6	27	15.8
550	27	4,916	-13.4	-30.0	27	17.4
500	27	5,634	-18.1	-35.0	26	20.6
450	27	6,414	-23.3	-38.6	26	22.1
400	27	7,265	-29.5	-43.4	26	23.1
350	27	8,208	-36.2	-49.0	27	24.3
300	27	9,258	-43.4	-50.1	26	27.5
250	27	10,468	-49.8		26	34.6
200	27	11,912	-53.5		26	36.4
175	27	12,769	-55.0		26	32.1
150	27	13,747	-57.9		26	30.4
125	27	14,889	-60.5		26	27.3
100	26	16,265	-64.5		26	21.9
80	26	17,623	-66.0		27	18.2
70	24	18,432	-65.3		27	13.5
60	24	19,371	-64.3		27	10.0
50	24	20,494	-62.2		26	6.3
40	21	21,870	-60.9		27	5.1
30	20	23,670	-59.7		30	3.4
25	20	24,813	-58.5		30	3.6
20	16	26,240	-56.9		30	4.2
15	12	28,066	-56.4		30	8.2
10						

AMARILLO, TEXAS
891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	-2.9	-8.3	27	2.5
1000						
950						
900						
850	31	1,467	2.2	-9.8	27	5.9
800	31	1,958	3.9	-10.8	27	8.4
750	31	2,482	2.2	-13.3	27	9.7
700	31	3,035	-1.0	-17.0	26	11.7
650	31	3,623	-4.2	-19.8	26	13.5
600	31	4,250	-7.9	-23.3	26	15.4
550	31	4,920	-12.3	-27.5	26	17.0
500	31	5,642	-17.4	-31.7	26	19.3
450	31	6,423	-22.9	-36.2	26	20.3
400	31	7,275	-29.5	-41.9	26	21.5
350	31	8,217	-36.5	-48.4	26	24.6
300	31	9,266	-43.8	-48.1	26	29.4
250	31	10,472	-50.6		26	35.3
200	31	11,910	-55.6		26	34.2
175	31	12,758	-56.9		26	33.1
150	31	13,731	-58.8		27	28.2
125	30	14,872	-61.4		27	27.7
100	30	16,246	-64.3		26	20.8
80	30	17,606	-65.1		27	19.1
70	29	18,418	-65.6		27	13.7
60	28	19,355	-64.6		27	9.6
50	27	20,477	-62.7		26	7.3
40	26	21,861	-61.4		27	6.9
30	26	23,653	-59.9		28	5.8
25	24	24,797	-59.2		28	5.1
20	23	26,196	-57.7		29	7.3
15	19	27,998	-56.8		28	7.7
10	8	30,644	-54.2			

* ANCHORAGE, ALASKA
1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	-9.4	-13.2	02	1.5
1000	18	214	-6.6	-11.0	02	1.5
950	31	499	-6.5	-12.9	02	2.8
900	31	922	-6.2	-13.8	03	2.3
850	31	1,369	-7.1	-16.2	05	.8
800	31	1,840	-8.7	-17.5	17	.7
750	31	2,338	-11.2	-20.3	20	1.3
700	31	2,865	-14.4	-22.9	23	1.6
650	31	3,423	-17.8	-27.6	25	2.5
600	31	4,018	-21.4	-30.4	26	4.3
550	31	4,654	-25.8	-34.4	26	5.3
500	31	5,338	-30.7	-38.2	27	5.9
450	31	6,078	-35.6	-41.2	27	6.9
400	31	6,888	-41.2	-43.6	27	8.5
350	31	7,787	-46.9		28	9.9
300	31	8,794	-52.0		28	9.6
250	31	9,963	-55.9		27	11.7
200	31	11,377	-56.8		27	11.0
175	31	12,226	-55.7		27	12.9
150	30	13,206	-53.9		27	13.2
125	30	14,378	-53.4		27	14.7
100	29	15,820	-53.8		27	17.2
80	28	17,261	-53.6		27	19.7
70	28	18,121	-53.4		28	20.4
60	27	19,120	-54.1		27	21.4
50	26	20,295	-54.3		27	23.0
40	26	21,726	-54.4		28	25.3
30	25	23,573	-55.2		28	28.2
25	24	24,733	-55.5		28	29.9
20	22	26,173	-55.9		28	31.1
15	17	27,958	-58.8		28	34.9
10	12	30,565	-60.0		28	35.5

* ANNETTE, ALASKA
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	.3	-3.2	10	1.2
1000	22	153	-.2	-5.2	05	1.2
950	30	512	-1.5	-5.9	13	1.9
900	30	941	-3.5	-8.5	16	2.9
850	29	1,393	-5.7	-11.5	21	3.1
800	29	1,867	-7.9	-14.3	23	4.1
750	29	2,367	-10.4	-18.1	26	4.6
700	29	2,895	-13.3	-21.1	28	5.3
650	29	3,456	-16.6	-25.8	28	6.1
600	29	4,053	-20.4	-28.3	29	6.8
550	29	4,692	-24.4	-32.2	28	8.3
500	29	5,380	-28.9	-38.0	28	10.7
450	29	6,126	-34.3	-42.2	27	12.5
400	29	6,940	-40.2	-42.1	28	13.6
350	29	7,842	-45.9		29	14.3
300	29	8,853	-51.3		29	15.5
250	29	10,027	-54.8		28	18.0
200	28	11,458	-54.4		28	18.3
175	28	12,316	-53.4		28	18.4
150	26	13,310	-53.0		28	18.7
125	24	14,482	-53.2		28	17.4
100	23	15,932	-52.7		28	16.8
80	23	17,371	-53.2		29	18.0
70	23	18,231	-53.5		29	17.7
60	20	19,246	-54.1		29	18.2
50	18	20,421	-54.9		30	15.7
40	15	21,848	-55.0			
30	13	23,657	-56.9			
25	8	24,868	-55.4			
20	6	26,273	-55.9			
15						
10						

ATHENS, GEORGIA
992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	6.6	4.0	33	.8
1000						
950	31	598	8.8	3.8	25	3.9
900	31	1,047	8.7	1.2	25	6.0
850	31	1,519	7.2	-3.0	25	9.1
800	31	2,017	5.2	-5.7	26	9.9
750	31	2,542	3.2	-9.3	26	11.6
700	31	3,099	.4	-13.2	26	13.6
650	31	3,691	-2.0	-19.0	26	15.6
600	31	4,323	-5.4	-24.9	26	18.2
550	31	5,000	-9.7	-30.0	26	19.7
500	31	5,729	-14.5	-31.9	26	21.7
450	31	6,519	-19.8	-36.6	26	23.7
400	31	7,383	-26.1	-41.4	26	26.4
350	31	8,338	-32.9	-46.8	26	29.5
300	31	9,403	-40.7	-51.4	26	33.6
250	31	10,621	-49.0		26	39.4
200	31	12,059	-56.6		27	45.2
175	31	12,902	-58.8		27	44.2
150	30	13,867	-61.6		26	40.3
125	29	14,987	-64.6		26	34.8
100	28	16,334	-68.6		26	29.2
80	27	17,668	-68.8		26	21.2
70	25	18,468	-67.4		26	17.6
60	24	19,399	-65.5		26	14.8
50	23	20,516	-64.3		26	11.7
40	21	21,884	-63.3		27	12.4
30	21	23,662	-61.5		28	10.7
25	19	24,799	-60.3		28	12.1
20	19	26,200	-57.4		29	9.2
15	18	28,029	-55.0		28	12.4
10	14	30,665	-50.1		27	16.2

* BARROW, ALASKA
1025 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	15	8	-11.4	-12.6	21	2.8
1000	14	212	-9.3	-11.5	23	5.0
950	15	595	-9.2	-12.6	24	7.7
900	15	1,013	-10.3	-13.2	24	8.4
850	15	1,452	-12.1	-14.9	25	7.5
800	15	1,915	-14.0	-18.1	25	6.7
750	15	2,402	-16.4	-21.3	24	7.0
700	15	2,919	-19.1	-25.2	25	6.9
650	15	3,468	-21.8	-27.8	25	8.2
600	15	4,053	-25.3	-31.1	26	9.8
550	15	4,681	-28.5	-33.9	26	10.6
500	15	5,357	-32.9	-37.0	26	11.2
450	15	6,092	-37.4	-39.7	26	12.6
400	15	6,897	-42.6	-43.2	26	13.2
350	15	7,791	-47.9		27	14.6
300	15	8,793	-53.3		28	16.6
250	14	9,975	-58.2		26	20.6
200	14	11,374	-59.3		27	19.5
175	13	12,221	-58.5		27	18.7
150	13	13,193	-57.6		27	18.6
125	13	14,344	-57.9		27	20.6
100	13	15,751	-58.1		26	22.3
80	12	17,142	-59.6		27	25.8
70	12	17,976	-60.0			
60	10	18,933	-60.7			
50	9	20,066	-61.2			
40	8	21,505	-61.7			
30	5	23,328	-61.9			
25						
20						
15						
10						

BARTER IS., ALASKA
1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	15	-19.9	-22.1	27	3.6
1000	29	153	-18.1	-20.7	27	5.2
950	29	538	-15.9	-19.1	28	5.0
900	29	946	-15.9	-19.9	28	4.3
850	29	1,376	-16.7	-21.6	28	4.3
800	29	1,832	-17.2	-22.7	29	4.5
750	29	2,314	-19.1	-24.2	29	5.3
700	29	2,825	-21.2	-27.3	29	5.2
650	29	3,369	-24.3	-29.7	30	6.1
600	29	3,949	-27.9	-32.8	30	6.5
550	29	4,569	-31.6	-36.4	30	6.6
500	29	5,238	-35.5	-39.4	30	7.6
450	29	5,964	-39.9	-41.3	30	10.1
400	29	6,760	-45.1	-40.3	30	12.5
350	29	7,644	-50.6		30	13.0
300	29	8,634	-55.7		30	12.3
250	29	9,787	-58.9		30	12.5
200	29	11,187	-58.8		29	14.8
175	29	12,027	-58.0		29	15.7
150	29	12,999	-57.9		28	16.5
125	29	14,147	-58.5		28	18.9
100	29	15,547	-59.2		28	20.9
80	28	16,947	-60.0		28	25.3
70	27	17,787	-60.5		28	25.9
60	25	18,740	-61.6		28	28.5
50	24	19,866	-63.2		28	31.6
40	23	21,223	-64.1		28	35.7
30	20	22,970	-65.3		28	40.7
25	17	24,056	-66.6		28	44.0
20	14	25,422	-67.4		28	43.3
15	10	27,185	-66.9			
10						

BETHEL, ALASKA
1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	-12.4	-15.6	03	3.3
1000	19	204	-6.0	-9.4	04	.5
950	31	504	-9.8	-13.9	05	3.2
900	31	924	-8.3	-14.4	04	1.5
850	31	1,367	-9.3	-17.4	02	.8
800	31	1,835	-10.6	-19.0	04	.4
750	31	2,329	-12.7	-22.3	08	.5
700	31	2,853	-15.3	-26.0	14	.3
650	31	3,410	-18.4	-28.3	23	1.4
600	31	4,003	-21.7	-31.6	23	2.3
550	31	4,639	-25.7	-35.3	24	3.4
500	31	5,324	-30.2	-37.0	23	4.7
450	31	6,066	-35.2	-39.8	22	4.3
400	31	6,878	-40.5	-42.5	24	4.8
350	31	7,779	-46.3		23	9.8
300	31	8,787	-52.3		23	12.2
250	31	9,954	-56.4		25	15.2
200	31	11,367	-56.1		25	13.3
175	31	12,217	-55.3		24	15.7
150	31	13,204	-54.2		24	16.5
125	31	14,375	-53.5		24	17.5
100	30	15,803	-53.0		24	19.7
80	30	17,241	-53.1		25	19.9
70	30	18,102	-53.4		25	21.7
60	30	19,094	-53.5		26	23.9
50	30	20,269	-53.3		26	23.8
40	30	21,704	-53.7		26	27.2
30	29	23,548	-54.4		26	32.3
25	28	24,710	-55.8		26	33.8
20	28	26,126	-56.4		27	39.1
15	19	27,915	-58.4		28	43.6
10						

* BISMARCK, N. DAK.
957 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	-14.9	-17.2	31	1.3
1000						
950	24	584	-16.2	-20.1	30	2.0
900	31	972	-10.9	-14.8	31	4.6
850	31	1,413	-9.6	-14.9	31	6.6
800	31	1,881	-10.3	-16.0	30	7.7
750	31	2,376	-11.9	-17.9	30	9.0
700	31	2,903	-13.7	-19.8	29	10.6
650	31	3,464	-16.0	-22.7	29	12.9
600	31	4,064	-18.9	-25.0	29	15.8
550	31	4,707	-22.6	-28.8	29	17.6
500	31	5,401	-27.2	-32.9	28	19.9
450	31	6,152	-32.3	-36.0	28	22.0
400	31	6,972	-38.3	-40.6	28	25.0
350	31	7,882	-44.0	-45.2	28	27.6
300	31	8,899	-50.3		28	29.2
250	31	10,076	-54.7		28	29.2
200	30	11,502	-55.4		28	28.3
175	29	12,350	-53.7		28	28.3
150	29	13,343	-53.4		28	26.9
125	26	14,525	-53.3		28	25.4
100	26	15,956	-54.8		28	23.6
80	25	17,383	-55.8		28	21.3
70	22	18,231	-56.0		28	20.0
60	22	19,210	-56.8		28	17.7
50	19	20,359	-56.5		29	14.1
40	15	21,776	-56.9		29	13.2
30	14	23,591	-56.9		30	9.2
25	10	24,761	-56.3		32	10.4
20	8	26,204	-55.3			
15						
10						

BOISE, IDAHO
919 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	-5.5	-9.8	14	1.1
1000						
950						
900	31	1,031	-3.9	-8.4	15	.9
850	31	1,483	-4.1	-9.5	26	2.1
800	31	1,960	-5.9	-10.9	27	5.6
750	31	2,463	-7.9	-13.3	28	8.0
700	31	2,998	-10.6	-16.6	29	9.2
650	31	3,565	-13.5	-19.8	29	10.9
600	31	4,170	-16.9	-24.3	29	12.9
550	31	4,818	-20.9	-28.8	28	15.0
500	31	5,517	-25.1	-31.7	28	16.9
450	31	6,275	-29.9	-35.5	28	18.5
400	31	7,104	-35.8	-38.7	29	20.1
350	31	8,023	-42.2	-41.3	29	21.8
300	31	9,048	-48.3		29	24.7
250	31	10,234	-53.8		29	26.2
200	31	11,663	-54.3		29	25.3
175	31	12,519	-54.4		29	25.2
150	31	13,505	-55.1		29	23.4
125	31	14,669	-55.7		29	21.8
100	31	16,084	-57.7		29	18.0
80	31	17,488	-58.6		29	14.7
70	29	18,325	-58.8		29	11.8
60	27	19,295	-58.6		30	9.4
50	27	20,442	-58.1		31	7.5
40	27	21,849	-58.1		32	6.3
30	24	23,665	-56.5		35	5.6
25	22	24,823	-56.5		35	6.4
20	20	26,252	-56.5		01	7.2
15	12	28,101	-56.6		02	7.8
10						
7						

BOOTHVILLE, LA.
1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1	12.1	10.2	03	2.2
1000	29	164	14.1	11.1	05	1.5
950	29	597	13.1	8.4	22	1.2
900	29	1,052	12.3	3.5	24	2.6
850	29	1,531	11.4	-1.8	24	4.3
800	29	2,036	9.6	-7.3	25	6.4
750	29	2,569	7.4	-10.4	26	7.7
700	29	3,134	4.6	-13.7	25	8.9
650	29	3,735	1.5	-16.2	25	9.7
600	29	4,375	-2.2	-20.2	26	11.0
550	29	5,061	-6.6	-24.0	26	12.3
500	29	5,798	-11.6	-28.9	25	15.0
450	29	6,596	-17.2	-34.0	25	18.2
400	29	7,469	-23.2	-34.8	25	23.1
350	29	8,437	-29.8	-40.8	25	26.7
300	28	9,512	-37.7	-47.2	25	31.2
250	28	10,747	-46.2		26	36.5
200	28	12,199	-55.6		26	40.9
175	28	13,042	-59.7		26	37.5
150	27	13,997	-63.4		26	35.0
125	27	15,107	-67.2		26	28.1
100	25	16,439	-71.4		25	21.5
80	24	17,754	-72.0		26	15.7
70	24	18,545	-69.8		25	11.4
60	23	19,470	-67.0		24	8.1
50	23	20,578	-64.2		24	6.3
40	23	21,950	-62.2		25	7.6
30	20	23,732	-60.7		27	9.4
25	20	24,872	-58.7		27	11.1
20	20	26,284	-56.2		27	12.9
15	18	28,122	-52.8		27	14.3
10	15	30,762	-46.3			
7						

* BROWNSVILLE, TEXAS
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	12.9	10.4	33	.7
1000	31	150	15.2	11.6	14	1.1
950	31	586	15.0	10.7	15	4.9
900	31	1,044	14.3	6.4	17	5.9
850	31	1,527	13.7	1.4	20	4.4
800	31	2,036	11.6	-2.6	22	4.4
750	31	2,573	8.9	-6.9	24	4.3
700	31	3,142	6.1	-10.9	25	4.6
650	31	3,745	2.5	-13.4	26	6.4
600	31	4,387	-1.5	-18.1	25	9.0
550	31	5,075	-5.5	-23.3	25	11.2
500	31	5,816	-10.2	-27.8	25	14.6
450	31	6,620	-15.5	-32.7	25	17.4
400	31	7,497	-22.0	-35.7	25	20.7
350	31	8,470	-28.8	-40.6	25	24.2
300	31	9,551	-37.1	-47.5	25	28.1
250	31	10,788	-46.1		25	32.2
200	31	12,240	-55.8		25	35.9
175	31	13,080	-60.7		26	34.1
150	31	14,029	-64.7		25	29.9
125	31	15,130	-69.7		25	25.4
100	31	16,448	-73.7		25	18.2
80	30	17,742	-74.3		25	10.6
70	28	18,527	-71.6		24	6.4
60	27	19,446	-68.6		23	4.4
50	25	20,554	-64.1		22	3.2
40	23	21,931	-61.8		24	4.5
30	21	23,728	-58.4		28	5.9
25	20	24,880	-58.0		27	8.2
20	19	26,291	-55.2		27	10.6
15	16	28,142	-52.5		27	15.6
10	12	30,805	-43.9		27	26.5
7	10	33,228	-39.1			

BUFFALO, N. Y.
991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	-1.3	-3.3	25	1.4
1000	7	251	-5.9	-10.5		
950	31	557	-1.9	-3.4	24	5.0
900	31	986	-3.8	-4.8	25	9.0
850	31	1,437	-4.9	-8.0	26	11.4
800	31	1,913	-5.7	-10.7	26	13.8
750	31	2,419	-6.8	-13.1	27	16.4
700	31	2,956	-8.8	-15.6	26	19.2
650	31	3,527	-11.6	-17.3	26	22.2
600	31	4,137	-15.0	-21.2	27	24.0
550	31	4,790	-19.0	-25.2	27	26.1
500	31	5,494	-23.4	-29.0	27	28.0
450	31	6,258	-28.0	-34.1	27	32.3
400	31	7,094	-33.3	-38.4	27	36.7
350	31	8,024	-39.3	-42.7	27	41.4
300	31	9,061	-46.3		27	43.2
250	31	10,254	-52.9		26	44.1
200	31	11,678	-56.7		26	38.6
175	31	12,525	-56.5		26	38.6
150	31	13,502	-57.5		27	34.6
125	31	14,650	-58.9		27	33.3
100	28	16,042	-59.7		27	29.7
80	27	17,430	-60.8		27	22.3
70	24	18,261	-61.3			
60	23	19,214	-61.7		27	20.6
50	20	20,352	-60.9		27	18.3
40	19	21,742	-61.2		28	13.9
30	19	23,528	-61.4		28	15.1
25	18	24,650	-60.7		29	11.7
20	16	26,034	-60.7			
15	9	27,864	-58.7			
10						
7						

CAPE HATTERAS, N. C.
1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	10.8	8.3	32	2.0
1000	30	177	11.6	6.8	30	2.7
950	31	600	10.6	5.0	26	4.7
900	31	1,051	9.3	1.2	25	6.8
850	31	1,523	7.3	-2.0	25	9.1
800	31	2,021	5.7	-7.5	25	11.7
750	31	2,547	3.3	-11.9	25	13.2
700	31	3,104	.7	-16.3	25	15.2
650	31	3,696	-2.2	-19.8	25	16.8
600	31	4,327	-6.1	-22.2	26	18.6
550	31	5,003	-9.7	-24.6	26	21.3
500	31	5,733	-14.4	-27.6	26	24.3
450	31	6,524	-19.4	-32.0	26	26.3
400	31	7,389	-25.6	-37.4	26	27.7
350	31	8,347	-32.7	-42.9	26	30.9
300	31	9,412	-40.3	-46.9	26	33.2
250	31	10,632	-48.9		26	36.6
200	31	12,071	-56.1		27	40.6
175	31	12,915	-58.6		27	41.0
150	31	13,878	-61.3		27	37.8
125	31	15,001	-64.6		27	34.7
100	31	16,355	-67.0		27	28.9
80	30	17,695	-67.2		27	22.5
70	30	18,503	-65.9		27	19.6
60	29	19,444	-64.7		27	17.2
50	27	20,561	-63.4		27	15.2
40	26	21,933	-61.7		27	12.8
30	25	23,719	-60.7		28	12.0
25	22	24,853	-59.8		28	14.2
20	22	26,255	-57.3		28	13.0
15	19	28,081	-54.5		27	19.1
10	12	30,689	-48.6			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

• CARIBOU, MAINE
995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-14.9	-18.3	32	1.5
1000	9	258	-18.8	-22.2		
950	31	542	-12.8	-15.7	28	1.2
900	31	956	-12.3	-15.4	27	4.2
850	31	1,393	-12.2	-16.8	28	7.9
800	31	1,856	-12.8	-18.5	28	10.4
750	31	2,348	-13.3	-19.9	28	13.5
700	31	2,873	-14.2	-21.5	27	16.6
650	31	3,434	-16.2	-23.4	27	19.2
600	31	4,034	-18.6	-25.3	27	24.3
550	31	4,679	-21.6	-28.9	27	28.4
500	30	5,372	-25.8	-32.6	27	31.1
450	30	6,127	-31.0	-36.8	27	34.1
400	30	6,953	-36.7	-41.4	27	38.6
350	30	7,869	-42.7	-43.2	27	42.7
300	30	8,893	-48.6		27	48.1
250	30	10,078	-54.0		27	50.9
200	30	11,502	-55.8		27	51.0
175	30	12,353	-55.6		27	46.7
150	30	13,336	-55.3		27	42.6
125	28	14,512	-55.9		27	36.6
100	26	15,916	-57.2		27	33.5
80	26	17,324	-58.5		27	29.5
70	26	18,163	-58.4		27	28.2
60	24	19,132	-58.9		27	25.8
50	24	20,274	-59.5		27	23.1
40	24	21,669	-59.9		27	22.0
30	24	23,467	-59.9		27	20.9
25	24	24,606	-60.0		27	21.7
20	23	25,995	-61.0		27	22.7
15	19	27,799	-60.1		27	24.6
10	14	30,318	-57.4		27	32.1
7	12	32,622	-55.4			
5	6	34,798	-51.7			

CHARLESTON, S. C.
10.9 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	9.3	7.3	31	1.4
1000	30	176	11.6	8.5	30	1.5
950	31	601	11.6	5.5	26	3.8
900	31	1,052	10.1	1.7	25	6.2
850	31	1,526	8.5	-1.9	25	7.9
800	31	2,027	6.9	-6.8	25	8.7
750	31	2,555	5.1	-10.2	26	9.5
700	31	3,116	2.4	-13.3	26	11.6
650	31	3,712	-.5	-18.2	25	13.8
600	31	4,347	-4.0	-21.1	25	16.3
550	30	5,026	-8.3	-27.0	26	18.0
500	30	5,758	-13.4	-30.1	26	19.3
450	30	6,552	-18.8	-33.5	26	22.1
400	30	7,419	-24.9	-38.7	26	24.4
350	30	8,380	-31.5	-43.1	26	27.3
300	30	9,451	-39.3	-48.1	26	31.5
250	30	10,677	-48.0		26	37.1
200	30	12,122	-55.5		27	41.7
175	30	12,967	-58.7		27	41.8
150	30	13,929	-61.3		27	37.0
125	29	15,050	-64.9		26	32.2
100	27	16,391	-68.7		27	25.4
80	25	17,722	-68.9		26	19.3
70	23	18,517	-67.5		27	16.5
60	22	19,453	-65.0		26	13.5
50	22	20,571	-62.9		27	12.4
40	21	21,936	-61.5		27	11.1
30	21	23,726	-60.0		28	11.3
25	21	24,869	-58.1		28	11.4
20	20	26,283	-55.1		28	13.9
15	16	28,140	-51.7		27	17.4
10	8	30,823	-46.7			
7						
5						

CHATHAM, MASS.
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	3.4	.4	35	1.2
1000	28	163	2.8	-.6	32	1.7
950	31	557	[illegible]	[illegible]	27	4.4
900	31	990	-.8	-4.3	27	6.9
850	31	1,447	-1.6	-7.2	26	9.6
800	31	1,930	-1.9	-10.6	26	13.0
750	31	2,442	-3.3	[illegible]	26	16.6
700	31	2,986	-5.3	[illegible]	26	20.1
650	31	3,566	[illegible]	-18.5	26	23.2
600	31	4,184	-11.0	-21.3	26	25.6
550	31	4,848	-14.8	-24.9	26	28.1
500	31	5,563	-19.7	-29.8	26	30.8
450	31	6,337	-24.9	-33.3	26	33.7
400	31	7,184	-30.7	-38.1	26	37.7
350	31	8,122	-37.2	-41.0	26	40.8
300	31	9,168	-44.9		26	44.0
250	31	10,364	-53.1		27	46.4
200	31	11,783	-58.6		27	47.4
175	31	12,620	-59.5		27	44.6
150	31	13,585	-59.9		27	41.6
125	29	14,710	-60.5		27	38.0
100	27	16,089	-62.1		27	32.7
80	23	17,467	-61.7		26	25.6
70	23	18,293	-62.2		26	22.3
60	23	19,247	-61.5		27	21.9
50	21	20,374	-61.9		27	18.7
40	20	21,761	-61.5		27	16.5
30	19	23,545	-59.5		28	14.1
25	18	24,697	-59.4		27	12.0
20	16	26,130	-57.7		28	14.8
15	10	27,966	-54.6			
10	6	30,544	-54.6			
7						
5						

CHIHUAHUA, MEXICO
857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	4.9	-2.5	23	1.0
1000						
950						
900						
850	30	1,501	[illegible]	-3.2	23	1.5
800	31	2,000	8.6	-4.2	23	5.7
750	31	2,531	6.2	-7.4	[illegible]	9.0
700	31	3,094	4.0	-12.0	25	10.8
650	31	3,694	1.1	-16.6	26	11.7
600	31	4,333	-2.7	-21.4	26	12.9
550	31	5,016	-7.4	-25.5	26	13.9
500	31	5,751	-12.6	-30.2	26	[illegible]
450	31	6,547	-18.2	-34.4	26	16.7
400	31	7,415	-24.9	-38.1	26	17.4
350	31	8,375	-32.0	-43.8	26	19.8
300	31	9,443	-40.0	[illegible]	27	20.9
250	31	10,667	-47.9		27	25.9
200	31	12,112	-55.6		27	25.3
175	31	12,956	-59.3		28	21.3
150	31	13,914	-62.6		27	18.1
125	31	15,029	-66.0		27	14.8
100	30	16,373	-68.9		28	12.2
80	30	17,708	-69.1		28	8.6
70	30	18,506	-69.1		27	7.6
60	30	19,428	-67.9		28	6.3
50	29	20,538	-63.2		28	5.1
40	27	21,917	-61.9		27	6.7
30	26	23,708	-59.5		27	6.0
25	24	24,844	-58.7		28	5.4
20	23	26,251	-57.4		28	7.9
15	20	28,089	-53.7		28	10.7
10	12	30,733	-49.5			
7						
5	5	33,097	-43.1			

• COLD BAY, ALASKA
[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	30	-.6	-2.6	[illegible]	[illegible]
1000	15	[illegible]	[illegible]	-2.8	[illegible]	[illegible]
950	29	471	-2.4	-5.0	[illegible]	[illegible]
900	29	899	-4.5	[illegible]	[illegible]	[illegible]
850	29	1,348	-5.9	[illegible]	[illegible]	[illegible]
800	29	1,821	-8.1	[illegible]	[illegible]	[illegible]
750	29	2,321	-10.1	[illegible]	[illegible]	[illegible]
700	29	2,850	-12.9	[illegible]	[illegible]	[illegible]
650	29	3,412	[illegible]	[illegible]	21	[illegible]
600	29	4,012	[illegible]	[illegible]	[illegible]	[illegible]
550	29	4,654	[illegible]	[illegible]	21	[illegible]
500	29	5,346	-27.4	[illegible]	[illegible]	[illegible]
450	29	6,096	[illegible]	-38.8	22	[illegible]
400	29	6,916	[illegible]	[illegible]	22	[illegible]
350	29	7,825	[illegible]	-45.8	22	[illegible]
300	28	8,849	-50.6		21	11.6
250	28	10,026	-54.6		23	13.1
200	28	11,450	-54.3		23	[illegible]
175	28	12,309	-52.8		24	11.7
150	27	13,311	-51.9		24	12.3
125	25	14,473	-50.9		24	13.4
100	22	15,937	-50.3		25	13.3
80	20	17,366	-50.4		25	13.9
70	20	18,237	-50.6		25	13.2
60	19	19,245	-51.2		26	13.3
50	19	20,431	[illegible]		25	13.6
40	17	21,891	-50.7		26	[illegible]
30	14	23,743	-52.6		27	17.1
25	11	24,870	-53.3			
20	[illegible]	26,255	-56.4			
15						
10						
7						
5						

DAYTON, OHIO
983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	-.5	-2.8	27	1.3
1000						
950	31	572	-1.3	-3.4	25	4.5
900	31	1,003	-1.0	-4.4	26	8.4
850	31	1,460	.3	-9.9	26	12.0
800	31	1,946	-.2	-11.6	26	14.4
750	31	2,462	-1.9	-13.8	26	16.1
700	31	3,008	-4.7	-16.3	26	17.2
650	31	3,588	-7.9	-19.4	26	19.3
600	31	4,207	-11.0	-21.6	26	21.4
550	31	4,871	-14.8	-25.1	26	23.9
500	31	5,586	-19.3	-30.1	27	28.0
450	31	6,361	-24.5	-35.1	26	30.9
400	31	7,209	-30.4	-40.2	26	34.1
350	31	8,148	-37.3	-44.8	26	37.4
300	31	9,194	-44.6		26	41.2
250	31	10,394	-52.0		26	44.6
200	29	11,819	-58.1		26	47.2
175	29	12,659	-58.6		26	47.9
150	29	13,627	-58.8		26	43.9
125	27	14,767	-60.5		27	38.8
100	26	16,151	-62.2		26	31.3
80	25	17,527	-62.2		27	26.3
70	22	18,351	-62.0		27	21.7
60	17	19,300	-61.2		27	20.9
50	17	20,431	-61.8		27	19.1
40	16	21,818	-61.1		28	15.6
30	15	23,607	-60.0		28	14.7
25	15	24,747	-59.3		28	13.9
20	12	26,147	-58.0		28	16.1
15	9	27,963	-55.5			
10	5	30,578	-49.2			

DEL RIO, TEXAS
982 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	5.9	.2	01	.7
1000						
950	31	590	8.0	-.2	13	1.0
900	31	1,037	8.8	-3.4	21	2.1
850	31	1,511	10.2	-4.3	24	3.8
800	31	2,015	9.0	-5.7	25	6.0
750	31	2,548	7.4	-9.3	26	8.3
700	31	3,112	4.1	-13.1	26	10.2
650	31	3,711	.5	-15.3	26	11.9
600	31	4,349	-3.5	-20.0	25	13.5
550	31	5,030	-8.1	-24.7	25	14.8
500	31	5,764	-12.9	-28.2	26	17.8
450	31	6,558	-18.7	-32.3	26	19.5
400	31	7,425	-25.2	-36.9	25	22.2
350	31	8,384	-32.0	-42.5	26	25.6
300	31	9,453	-39.5	-47.3	26	30.7
250	31	10,680	-47.3		25	37.1
200	31	12,128	-55.4		26	35.6
175	31	12,973	-59.0		26	33.5
150	31	13,931	-62.9		26	30.9
125	31	15,047	-66.1		26	24.2
100	30	16,390	-69.2		26	20.0
80	27	17,721	-70.2		27	12.3
70	26	18,516	-70.3		27	9.1
60	25	19,444	-67.1		26	8.4
50	25	20,552	-64.0		26	7.0
40	25	21,929	-61.7		26	9.2
30	24	23,720	-60.0		27	10.1
25	23	24,863	-58.8		27	9.6
20	21	26,278	-57.0		27	10.0
15	19	28,109	-53.9		28	11.2
10	11	30,749	-48.9			

DENVER, COLO.
834 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	-6.6	-14.5	21	1.5
1000						
950						
900						
850						
800	31	1,942	-2.5	-15.1	27	2.9
750	31	2,454	-2.9	-17.6	28	3.8
700	31	2,998	-5.5	-19.4	29	6.1
650	31	3,576	-8.9	-21.9	29	7.5
600	31	4,191	-13.0	-24.6	29	10.8
550	31	4,849	-17.0	-28.1	28	13.8
500	31	5,557	-22.0	-33.0	27	16.7
450	31	6,324	-27.3	-37.8	27	18.0
400	31	7,161	-33.7	-42.0	27	20.1
350	31	8,087	-40.7	-46.1	26	23.5
300	31	9,120	-46.7		27	26.8
250	31	10,312	-52.7		27	29.8
200	30	11,738	-54.8		27	28.8
175	30	12,592	-55.0		27	27.0
150	30	13,575	-56.1		27	27.7
125	30	14,729	-57.8		27	26.1
100	30	16,132	-59.7		27	20.0
80	30	17,521	-60.6		27	15.0
70	29	18,355	-61.4		27	11.2
60	28	19,311	-60.9		28	8.6
50	26	20,450	-60.5		28	5.6
40	23	21,842	-60.1		29	5.6
30	19	23,641	-59.5		33	4.3
25	17	24,807	-58.2		36	5.2
20	15	26,214	-58.0		01	4.8
15	10	28,029	-37.0			
10						

DODGE CITY, KANS.
925 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	-6.2	-10.1	29	1.6
1000						
950						
900	31	1,003	-2.1	-8.7	33	3.1
850	31	1,459	-.7	-11.0	31	4.4
800	31	1,944	.2	-11.3	29	6.2
750	31	2,461	-.7	-14.2	28	8.3
700	31	3,010	-3.4	-17.4	27	11.3
650	31	3,592	-6.5	-20.7	27	12.6
600	31	4,214	-9.9	-23.7	27	14.6
550	31	4,880	-14.1	-27.6	26	15.7
500	31	5,596	-19.3	-31.8	26	17.6
450	31	6,371	-24.7	-35.6	26	20.6
400	31	7,218	-31.1	-40.6	26	21.5
350	31	8,154	-37.8	-46.6	26	23.6
300	31	9,198	-44.8		26	28.2
250	31	10,398	-51.8		26	33.6
200	31	11,832	-55.5		26	35.8
175	31	12,683	-55.5		26	33.8
150	30	13,660	-56.7		26	32.2
125	29	14,810	-58.5		26	25.1
100	28	16,206	-61.1		26	22.6
80	25	17,594	-62.5		27	15.5
70	23	18,421	-62.4		27	13.1
60	21	19,376	-62.6		28	9.3
50	20	20,506	-61.2		28	7.3
40	16	21,903	-60.1		27	3.5
30	13	23,715	-59.1		34	3.7
25	12	24,864	-58.8		33	5.4
20	10	26,275	-58.2		35	5.1
15	8	28,089	-56.4			
10						

EL PASO, TEXAS
883 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	[illegible]	-5.3	31	1.3
1000						
950						
900						
850	31	1,502	6.5	-7.9	30	2.3
800	31	1,998	5.0	-9.1	26	5.4
750	31	2,522	2.5	-11.6	26	9.1
700	31	3,078	.6	-16.8	26	11.2
650	31	3,670	-2.6	-20.8	26	12.6
600	31	4,300	-5.9	-24.5	26	13.7
550	31	4,976	-10.4	-28.3	27	15.3
500	31	5,703	-15.5	-32.4	26	18.3
450	31	6,490	-20.8	-36.8	26	21.7
400	31	7,349	-27.4	-41.1	26	24.2
350	31	8,300	-34.2	-47.1	26	27.1
300	31	9,358	-42.2	-49.0	26	29.6
250	31	10,571	-49.6		26	32.9
200	31	12,012	-55.7		26	32.3
175	31	12,859	-57.8		27	27.5
150	31	13,825	-60.5		27	23.3
125	31	14,954	-63.2		27	21.1
100	31	16,315	-67.0		27	17.0
80	31	17,655	-68.7		27	12.4
70	31	18,456	-67.7		27	9.5
60	30	19,391	-66.0		27	8.8
50	30	20,505	-62.9		27	5.6
40	30	21,884	-61.7		28	4.6
30	28	23,673	-59.2		28	4.8
25	26	24,824	-58.7		29	4.0
20	26	26,230	-57.2		29	5.8
15	19	28,071	-54.2		28	8.9
10	6	30,696	-52.2			

ELY, NEV.
807 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	-10.9	-14.3	21	3.5
1000						
950						
900						
850						
800	22	2,019	-5.4	-11.2	21	2.6
750	30	2,486	-5.7	-13.4	25	1.1
700	30	3,024	-8.3	-16.2	29	4.8
650	30	3,597	-11.0	-19.6	30	8.9
600	30	4,208	-14.1	-23.6	30	11.7
550	29	4,868	-18.0	-26.9	29	12.9
500	29	5,574	-22.7	-31.1	29	14.8
450	28	6,348	-27.5	-36.3	29	16.7
400	28	7,185	-33.6	-41.6	29	18.8
350	28	8,113	-39.4	-46.2	29	22.2
300	27	9,159	-46.2		29	25.0
250	27	10,355	-52.1		29	27.3
200	26	11,783	-53.5		28	26.8
175	24	12,654	-54.7		29	26.8
150	23	13,645	-55.8		29	23.1
125	23	14,800	-58.2		29	21.5
100	22	16,203	-60.6		29	18.5
80	20	17,575	-62.6		28	13.3
70	19	18,410	-62.5		29	10.6
60	18	19,359	-62.2		30	6.9
50	18	20,489	-60.5		30	4.7
40	18	21,882	-60.0		34	3.6
30	16	23,697	-58.6		36	4.0
25	16	24,846	-57.8		01	4.1
20	15	26,262	-58.1		04	6.7
15	10	28,110	-57.1		34	6.6
10	6	30,704	-54.2			

EMPALME, MEXICO
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	12.9	5.5	32	2.8
1000	31	130	16.8	3.2	34	3.0
950	31	568	16.8	.3	36	3.4
900	31	1,026	14.5	-2.3	30	1.6
850	31	1,507	13.0	-6.0	24	3.0
800	31	2,014	10.7	-9.6	25	3.5
750	31	2,549	8.2	-12.4	26	4.6
700	31	3,115	5.1	-15.0	26	6.5
650	31	3,716	1.6	-19.0	27	8.6
600	31	4,356	-2.7	-21.4	27	10.5
550	31	5,040	-7.1	-25.0	27	12.6
500	31	5,775	-12.4	-29.6	27	14.2
450	31	6,571	-18.3	-34.1	27	16.6
400	31	7,439	-24.9	-38.3	26	19.5
350	31	8,400	-31.8	-44.0	26	22.4
300	31	9,468	-40.0	-47.9	26	26.7
250	31	10,690	-48.4		26	30.5
200	31	12,135	-55.5		26	31.0
175	31	12,981	-58.1		26	29.5
150	31	13,946	-61.0		27	25.7
125	31	15,068	-65.0		27	21.0
100	30	16,421	-68.6		27	16.2
80	29	17,756	-69.4		27	11.6
70	29	18,553	-68.9		28	9.8
60	29	19,479	-67.0		28	7.9
50	29	20,590	-63.9		27	8.2
40	29	21,967	-61.3		27	8.1
30	27	23,765	-59.2		27	8.9
25	25	24,912	-57.7		27	7.4
20	25	26,325	-56.3		27	8.8
15	22	28,161	-53.8		27	9.8
10	15	30,803	-48.5			

• FAIRBANKS, ALASKA
1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	-18.6	-24.2	01	1.0
1000	17	234	-10.6	-13.1	02	.6
950	31	531	-14.7	-17.7	07	1.0
900	31	942	-13.2	-17.3	13	.6
850	31	1,377	-12.9	-17.9	16	.4
800	31	1,840	-13.2	-18.5	26	2.2
750	31	2,330	-15.0	-20.6	26	3.1
700	31	2,849	-17.4	-24.7	26	4.2
650	31	3,402	-20.1	-27.9	27	5.4
600	31	3,991	-23.7	[illegible]	28	6.7
550	31	4,622	-27.7	-33.8	28	7.9
500	31	5,302	-31.6	-37.4	29	8.8
450	31	6,039	-36.7	-39.6	29	10.5
400	31	6,846	-42.2	-41.4	29	12.4
350	31	7,740	-47.9		29	13.5
300	31	8,740	-53.9		29	16.7
250	31	9,898	-58.1		29	16.7
200	31	11,303	-57.9		29	16.5
175	30	12,152	-56.5		28	16.6
150	30	13,133	-55.6		28	17.3
125	30	14,295	-55.7		28	17.4
100	30	15,718	-55.2		28	19.5
80	30	17,140	-55.9		28	22.8
70	27	17,974	-56.4		28	24.3
60	26	18,959	-56.3		28	27.2
50	22	20,157	-56.8		28	26.9
40	19	21,551	-57.1		28	31.2
30	17	23,369	-58.6		28	35.0
25	15	24,522	-59.0		28	34.5
20	10	26,062	-57.8			
15						
10						

FLINT, MICH.
989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	236	-2.1	-5.5	27	2.1
1000						
950	31	553	-4.9	-6.3	26	4.3
900	31	977	-6.0	-8.4	27	6.5
850	31	1,425	-6.1	-12.3	27	8.4
800	31	1,901	-5.7	-13.7	27	11.2
750	31	2,406	-6.6	-15.4	26	15.1
700	31	2,943	-8.7	-17.9	26	17.1
650	31	3,515	-11.7	[illegible]	27	18.7
600	31	4,124	-14.8	-24.6	27	22.0
550	31	4,778	-18.7	[illegible]	27	24.4
500	31	5,482	-23.5	-33.6	27	27.7
450	31	6,245	-28.5	-37.6	26	29.7
400	31	7,079	-34.0	-42.4	26	33.8
350	31	8,004	-40.5	-43.8	26	36.2
300	31	9,036	-47.5		26	39.5
250	31	10,223	-54.3		27	42.3
200	31	11,641	-56.9		27	41.0
175	29	12,490	-56.6		27	38.0
150	28	13,468	-57.1		27	34.9
125	26	14,620	-57.1		27	30.2
100	25	16,025	-58.7		27	26.0
80	23	17,420	-60.2		27	23.4
70	23	18,253	-60.4		27	20.7
60	22	19,212	-60.7		27	17.8
50	21	20,350	-60.9		28	16.2
40	18	21,750	-61.1		28	14.2
30	18	23,536	-61.5		29	12.9
25	17	24,662	-61.3		30	15.2
20	15	26,036	-60.8		29	18.8
15	12	27,823	-59.2		29	18.8
10	5	30,339	-54.4			

FORT WORTH, TEXAS
999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	2.8	[illegible]	31	1.3
1000	14	228	-.2	-6.8	33	2.7
950	31	583	4.0	[illegible]	24	4.1
900	31	1,025	6.8	[illegible]	25	6.0
850	31	1,496	7.9	-4.8	25	8.1
800	31	1,995	6.5	-7.6	25	8.9
750	31	2,523	4.4	-10.8	25	10.2
700	31	3,082	1.5	-14.2	25	11.7
650	31	3,676	-1.4	-17.6	25	13.8
600	31	4,309	-5.1	-20.9	25	16.1
550	31	4,987	[illegible]	-25.2	26	18.2
500	31	5,715	[illegible]	[illegible]	26	19.9
450	31	6,505	[illegible]	-34.8	26	23.6
400	31	7,366	-26.9	[illegible]	26	[illegible]
350	31	8,318	-33.7	-45.9	25	29.6
300	31	9,379	[illegible]	-49.2	25	32.6
250	31	10,597	-48.4		25	39.8
200	31	12,046	-55.2		25	43.4
175	29	12,896	-57.4		25	[illegible]
150	29	13,864	[illegible]		25	[illegible]
125	29	14,990	[illegible]		26	[illegible]
100	[illegible]	16,347	[illegible]		26	[illegible]
80	[illegible]	17,697	[illegible]		26	[illegible]
70	27	18,504	[illegible]		26	[illegible]
60	[illegible]	19,444	-65.0		26	[illegible]
50	[illegible]	20,558	-63.4		26	[illegible]
40	[illegible]	21,943	-60.4		26	7.3
30	[illegible]	23,739	-59.1		28	5.6
25	[illegible]	24,885	-58.3		29	7.0
20	[illegible]	26,302	-56.7		30	7.0
15	[illegible]	28,137	-54.8		30	7.8
10	[illegible]	[illegible]	-49.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1972

GLASGOW, MONT.
934 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-14.8	-18.5	03	.6
1000						
950						
900	31	979	-9.4	-12.5	29	3.9
850	31	1,421	-9.4	-14.1	30	7.9
800	31	1,889	-10.7	-15.5	30	8.8
750	31	2,384	-12.6	-17.2	30	10.0
700	31	2,908	-15.1	-18.5	29	10.6
650	31	3,466	-17.5	-21.1	29	12.1
600	31	4,063	-20.8	-24.0	29	13.9
550	31	4,701	-24.4	-28.2	29	15.8
500	31	5,390	-28.8	-32.6	29	17.1
450	31	6,136	-33.6	-36.9	29	19.4
400	31	6,953	-39.3	-38.6	28	22.2
350	31	7,859	-45.4	-42.4	29	23.9
300	31	8,870	-51.1		29	25.7
250	30	10,036	-55.1		29	27.6
200	30	11,461	-54.5		29	25.9
175	30	12,318	-53.9		29	24.5
150	29	13,308	-52.9		29	23.4
125	29	14,484	-53.2		28	23.2
100	27	15,920	-54.4		29	20.0
80	27	17,348	-55.0		29	19.4
70	27	18,201	-55.3		29	17.8
60	26	19,191	-56.1		29	16.2
50	23	20,352	-56.4		30	14.0
40	22	21,769	-57.5		30	12.7
30	21	23,584	-58.0		31	13.3
25	19	24,737	-58.4		32	13.6
20	17	26,107	-58.8		32	11.8
15	12	27,916	-59.6		35	10.0
10						

GRAND JUNCTION, COLO.
853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	-7.1	-9.5	11	1.5
1000						
950						
900						
850	22	1,546	-6.7	-10.6	12	2.4
800	31	1,978	-5.0	-10.6	16	2.8
750	31	2,485	-5.7	-12.5	20	3.0
700	31	3,024	-8.0	-15.7	25	5.3
650	31	3,597	-10.4	-18.8	27	7.2
600	31	4,210	-13.7	-21.8	27	9.7
550	31	4,867	-17.6	-25.7	27	12.5
500	31	5,573	-22.3	-31.2	27	15.6
450	31	6,339	-27.6	-35.8	27	18.5
400	31	7,176	-33.8	-41.5	27	20.6
350	31	8,104	-39.7	-44.4	27	23.2
300	31	9,140	-46.4		27	25.9
250	31	10,334	-52.1		28	29.7
200	31	11,771	-54.0		28	30.1
175	31	12,628	-54.1		28	28.5
150	31	13,614	-55.4		27	26.6
125	30	14,763	-57.2		27	23.4
100	28	16,171	-60.3		27	19.7
80	27	17,556	-61.7		27	15.5
70	27	18,383	-61.7		27	12.8
60	24	19,325	-61.0		27	10.2
50	24	20,462	-60.0		28	7.1
40	22	21,846	-59.3		29	4.9
30	21	23,659	-58.3		33	2.8
25	19	24,803	-58.0		32	3.7
20	17	26,197	-57.9		34	5.0
15	13	28,003	-57.0		33	7.7
10						

• GREAT FALLS, MONT.
886 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	-8.3	-13.9	23	6.3
1000						
950						
900						
850	31	1,441	-7.2	-14.4	26	9.4
800	31	1,912	-9.5	-15.1	27	9.7
750	31	2,408	-12.2	-16.8	29	10.8
700	31	2,934	-14.2	-18.3	29	12.3
650	31	3,494	-16.3	-20.7	29	14.3
600	31	4,093	-19.5	-24.9	29	14.9
550	31	4,735	-23.3	-28.9	29	16.3
500	31	5,426	-27.9	-33.5	29	18.0
450	31	6,176	-32.9	-37.3	29	19.0
400	31	6,995	-38.7	-41.0	29	21.4
350	31	7,903	-44.7		29	24.2
300	31	8,918	-50.4		29	26.6
250	31	10,096	-54.3		29	28.6
200	31	11,525	-54.4		29	25.9
175	29	12,369	-53.6		29	23.0
150	29	13,361	-53.5		29	21.9
125	27	14,532	-52.7		28	20.1
100	27	15,967	-54.6		28	17.3
80	27	17,392	-55.0		29	16.3
70	25	18,247	-55.0		29	14.4
60	22	19,216	-55.0		29	11.3
50	22	20,379	-55.4		30	11.9
40	18	21,825	-54.8		31	9.3
30	15	23,693	-55.2		32	8.2
25	13	24,875	-55.4		34	8.9
20	9	26,345	-54.3			
15	7	28,194	-56.7			
10						

GREEN BAY, WIS.
992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-9.1	-11.7	29	1.6
1000	5	249	-19.9	-23.1		
950	31	544	-8.7	-11.0	30	2.2
900	31	963	-8.7	-12.2	27	3.3
850	31	1,407	-8.3	-14.2	27	6.1
800	31	1,877	-9.0	-15.5	27	8.0
750	31	2,376	-10.2	-16.9	27	10.4
700	31	2,906	-11.8	-17.9	27	13.6
650	31	3,471	-14.3	-21.1	27	16.3
600	31	4,075	-17.2	-24.9	27	19.2
550	31	4,723	-21.1	-29.9	27	22.3
500	31	5,421	-25.6	-34.3	27	24.8
450	31	6,177	-30.6	-38.2	26	29.5
400	31	7,004	-36.4	-42.8	26	32.9
350	31	7,920	-42.7		26	35.6
300	31	8,943	-49.1		27	39.2
250	31	10,125	-54.4		26	39.6
200	31	11,547	-56.1		26	38.3
175	31	12,399	-55.1		27	37.8
150	30	13,379	-55.2		26	33.5
125	29	14,535	-56.5		27	32.6
100	29	15,948	-57.8		27	27.3
80	28	17,352	-58.5		27	23.1
70	27	18,192	-59.0		28	23.3
60	27	19,157	-60.1		28	20.0
50	27	20,294	-60.1		28	16.9
40	25	21,700	-59.9		28	16.4
30	21	23,488	-59.9		29	13.9
25	19	24,639	-60.0		29	14.8
20	18	26,031	-60.1		29	11.4
15	8	27,796	-58.3			
10						

GREENSBORO, N. C.
988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	3.5	1.0	31	.6
1000						
950	31	594	6.5	1.1	25	4.9
900	31	1,039	6.5	1.0	25	8.3
850	31	1,507	5.3	-2.1	26	9.6
800	31	2,002	3.7	-6.1	26	10.9
750	31	2,524	1.4	-8.8	26	13.0
700	31	3,077	-1.2	-12.2	26	14.6
650	31	3,666	-3.8	-17.9	26	17.2
600	31	4,294	-7.0	-21.8	26	19.0
550	31	4,968	-11.2	-26.2	26	21.4
500	31	5,693	-15.8	-29.1	27	24.4
450	31	6,479	-21.2	-33.7	26	26.4
400	31	7,338	-27.4	-38.9	26	28.2
350	31	8,288	-34.3	-43.9	26	28.5
300	31	9,347	-42.0	-49.5	26	30.5
250	31	10,558	-50.4		26	35.1
200	31	11,991	-56.6		27	41.9
175	29	12,829	-58.6		27	41.8
150	28	13,799	-60.5		27	39.7
125	27	14,927	-63.2		27	33.2
100	26	16,283	-66.6		27	27.7
80	26	17,632	-66.7		27	22.7
70	23	18,434	-65.7		27	20.5
60	21	19,370	-64.3		27	15.8
50	19	20,483	-63.4		28	13.9
40	17	21,860	-62.8		28	9.4
30	15	23,642	-61.0		29	8.8
25	14	24,784	-59.4		28	8.7
20	13	26,191	-57.6		29	9.9
15	13	28,017	-55.3		27	14.3
10	8	30,592	-50.8			

GUADALUPE IS., MEXICO
1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	23	14.7	10.5	34	3.8
1000	30	154	13.7	8.4	34	4.7
950	30	586	12.2	1.2	33	4.0
900	30	1,037	10.5	-3.9	34	4.2
850	30	1,512	8.7	-7.9	34	4.0
800	30	2,012	7.9	-13.4	34	3.2
750	30	2,542	6.1	-16.5	30	3.3
700	30	3,104	3.1	-20.6	29	4.8
650	30	3,701	.1	-22.1	29	5.3
600	30	4,337	-4.3	-25.1	29	4.9
550	30	5,016	-8.8	-28.5	29	7.3
500	30	5,747	-14.2	-32.2	29	8.4
450	30	6,538	-19.7	-36.2	28	9.0
400	30	7,401	-26.2	-41.3	28	10.3
350	30	8,356	-33.5	-46.9	28	13.0
300	30	9,417	-41.5	-47.8	28	14.4
250	30	10,631	-49.2		27	17.0
200	30	12,076	-54.7			
175	30	12,925	-57.5			
150	30	13,893	-60.3			
125	30	15,019	-64.2			
100	30	16,373	-67.4			
80	30	17,714	-68.5			
70	30	18,515	-67.9			
60	30	19,444	-66.8			
50	30	20,553	-63.9			
40	29	21,932	-61.3			
30	28	23,728	-59.1			
25	28	24,875	-57.7			
20	27	26,294	-55.1			
15	25	28,145	-53.3			
10	14	30,781	-48.4			
7						

• GUAM, MARIANA IS.
1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.7	22.1	08	3.2
1000	21	122	24.8	21.9	08	4.3
950	31	566	22.3	20.0	08	10.7
900	31	1,036	19.5	15.8	08	10.3
850	31	1,527	17.2	10.8	08	8.8
800	31	2,044	15.8	2.8	08	7.8
750	31	2,590	13.3	-3.0	08	7.6
700	31	3,167	10.5	-8.6	08	7.9
650	31	3,781	7.9	-13.4	09	7.2
600	31	4,437	4.1	-18.8	09	7.1
550	31	5,139	.2	-21.1	10	7.5
500	31	5,896	-4.5	-27.0	09	8.3
450	31	6,718	-9.5	-30.7	10	7.1
400	31	7,617	-15.4	-36.0	10	5.8
350	31	8,615	-22.4	-42.1	10	4.7
300	31	9,726	-30.7	-49.0	09	2.7
250	31	10,994	-40.8	-56.3	10	1.7
200	31	12,473	-52.7		15	2.7
175	31	13,321	-59.7		14	4.1
150	30	14,267	-67.4		14	5.2
125	29	15,344	-75.4		12	6.1
100	26	16,614	-82.4		11	8.8
80	22	17,864	-81.8		09	12.0
70	19	18,614	-78.5		09	10.7
60	18	19,510	-72.4		09	12.0
50	17	20,593	-67.1		09	13.5
40	17	21,961	-60.8		09	14.4
30	16	23,765	-56.8		09	11.0
25	15	24,927	-54.5		09	7.1
20	14	26,370	-51.4		21	1.6
15	13	28,242	-49.1		27	8.0
10	8	30,954	-42.4			
7						

HILO, HAWAII
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	19.4	16.7	26	1.0
1000	31	133	20.9	16.2	30	.9
950	31	576	17.8	14.8	03	1.5
900	31	1,037	14.6	12.4	07	1.5
850	31	1,519	12.2	7.3	13	1.1
800	31	2,025	10.1	.4	20	1.9
750	31	2,561	9.0	-8.9	23	2.3
700	31	3,131	7.6	-16.2	24	3.3
650	31	3,738	5.0	-18.3	25	5.0
600	31	4,386	1.4	-22.3	25	6.7
550	31	5,081	-2.8	-25.7	26	9.3
500	31	5,829	-7.8	-30.0	26	11.5
450	31	6,640	-13.3	-34.6	26	14.0
400	31	7,525	-19.9	-39.9	26	17.6
350	31	8,506	-26.6	-44.9	26	20.6
300	31	9,598	-34.5	-50.2	26	23.2
250	31	10,850	-42.9		26	30.1
200	31	12,321	-53.3		27	33.9
175	31	13,169	-59.5		27	34.1
150	31	14,118	-66.2		27	31.9
125	31	15,206	-72.5		26	24.1
100	30	16,502	-76.6		27	15.4
80	28	17,789	-76.7		25	4.3
70	28	18,565	-72.7		25	1.2
60	27	19,477	-69.2		12	1.1
50	27	20,577	-65.6		09	3.2
40	27	21,950	-60.7		08	4.4
30	26	23,758	-56.8		08	3.9
25	26	24,917	-55.4		07	2.8
20	25	26,346	-53.7		03	1.5
15	22	28,205	-50.3		26	5.0
10	19	30,864	-46.9		26	12.9
7	5	33,287	-38.7			

HUNTINGTON W. VA.
990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	3.4	-.8	23	1.3
1000						
950	31	579	3.7	-.5	24	5.6
900	31	1,018	2.8	-1.3	25	9.2
850	31	1,481	2.3	-5.3	26	12.0
800	31	1,970	1.1	-8.7	26	14.2
750	31	2,488	-1.1	-11.4	26	15.7
700	31	3,036	-3.8	-13.8	26	17.1
650	31	3,618	-6.3	-16.9	26	19.0
600	31	4,241	-9.6	-19.9	27	21.9
550	31	4,908	-13.6	-24.2	27	24.2
500	31	5,627	-17.7	-29.1	27	26.0
450	31	6,408	-22.9	-34.2	27	28.9
400	31	7,261	-28.8	-39.5	26	32.4
350	31	8,206	-35.5	-44.6	26	35.1
300	31	9,259	-43.3	-50.8	26	36.7
250	31	10,467	-50.8		26	41.0
200	30	11,900	-56.9		26	46.9
175	30	12,742	-58.8		26	46.3
150	30	13,708	-59.7		26	44.7
125	26	14,844	-60.8		26	37.1
100	24	16,219	-63.5		26	30.7
80	21	17,609	-63.3		27	23.7
70	21	18,430	-63.5		27	19.2
60	20	19,377	-63.4		27	15.6
50	17	20,494	-62.1		27	12.5
40	15	21,882	-61.4		29	10.7
30	12	23,692	-60.7		30	8.2
25	10	24,831	-59.4		31	5.3
20	9	26,243	-58.6			
15	8	28,066	-58.0			
10						
7						

• INTERNATIONAL FALLS, MINN.
974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-17.1	-21.7	25	.9
1000						
950	31	542	-16.7	-18.2	27	2.7
900	31	948	-16.7	-18.3	28	4.6
850	31	1,380	-14.3	-17.9	29	6.8
800	31	1,840	-14.0	-19.6	29	8.5
750	31	2,330	-14.8	-21.7	29	10.9
700	31	2,851	-16.7	-24.0	29	11.8
650	31	3,405	-19.2	-25.8	29	13.1
600	31	3,997	-22.2	-28.3	28	14.8
550	31	4,632	-25.9	-31.0	28	17.4
500	31	5,316	-30.2	-34.7	28	20.3
450	31	6,059	-35.1	-37.3	28	23.6
400	31	6,870	-40.8	-42.8	28	26.1
350	31	7,771	-46.3		28	29.5
300	31	8,781	-51.2		27	31.4
250	31	9,957	-54.1		27	30.9
200	31	11,386	-54.2		27	29.6
175	31	12,245	-53.3		28	27.5
150	31	13,238	-53.2		28	25.7
125	31	14,411	-54.0		28	25.3
100	31	15,840	-54.7		28	24.0
80	30	17,260	-56.1		28	23.2
70	29	18,107	-56.7		28	21.6
60	29	19,085	-56.8		28	19.6
50	29	20,237	-57.9		28	18.9
40	28	21,648	-58.7		29	17.6
30	26	23,453	-59.6		30	18.6
25	24	24,623	-59.4		30	17.4
20	2.	26,024	-59.5		29	19.3
15	18	27,814	-59.7		29	20.6
10	14	30,333	-60.9		29	24.6
7	7	32,549	-60.5			

JACKSON, MISS.
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	7.4	5.8	09	.4
1000	29	172	8.1	5.5	19	.7
950	31	588	8.8	4.3	22	2.8
900	31	1,038	9.9	2.1	24	5.4
850	31	1,513	9.3	-2.8	25	6.4
800	31	2,014	7.5	-6.0	26	9.3
750	31	2,543	5.3	-8.4	26	11.3
700	31	3,105	2.7	-13.2	26	13.3
650	31	3,701	-.5	-17.8	25	15.3
600	31	4,336	-4.2	-21.4	25	16.8
550	31	5,017	-8.1	-25.8	25	18.7
500	31	5,750	-13.4	-30.1	25	20.1
450	31	6,543	-19.2	-34.3	26	22.9
400	31	7,408	-25.3	-39.8	25	24.9
350	31	8,367	-32.3	-43.9	25	28.3
300	31	9,433	-40.2	-47.2	25	32.6
250	31	10,655	-48.5		25	38.6
200	31	12,097	-56.4		26	41.8
175	29	12,942	-58.9		26	42.6
150	29	13,903	-62.0		26	39.3
125	29	15,022	-65.4		26	31.7
100	28	16,367	-68.6		26	26.6
80	25	17,700	-69.0		26	19.1
70	24	18,500	-67.5		26	14.5
60	22	19,433	-66.0		26	11.4
50	21	20,548	-64.2		25	10.7
40	19	21,918	-63.0		26	13.7
30	17	23,701	-61.2		27	11.2
25	16	24,837	-59.8		27	14.0
20	14	26,243	-57.9		27	14.9
15	12	28,066	-54.4		27	15.3
10						
7						

JOHN F. KENNEDY INT. AP NY
1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	3.4	-1.5	33	2.4
1000	29	166	2.5	-1.0	33	2.0
950	31	569	1.9	-1.9	27	4.2
900	31	1,005	1.0	-3.5	27	7.1
850	31	1,464	.1	-6.5	27	9.8
800	31	1,949	-1.0	-10.8	28	12.3
750	31	2,463	-2.3	-11.7	28	15.2
700	30	3,010	-4.3	-14.9	27	18.5
650	30	3,591	-7.1	-18.1	27	21.1
600	30	4,212	-10.7	-22.6	27	24.5
550	30	4,877	-14.4	-26.1	27	26.4
500	30	5,593	-18.8	-29.3	27	29.3
450	30	6,370	-24.0	-31.7	27	32.9
400	30	7,220	-29.6	-37.8	26	36.8
350	30	8,163	-36.0	-42.3	26	39.5
300	30	9,214	-43.6	-48.4	26	43.3
250	29	10,416	-51.7		26	45.2
200	29	11,839	-58.1		26	47.7
175	27	12,674	-58.6		27	47.8
150	25	13,636	-59.2		27	41.4
125	24	14,776	-60.9		26	38.2
100	22	16,158	-62.3		26	31.7
80	21	17,533	-62.9			
70	21	18,356	-62.6			
60	18	19,311	-61.3			
50	18	20,442	-61.2			
40	17	21,835	-60.4			
30	16	23,634	-58.9			
25	16	24,781	-58.0			
20	15	26,196	-57.7			
15	7	28,021	-56.6			
10						
7						

JOHNSTON IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.5	19.2	06	7.3
1000	31	127	23.0	17.8	06	8.1
950	31	573	19.1	16.3	06	8.5
900	31	1,036	15.7	13.0	07	6.9
850	31	1,520	13.2	7.9	07	5.7
800	31	2,028	11.2	2.3	07	4.5
750	31	2,568	11.4	-6.8	05	3.2
700	31	3,142	9.3	-12.6	02	2.5
650	31	3,753	6.3	-15.2	32	2.3
600	31	4,404	2.3	-19.8	31	3.1
550	31	5,101	-1.9	-24.2	32	3.3
500	31	5,852	-6.5	-28.7	33	4.6
450	31	6,667	-11.8	-32.7	31	6.3
400	31	7,558	-17.8	-37.0	30	8.3
350	31	8,547	-24.4	-41.8	29	12.5
300	31	9,649	-32.5	-49.1	26	15.9
250	31	10,911	-41.4	-54.1	27	19.8
200	31	12,388	-52.9		27	21.4
175	31	13,238	-59.2		27	21.5
150	31	14,187	-66.2		27	19.9
125	30	15,274	-73.5		28	16.9
100	30	16,557	-79.4		29	9.9
80	28	17,818	-80.1		34	2.9
70	27	18,579	-76.3		08	2.9
60	27	19,482	-70.5		09	3.7
50	27	20,578	-65.7		09	6.8
40	25	21,949	-61.0		09	9.3
30	24	23,760	-56.1		08	9.3
25	23	24,920	-55.0		08	7.3
20	21	26,356	-52.4		07	2.8
15	19	28,235	-49.0		28	5.0
10	17	30,934	-43.5		26	18.6
7	5	33,314	-39.7			

KEY WEST, FLA.
1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	21.5	18.3	06	3.6
1000	30	151	21.5	17.7	07	4.2
950	30	595	18.6	15.6	09	4.1
900	30	1,058	15.9	11.1	11	2.7
850	30	1,542	13.3	5.2	12	2.3
800	30	2,052	11.8	-1.3	13	1.9
750	30	2,591	10.5	-8.6	16	1.7
700	30	3,162	7.9	-12.7	19	1.6
650	30	3,770	5.0	-16.0	22	2.2
600	30	4,419	1.3	-19.6	24	3.8
550	30	5,113	-2.8	-22.8	26	4.9
500	30	5,861	-7.8	-26.8	25	6.8
450	30	6,673	-13.0	-31.7	26	8.3
400	30	7,560	-19.3	-33.5	26	11.3
350	30	8,542	-26.0	-40.8	26	14.3
300	30	9,635	-34.7	-47.6	27	16.4
250	30	10,882	-44.7		27	20.0
200	30	12,339	-55.1		28	24.8
175	30	13,182	-60.1		28	24.0
150	30	14,132	-65.2		27	20.9
125	30	15,229	-70.1		27	16.7
100	30	16,541	-74.3		27	12.2
80	29	17,834	-75.5		27	5.2
70	29	18,612	-72.9		23	1.8
60	29	19,528	-68.3		13	1.9
50	28	20,630	-65.1		12	2.9
40	28	22,002	-61.7		14	2.0
30	27	23,807	-57.0		33	1.8
25	25	24,966	-55.3		29	4.0
20	23	26,396	-53.5		28	7.3
15	23	28,259	-50.3		27	11.1
10	20	30,941	-42.5		26	22.5
7						

+ KOROR, CAROLINE IS.
1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.4	24.1	07	3.2
1000	31	101	26.5	23.6	07	4.3
950	31	554	23.2	21.0	07	7.3
900	31	1,025	20.4	17.2	07	7.1
850	31	1,518	17.6	13.6	08	6.5
800	31	2,036	15.5	8.7	08	6.0
750	31	2,582	13.0	3.5	08	6.1
700	31	3,159	10.1	-.7	08	5.6
650	31	3,772	7.0	-5.9	08	5.6
600	31	4,427	3.4	-10.5	09	6.1
550	31	5,127	-.6	-14.7	08	6.8
500	31	5,884	-4.4	-20.2	09	7.4
450	31	6,706	-9.2	-25.5	09	7.3
400	31	7,608	-14.9	-30.8	09	7.9
350	31	8,608	-21.8	-37.2	08	7.8
300	31	9,721	-30.2	-44.5	08	7.8
250	31	10,991	-40.5	-53.6	09	7.1
200	31	12,471	-52.9		10	8.4
175	31	13,319	-59.7		10	10.3
150	31	14,266	-67.1		10	11.4
125	31	15,347	-74.7		10	11.1
100	31	16,618	-81.6		09	10.8
80	29	17,866	-81.3		09	10.6
70	27	18,623	-77.4		09	11.6
60	27	19,519	-72.3		09	16.5
50	27	20,605	-66.8		09	21.8
40	26	21,975	-60.3		09	24.6
30	25	23,798	-53.6		09	17.2
25	24	24,980	-50.6		09	5.3
20	24	26,442	-48.6		26	7.1
15	24	28,347	-45.6		27	20.2
10	21	31,064	-42.4		27	27.0
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	26.6	23.1	06	7.1
1000	30	94	26.0	22.7	06	8.4
950	30	545	22.4	21.0	06	11.3
900	30	1,015	19.5	16.6	07	11.5
850	30	1,506	16.7	12.7	07	10.1
800	30	2,023	16.3	1.7	07	7.9
750	30	2,570	14.1	-2.3	07	6.9
700	30	3,149	10.9	-4.9	07	6.8
650	30	3,763	7.7	-9.4	08	7.4
600	30	4,419	4.2	-14.4	08	7.9
550	30	5,122	.3	-18.1	08	7.8
500	30	5,881	-3.9	-22.0	09	8.2
450	30	6,704	-8.9	-27.0	08	7.2
400	30	7,607	-14.6	-32.9	09	7.1
350	30	8,604	-21.6	-36.9	07	6.2
300	30	9,722	-29.8	-41.9	08	3.9
250	30	10,995	-40.0	-51.0	13	3.8
200	30	12,477	-52.7	-62.0	15	5.8
175	30	13,325	-60.0		14	6.6
150	30	14,268	-68.2		13	8.1
125	25	15,341	-76.6		12	7.9
100	18	16,605	-84.1		09	10.0
80	13	17,841	-83.5		09	9.8
70	13	18,593	-77.7		09	9.7
60	10	19,492	-73.2		09	12.7
50	10	20,572	-67.5		09	19.1
40	10	21,936	-60.9		09	18.7
30	10	23,743	-55.7		09	14.8
25	9	24,903	-52.2			
20	8	26,356	-48.8			
15	8	28,261	-45.6			
10	7	30,973	-43.3			

LAKE CHARLES, LA. 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	9.3	8.2	05	1.2
1000	31	160	11.0	8.2	12	1.3
950	31	589	11.9	6.2	20	3.4
900	31	1,042	11.4	3.0	23	4.8
850	31	1,519	9.9	-.9	24	5.9
800	31	2,022	8.6	-6.3	24	7.8
750	31	2,554	6.3	-9.8	25	9.0
700	31	3,117	3.6	-14.1	25	9.8
650	31	3,715	.3	-17.0	25	11.5
600	31	4,352	-3.4	-20.7	25	13.5
550	31	5,035	-7.6	-24.8	25	14.8
500	31	5,769	-12.7	-30.0	25	16.9
450	31	6,565	-18.2	-34.4	25	19.6
400	31	7,433	-24.7	-38.6	25	23.4
350	31	8,394	-31.5	-42.9	25	26.7
300	31	9,465	-39.1	-48.4	25	31.9
250	31	10,694	-47.2		25	37.8
200	31	12,141	-55.5		26	43.4
175	31	12,986	-59.0		26	41.1
150	31	13,944	-62.4		26	34.8
125	31	15,060	-66.4		26	30.7
100	29	16,393	-69.6		25	24.5
80	27	17,722	-70.6		26	15.6
70	24	18,518	-69.3		25	14.5
60	21	19,448	-66.7		25	11.8
50	21	20,560	-63.6		25	9.7
40	19	21,936	-62.4		26	10.8
30	18	23,720	-60.8		26	14.3
25	17	24,857	-60.3		27	16.8
20	15	26,253	-57.6		27	16.3
15	11	28,089	-53.0		26	19.2
10	6	30,737	-47.4			

LANDER, WYO. [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	-12.7	-18.5	25	[illegible]
1000						
950						
900						
850						
800	31	1,942	-7.7	-16.6	28	1.4
750	31	2,445	[illegible]	[illegible]	29	3.7
700	31	2,981	-9.4	[illegible]	29	7.7
650	31	3,551	-12.1	-22.4	29	11.8
600	31	4,159	-15.7	[illegible]	29	[illegible]
550	31	4,810	-20.0	-29.3	28	14.8
500	31	5,511	-24.7	-33.4	28	15.1
450	31	6,269	-30.4	[illegible]	28	16.9
400	31	7,095	-36.7	[illegible]	28	18.8
350	31	8,011	-42.9	-44.9	28	21.2
300	31	9,033	-49.2		28	22.7
250	31	10,216	-53.6		28	26.8
200	29	11,659	-55.1		28	28.7
175	29	12,511	-55.3		29	27.7
150	28	13,494	-54.7		28	25.2
125	28	14,659	-55.6		28	22.4
100	28	16,074	-57.9		28	19.7
80	28	17,479	-58.3		29	16.2
70	27	18,318	-59.1		29	12.5
60	27	19,283	-59.5		29	10.3
50	26	20,426	-59.4		29	8.6
40	23	21,818	-58.9		29	7.5
30	21	23,614	-57.8		31	6.3
25	21	24,763	-58.3		33	6.7
20	17	26,182	-57.6		34	6.3
15	12	28,027	-57.9		35	9.6
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*** LIHUE KAUAI, HAWAII 1012 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	19.1	15.4	35	1.1
1000	31	142	20.8	15.1	08	1.6
950	31	584	17.5	[illegible]	08	[illegible]
900	31	1,044	14.0	[illegible]	08	1.3
850	31	1,524	11.1	4.5	[illegible]	.5
800	31	2,030	10.3	-5.5	27	[illegible]
750	31	2,566	9.3	[illegible]	26	4.1
700	31	3,135	6.7	-15.6	26	5.7
650	31	3,739	3.4	-18.5	26	7.3
600	31	4,384	.2	[illegible]	25	9.7
550	31	[illegible]	-3.9	[illegible]	26	[illegible]
500	31	5,821	-8.9	[illegible]	25	[illegible]
450	31	6,629	-14.3	[illegible]	27	15.9
400	31	7,511	-20.5	-39.4	26	18.7
350	31	8,488	-27.8	-45.5	27	21.5
300	31	9,576	-35.7	[illegible]	27	[illegible]
250	31	10,821	-44.0		27	[illegible]
200	31	12,289	-53.3		26	[illegible]
175	31	13,137	-58.9		27	34.6
150	30	14,091	-64.9		27	31.2
125	[illegible]	15,191	-70.3		27	[illegible]
100	[illegible]	16,497	-74.4		27	[illegible]
80	[illegible]	17,797	-74.4		26	7.6
70	25	18,581	-71.9		24	4.8
60	24	19,495	-68.1		24	1.8
50	23	20,602	-64.5		[illegible]	1.1
40	21	21,979	-61.2		[illegible]	1.7
30	19	23,783	-56.6		[illegible]	.8
25	19	24,943	-55.2		31	1.1
20	18	26,371	-53.4		[illegible]	1.1
15	14	28,238	-51.3		26	3.1
10	7	30,934	-45.1			

LITTLE ROCK, ARK. [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	[illegible]	-.1	33	.9
1000	[illegible]	171	[illegible]	-2.1	[illegible]	[illegible]
950	31	579	[illegible]	[illegible]	[illegible]	3.8
900	31	1,019	[illegible]	[illegible]	[illegible]	[illegible]
850	31	1,488	[illegible]	[illegible]	[illegible]	6.9
800	31	1,984	[illegible]	[illegible]	25	[illegible]
750	31	2,510	[illegible]	[illegible]	26	[illegible]
700	31	3,066	.2	[illegible]	26	[illegible]
650	31	3,657	[illegible]	[illegible]	26	[illegible]
600	31	4,287	-6.5	[illegible]	26	[illegible]
550	31	[illegible]	[illegible]	[illegible]	26	[illegible]
500	31	5,689	[illegible]	[illegible]	26	[illegible]
450	31	6,477	[illegible]	[illegible]	26	[illegible]
400	31	7,335	[illegible]	[illegible]	26	[illegible]
350	31	8,285	[illegible]	[illegible]	26	[illegible]
300	31	9,341	[illegible]	[illegible]	26	[illegible]
250	31	10,550	[illegible]		26	[illegible]
200	31	[illegible]	-56.3		26	[illegible]
175	31	12,828	-58.5		26	[illegible]
150	31	13,793	[illegible]		26	[illegible]
125	31	[illegible]	[illegible]		26	[illegible]
100	[illegible]	16,278	[illegible]		26	[illegible]
80	[illegible]	17,628	[illegible]		26	[illegible]
70	28	18,434	-67.0		26	[illegible]
60	28	19,370	-64.9		26	[illegible]
50	[illegible]	[illegible]	-63.8		26	[illegible]
40	[illegible]	21,854	[illegible]		26	[illegible]
30	[illegible]	23,633	[illegible]		27	11.2
25	[illegible]	24,769	-59.7		28	[illegible]
20	21	26,169	-57.9		28	[illegible]
15	13	28,023	-55.7		27	[illegible]
10						

MCGRATH, ALASKA 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	103	-17.9	-22.0	29	.5
1000	16	239	-7.9	-10.0	30	.8
950	27	532	-13.2	-15.5	01	.5
900	27	945	-11.2	-15.3	11	1.3
850	27	1,386	-9.7	-15.6	20	.7
800	27	1,853	-10.5	-17.6	26	1.8
750	27	2,348	-12.3	-20.0	27	3.1
700	27	2,873	-14.9	-23.7	26	4.5
650	27	3,431	-17.9	-26.5	25	5.8
600	27	4,026	-21.3	-29.6	25	6.3
550	27	4,662	-25.5	-32.7	25	7.3
500	27	5,347	-30.2	-37.8	25	8.6
450	27	6,090	-34.8	-37.7	25	11.1
400	27	6,903	-40.2	-43.1	25	11.7
350	27	7,805	-46.2		26	12.9
300	27	8,813	-52.3		26	15.3
250	26	9,967	-57.1		26	15.1
200	25	11,386	-57.8		26	14.9
175	25	12,231	-56.4		26	14.6
150	25	13,215	-54.5		26	16.7
125	25	14,384	-54.0		27	17.4
100	25	15,817	-54.0		26	18.7
80	25	17,249	-54.2		26	20.6
70	24	18,095	-54.0		27	22.5
60	24	19,086	-53.9		27	23.4
50	24	20,255	-54.4		27	25.8
40	22	21,699	-55.0		27	28.6
30	18	23,557	-55.3		27	30.4
25	14	24,748	-55.3		27	30.6
20	12	26,143	-56.4		27	35.5
15	9	27,952	-57.4			
10						
7						

+ MAJURO, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.0	23.6	07	5.2
1000	31	91	26.7	22.4	07	6.8
950	31	543	23.1	20.7	07	9.0
900	31	1,014	20.2	17.3	07	8.8
850	31	1,507	17.8	12.6	08	7.7
800	31	2,025	16.3	7.4	09	6.3
750	31	2,573	14.0	2.1	09	5.9
700	31	3,152	10.8	-1.3	09	5.1
650	31	3,767	7.7	-4.8	09	5.6
600	31	4,423	4.4	-9.3	10	4.7
550	30	5,128	.7	-14.6	09	5.7
500	30	5,888	-3.6	-18.3	09	6.1
450	30	6,713	-8.5	-23.5	09	5.9
400	30	7,618	-14.0	-28.9	09	6.0
350	30	8,622	-20.5	-33.8	10	4.9
300	30	9,741	-28.7	-40.4	11	4.2
250	30	11,020	-38.8	-49.7	13	4.9
200	30	12,510	-51.4		14	5.8
175	30	13,364	-58.6		14	6.4
150	30	14,314	-66.8		12	5.5
125	30	15,394	-75.1		09	5.7
100	30	16,662	-82.6		08	10.3
80	30	17,902	-81.1		09	10.9
70	30	18,660	-77.3		08	11.7
60	29	19,560	-72.1		09	15.8
50	29	20,647	-66.5		09	20.2
40	29	22,015	-61.0		09	22.0
30	28	23,835	-53.5		09	16.5
25	28	25,021	-49.6		09	5.4
20	28	26,488	-48.1		26	6.1
15	27	28,396	-45.0		27	16.9
10	19	31,124	-40.8		27	25.4
7	8	33,549	-37.1			

*** MEDFORD, OREG. 973 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	-1.7	-3.8	21	.6
1000						
950	31	594	-.2	-2.5	17	.7
900	31	1,028	.4	[illegible]	17	3.3
850	31	1,486	-.8	-7.9	21	4.9
800	31	1,968	-2.9	-11.5	24	6.9
750	31	2,478	-5.2	-14.3	26	9.5
700	31	3,017	-7.9	-16.8	28	11.2
650	31	3,591	-10.8	-20.6	28	12.2
600	31	4,202	-14.5	-24.4	28	13.9
550	31	4,856	-18.5	[illegible]	28	15.9
500	31	5,561	-23.5	-32.1	29	17.2
450	31	6,323	-28.6	-35.5	29	19.0
400	31	7,158	-34.3	-40.1	29	21.5
350	31	8,083	-40.2	-42.3	29	23.7
300	31	9,117	-46.7		29	24.3
250	31	10,310	-52.7		29	26.7
200	31	11,741	-54.8		29	26.3
175	31	12,593	-55.4		29	26.2
150	31	13,576	-55.7		29	25.0
125	30	14,729	-56.7		29	21.7
100	29	16,140	-58.6		29	17.5
80	27	17,536	-59.0		30	13.5
70	26	18,376	-59.4		30	10.9
60	26	19,341	-59.6		30	8.5
50	23	20,488	-58.9		32	6.2
40	22	21,892	-58.0		35	4.9
30	20	23,728	-56.5		01	6.0
25	18	24,888	-56.5		01	5.8
20	16	26,316	-56.8		02	8.2
15	15	28,150	-56.4		02	10.2
10	8	30,776	-55.5			

MERIDA, MEXICO 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	19.1	18.0	07	1.1
1000	31	141	22.1	18.4	08	3.7
950	31	587	19.9	16.2	10	4.8
900	31	1,052	17.1	13.0	10	[illegible]
850	31	1,539	15.0	7.3	11	3.5
800	31	2,051	12.9	3.5	12	2.7
750	31	2,592	11.1	-3.3	11	2.3
700	31	3,165	8.9	-9.6	11	1.7
650	31	3,775	5.8	-10.6	12	.7
600	31	4,426	2.1	-13.6	27	.9
550	31	5,123	-2.0	-17.3	25	1.9
500	31	5,874	-6.5	-24.1	25	2.8
450	31	6,689	-11.7	-29.4	25	6.1
400	31	7,582	-17.5	-34.4	25	6.7
350	31	8,571	-24.6	-40.5	25	8.4
300	31	9,671	-33.3	-47.9	25	11.1
250	31	10,925	-43.3		26	12.5
200	31	12,393	-54.0		27	15.4
175	31	13,238	-59.9		27	14.4
150	30	14,189	-65.7		27	13.6
125	30	15,284	-70.6		27	13.7
100	29	16,590	-75.7		28	10.1
80	28	17,877	-77.0		29	3.9
70	27	18,648	-74.6		31	2.5
60	27	19,556	-69.6		34	.6
50	27	20,657	-64.9		[illegible]	.5
40	25	22,031	-61.0		[illegible]	3.0
30	25	23,839	-56.7		08	4.5
25	23	25,001	-54.6		08	4.3
20	21	26,434	-53.3		05	3.6
15	17	28,316	-47.7		35	3.7
10	15	31,022	-42.1			

MIAMI, FLA. [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	19.3	15.6	[illegible]	1.3
1000	31	163	[illegible]	[illegible]	[illegible]	2.5
950	31	606	17.9	[illegible]	[illegible]	3.5
900	31	1,067	15.0	[illegible]	[illegible]	3.0
850	31	1,550	12.8	6.5	13	2.2
800	31	2,059	11.6	[illegible]	17	1.4
750	31	2,598	[illegible]	[illegible]	19	1.7
700	31	3,169	7.2	[illegible]	22	2.1
650	31	3,775	3.9	-11.4	24	3.1
600	31	4,421	.3	-14.4	[illegible]	5.2
550	31	5,113	-4.1	-18.4	25	6.5
500	31	5,858	[illegible]	-21.9	26	8.6
450	31	6,667	-13.9	[illegible]	26	10.8
400	31	7,551	-20.5	[illegible]	26	13.4
350	31	8,529	-27.3	[illegible]	26	[illegible]
300	31	9,618	-35.5	-45.2	27	[illegible]
250	31	[illegible]	-45.4		27	[illegible]
200	31	12,314	-55.9		28	[illegible]
175	31	13,154	-60.8		28	25.5
150	31	14,103	[illegible]		27	23.5
125	28	15,203	-69.9		27	18.5
100	28	16,516	-74.4		27	13.9
80	28	17,810	-75.1		27	7.9
70	28	18,588	-72.7		24	3.9
60	28	19,504	-68.4		18	1.6
50	28	20,608	-64.9		15	1.7
40	28	21,978	-61.9		19	.4
30	26	23,772	-58.1		30	3.8
25	24	24,921	-56.5		28	6.7
20	23	26,345	-54.5		27	9.8
15	18	28,204	-50.0		26	12.4
10	13	30,905	-42.6		26	21.8

MIDLAND, TEXAS 918 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	.5	-4.4	24	.7
1000						
950						
900	31	1,029	3.5	-5.7	25	1.5
850	31	1,497	7.4	-8.7	26	5.7
800	31	1,996	6.7	-9.4	26	8.2
750	31	2,523	4.5	-12.2	26	10.0
700	31	3,082	1.7	-15.4	26	11.3
650	31	3,676	-1.5	-18.6	26	12.5
600	31	4,309	-5.2	-22.8	26	14.6
550	31	4,986	-9.8	-27.4	26	16.7
500	31	5,715	-14.9	-32.0	26	19.9
450	31	6,503	-20.6	-36.1	26	22.8
400	31	7,363	-27.1	-40.4	26	25.1
350	31	8,314	-34.1	-46.1	26	28.4
300	31	9,374	-41.6	-49.4	26	32.0
250	31	10,590	-49.0		26	35.2
200	31	12,033	-55.6		26	35.3
175	31	12,878	-58.1		26	33.6
150	31	13,843	-60.9		26	29.8
125	31	14,968	-64.0		27	25.6
100	29	16,324	-67.0		26	19.5
80	26	17,666	-67.8		26	15.5
70	25	18,474	-67.1		26	12.4
60	25	19,404	-66.7		26	10.2
50	24	20,518	-63.9		25	7.1
40	21	21,897	-61.8		27	6.8
30	20	23,689	-59.8		29	4.9
25	19	24,829	-59.3		28	5.0
20	17	26,229	-57.8		28	7.8
15	15	28,063	-55.1		29	7.3
10	7	30,722	-50.6			

MONTERREY, MEXICO 965 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	8.8	4.6	32	1.6
1000						
950	30	583	11.7	4.4	33	1.7
900	30	1,037	12.7	1.3	31	.9
850	30	1,518	13.7	-2.5	22	1.5
800	30	2,027	11.8	-5.1	21	2.7
750	30	2,565	9.6	-7.6	24	3.6
700	30	3,134	6.3	-10.6	25	6.2
650	30	3,737	2.7	-13.4	25	7.4
600	30	4,380	-1.5	-17.9	25	9.1
550	30	5,067	-5.9	-24.8	25	12.3
500	30	5,807	-10.5	-29.3	25	14.8
450	30	6,609	-16.1	-33.2	24	17.8
400	30	7,485	-22.3	-37.2	24	19.8
350	30	8,456	-29.4	-41.5	25	22.1
300	30	9,535	-37.5	-46.0	25	23.5
250	30	10,770	-46.2		26	28.1
200	30	12,222	-55.6		26	29.7
175	30	13,063	-60.4		26	26.5
150	30	14,013	-64.6		26	23.0
125	30	15,118	-68.1		25	20.8
100	30	16,442	-72.3		25	15.6
80	28	17,752	-73.3		25	10.4
70	28	18,535	-71.9		24	7.0
60	28	19,455	-68.1		23	3.9
50	26	20,561	-64.5		23	2.4
40	25	21,937	-61.9		24	3.2
30	25	23,729	-59.5		26	5.0
25	23	24,874	-58.3		25	6.9
20	22	26,285	-56.4		26	9.0
15	16	28,127	-53.1		27	9.9
10	8	30,745	-46.7			

MONETT, MO. 967 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	-2.1	-4.4	19	.6
1000						
950	31	574	-1.9	-5.4	23	2.1
900	31	1,006	.7	-7.1	25	7.1
850	31	1,467	2.3	-9.0	26	9.7
800	31	1,957	2.2	-12.3	26	11.7
750	31	2,476	.2	[illegible]	25	13.4
700	31	3,027	-2.0	-17.9	26	15.4
650	31	3,613	-5.0	-21.3	26	17.3
600	31	4,237	-8.8	-23.8	25	19.1
550	31	4,906	-12.9	-28.4	26	21.2
500	31	5,626	-17.9	-33.3	26	23.1
450	31	6,405	-23.4	[illegible]	26	25.4
400	31	7,256	-29.6	-42.4	26	28.2
350	31	8,198	-36.7	-47.0	25	31.8
300	31	9,245	-44.1		26	35.9
250	31	10,447	-51.5		26	38.1
200	31	11,882	-55.6		26	41.1
175	31	12,730	-57.3		26	42.0
150	30	13,699	-58.6		26	39.5
125	30	14,838	-61.0		26	34.5
100	30	16,217	-63.4		26	26.7
80	29	17,588	-64.5		26	20.3
70	27	18,404	-64.3		26	16.9
60	27	19,350	-62.9		27	12.8
50	25	20,480	-62.0		26	9.4
40	25	21,861	-61.8		27	8.5
30	23	23,650	-59.4		29	[illegible]
25	23	24,789	-59.9		30	6.2
20	21	26,194	-57.5		30	[illegible]
15	18	28,033	-56.0		30	9.4
10	6	30,574	-54.2			

MONTGOMERY, ALA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	8.0	5.5	34	.7
1000	29	180	9.3	5.4	26	.5
950	31	597	10.0	3.0	25	2.7
900	31	1,046	9.6	1.3	26	5.3
850	31	1,520	8.4	-2.4	26	6.4
800	31	2,020	6.5	-4.8	26	7.9
750	31	2,548	4.6	-8.5	26	9.8
700	30	3,108	2.0	-11.8	26	11.7
650	30	3,703	-.7	[illegible]	26	13.2
600	30	4,338	-4.3	-20.7	26	15.4
550	30	5,019	-8.6	[illegible]	26	16.9
500	30	5,751	-13.4	-29.0	26	18.2
450	30	6,544	-19.2	-32.3	26	20.4
400	30	7,410	-25.2	-36.5	26	23.2
350	30	8,370	-31.8	-43.4	26	27.7
300	30	9,439	-39.5	[illegible]	26	32.8
250	30	10,663	-48.2		26	38.4
200	30	12,104	-56.9		26	42.7
175	30	12,945	-59.6		26	42.7
150	29	13,904	-62.7		26	[illegible]
125	27	15,019	-65.9		26	[illegible]
100	25	16,361	-69.0		26	[illegible]
80	23	17,691	-70.2		26	[illegible]
70	23	18,488	-68.2		26	[illegible]
60	[illegible]	19,419	-65.9		26	[illegible]
50	[illegible]	20,531	-64.5		26	[illegible]
40	23	21,900	-62.6		26	[illegible]
30	23	23,681	-60.8		27	[illegible]
25	[illegible]	24,820	-59.0		28	[illegible]
20	21	26,223	-56.5		29	[illegible]
15	[illegible]	28,059	-53.7		[illegible]	[illegible]
10	[illegible]	30,707	-47.6			

NASHVILLE, TENN. [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	[illegible]	.3	28	.2
1000	11	230	-2.0	-7.3		
950	31	585	2.7	-.4	25	4.1
900	31	1,024	4.4	-2.4	24	7.9
850	31	1,491	4.4	[illegible]	24	[illegible]
800	31	1,984	2.9	[illegible]	25	[illegible]
750	31	2,505	1.1	[illegible]	25	[illegible]
700	31	[illegible]	-1.7	[illegible]	26	[illegible]
650	31	3,645	-4.2	-16.6	26	[illegible]
600	31	4,272	-7.4	[illegible]	26	[illegible]
550	31	4,945	-11.4	-24.4	26	[illegible]
500	31	5,669	-16.4	-28.4	26	[illegible]
450	31	6,454	-21.8	[illegible]	26	[illegible]
400	31	7,310	-28.1	-39.7	26	[illegible]
350	31	8,258	-35.0	-45.9	26	[illegible]
300	31	9,313	[illegible]	-49.0	26	[illegible]
250	31	10,521	[illegible]		26	[illegible]
200	31	11,952	-56.7		26	[illegible]
175	31	12,794	-58.9		26	[illegible]
150	31	13,756	[illegible]		26	[illegible]
125	[illegible]	14,881	[illegible]		26	[illegible]
100	[illegible]	16,248	-65.1		26	[illegible]
80	28	17,604	-66.3		26	[illegible]
70	28	18,416	-65.5		26	[illegible]
60	28	19,356	-64.5		26	[illegible]
50	28	20,475	[illegible]		26	[illegible]
40	27	21,852	-62.8		27	[illegible]
30	26	23,628	-61.3		28	9.5
25	[illegible]	24,763	-60.1		28	[illegible]
20	[illegible]	26,163	[illegible]		28	[illegible]
15	[illegible]	27,983	-56.4		28	[illegible]
10	[illegible]	30,576	-51.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

*** NOME, ALASKA 1017 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-11.2	-16.0	06	1.7
1000	26	157	-9.8	-14.6	11	1.3
950	30	529	-10.5	-16.5	12	1.4
900	30	945	-11.4	-17.7	09	1.7
850	30	1,382	-12.5	-20.1	12	.6
800	30	1,844	-14.1	-22.3	27	.7
750	30	2,332	-15.8	-25.6	27	1.9
700	30	2,851	-18.0	-27.9	27	2.8
650	30	3,402	-20.4	-30.6	28	3.3
600	30	3,991	-23.6	-33.4	27	4.4
550	30	4,622	-27.5	-36.5	27	5.2
500	30	5,302	-31.7	-38.5	26	6.0
450	30	6,041	-36.0	-41.1	26	5.4
400	30	6,850	-41.3	-43.7	24	10.1
350	30	7,748	-47.2		24	14.0
300	30	8,751	-53.6		24	18.2
250	30	9,909	-58.8		24	18.6
200	30	11,307	-58.9		23	20.7
175	30	12,149	-57.0		24	17.5
150	30	13,127	-56.0		24	15.7
125	29	14,296	-55.5		24	18.9
100	27	15,744	-54.8		25	18.9
80	27	17,169	-55.2		25	22.3
70	25	18,003	-54.2		25	23.1
60	25	18,990	-54.7		25	26.0
50	24	20,166	-55.1		25	27.8
40	23	21,607	-55.6		25	29.8
30	23	23,437	-56.5		25	35.0
25	19	24,623	-55.7		26	38.1
20	16	26,002	-56.3			
15	7	27,892	-58.0			
10						
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NORTH PLATTE, NEBR. 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	-11.0	-14.0	32	1.9
1000						
950						
900	30	1,000	-7.0	-12.8	32	4.6
850	31	1,445	-4.5	-13.4	32	7.2
800	31	1,922	-4.7	-15.4	31	6.8
750	31	2,430	-4.9	-16.2	30	8.6
700	31	2,970	-7.1	-18.1	30	9.8
650	31	3,546	-10.0	-20.6	29	10.8
600	31	4,159	-13.6	-23.6	28	13.0
550	31	4,816	-17.2	-27.4	27	15.2
500	31	5,524	-22.1	-32.5	27	18.1
450	31	6,290	-27.5	-37.8	27	19.9
400	31	7,127	-33.9	-42.6	27	22.2
350	31	8,052	-40.7	-45.1	26	25.2
300	31	9,082	-48.1		26	28.5
250	31	10,267	-53.9		26	32.8
200	31	11,689	-56.1		27	33.2
175	31	12,539	-55.4		26	32.1
150	31	13,522	-55.7		27	29.8
125	30	14,681	-57.3		27	27.7
100	28	16,078	-59.2		27	23.3
80	28	17,474	-59.9		27	16.4
70	28	18,305	-60.9		27	14.7
60	27	19,263	-60.6		28	13.4
50	27	20,399	-60.2		28	11.4
40	25	21,793	-59.9		28	8.7
30	25	23,593	-58.9		30	7.4
25	24	24,749	-58.6		31	6.7
20	23	26,151	-58.8		34	6.9
15	15	28,010	-57.4		34	5.6
10						
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OAKLAND, CALIF. 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	5.4	2.2	35	.4
1000	31	176	6.5	.5	34	1.4
950	31	597	6.1	-2.5	34	2.8
900	31	1,039	5.2	-7.3	32	3.4
850	31	1,505	3.4	-10.5	31	4.3
800	31	1,995	1.7	-12.0	30	6.2
750	31	2,513	-1.1	-15.5	30	7.9
700	31	3,061	-3.8	-20.5	30	9.9
650	31	3,643	-6.7	-24.1	30	12.0
600	31	4,263	-10.2	-27.9	30	14.3
550	31	4,928	-14.3	-30.4	30	16.9
500	31	5,645	-18.7	-34.5	30	19.4
450	31	6,422	-24.3	-38.4	29	21.8
400	31	7,270	-30.7	-43.8	29	23.5
350	31	8,208	-37.6	-47.5	29	25.4
300	31	9,250	-45.4		29	26.1
250	31	10,448	-52.3		29	29.4
200	31	11,878	-55.9		29	29.8
175	31	12,727	-56.4		29	28.7
150	31	13,702	-57.8		29	25.2
125	31	14,850	-59.3		29	22.1
100	31	16,240	-61.6		29	16.3
80	30	17,620	-62.7		29	12.6
70	29	18,441	-63.2		30	9.5
60	28	19,387	-62.7		31	7.1
50	28	20,515	-61.3		32	4.8
40	27	21,900	-59.8		35	4.0
30	26	23,707	-58.6		02	4.3
25	23	24,846	-57.5		04	4.6
20	21	26,269	-56.3		04	5.5
15	13	28,149	-56.1		02	5.4
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OMAHA, NEBR. 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	-8.4	-11.2	29	1.8
1000						
950	30	561	-7.5	-10.1	31	2.8
900	31	977	-5.0	-11.6	30	5.9
850	31	1,427	-4.3	-12.5	29	6.8
800	31	1,906	-3.6	-12.3	28	8.1
750	31	2,416	-4.4	-14.2	28	10.4
700	31	2,957	-6.3	-17.7	28	13.4
650	31	3,535	-9.1	-19.6	27	16.2
600	31	4,150	-12.7	-22.1	27	18.5
550	31	4,809	-16.8	-25.9	26	21.1
500	31	5,518	-21.5	-31.1	26	24.2
450	31	6,287	-26.7	-36.6	26	28.3
400	31	7,127	-32.8	-41.2	26	31.9
350	31	8,056	-39.5	-45.6	26	36.1
300	31	9,091	-47.1		27	29.5
250	31	10,280	-53.2		27	32.8
200	31	11,703	-56.5		28	32.9
175	31	12,553	-55.2		28	31.5
150	31	13,537	-55.4		27	29.7
125	31	14,695	-57.4		27	27.2
100	30	16,101	-58.7		27	23.7
80	28	17,494	-59.8		28	17.4
70	28	18,328	-60.2		28	15.4
60	28	19,289	-60.2		28	12.9
50	25	20,431	-60.1		30	8.4
40	23	21,836	-59.5		30	7.6
30	19	23,627	-59.5		32	8.1
25	17	24,771	-58.3		32	9.6
20	12	26,165	-58.1		33	9.6
15	6	27,964	-59.1			
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+ PAGO PAGO, AMERICAN SAMOA 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	29.9	24.5	09	3.5
1000	31	84	27.7	23.4	09	3.8
950	31	539	24.1	20.8	08	4.5
900	31	1,011	20.7	17.7	06	3.7
850	31	1,505	18.3	13.4	06	3.6
800	31	2,024	16.5	9.7	05	3.3
750	31	2,572	13.8	5.4	05	3.1
700	31	3,151	10.7	.4	05	2.8
650	31	3,766	7.5	-3.3	05	2.4
600	31	4,421	4.1	-6.5	04	2.5
550	31	5,125	.2	-11.3	03	1.6
500	31	5,883	-4.1	-16.1	02	1.3
450	31	6,707	-8.7	-19.9	01	.7
400	31	7,611	-14.2	-26.6	33	2.0
350	31	8,614	-20.8	-33.8	27	1.8
300	31	9,733	-28.9	-42.5	25	3.3
250	30	11,009	-39.4	-51.7	24	5.3
200	29	12,497	-51.8		24	4.9
175	29	13,348	-59.0		24	4.0
150	29	14,297	-66.9		23	4.4
125	29	15,377	-75.0		21	3.8
100	29	16,644	-82.8		16	2.1
80	29	17,884	-81.7		09	5.4
70	29	18,642	-76.4		09	7.9
60	29	19,547	-69.6		09	11.9
50	29	20,648	-65.1		09	17.2
40	29	22,024	-60.2		08	21.4
30	27	23,847	-54.4		09	20.7
25	26	25,020	-52.0		08	19.7
20	26	26,478	-47.9		09	15.6
15	25	28,394	-43.9		09	11.3
10	18	31,130	-40.2		08	8.6
7	5	33,547	-38.5			

*** PEORIA, ILL. 995 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	-5.8	-8.5	24	1.1
1000	8	237	-14.3	-19.0		
950	31	559	-5.7	-8.4	25	3.0
900	31	984	-4.7	-10.1	26	5.3
850	31	1,436	-3.0	-12.2	26	8.6
800	31	1,917	-2.4	-13.4	27	11.3
750	31	2,428	-3.8	-15.4	27	15.0
700	31	2,971	-6.0	-17.9	27	17.0
650	31	3,548	-8.9	-20.8	26	19.5
600	31	4,164	-12.1	-23.9	26	22.3
550	31	4,825	-16.1	-27.4	26	24.2
500	31	5,536	-20.9	-32.1	26	26.3
450	31	6,306	-26.5	-35.9	26	28.2
400	31	7,146	-32.9	-41.7	26	31.0
350	31	8,076	-39.5	-47.2	26	34.1
300	31	9,112	-46.5		26	37.8
250	30	10,302	-53.6		26	41.6
200	29	11,716	-56.8		26	42.9
175	28	12,562	-57.0		26	43.1
150	28	13,537	-57.6		26	38.6
125	27	14,681	-58.9		26	35.1
100	27	16,074	-60.9		27	28.7
80	26	17,461	-61.5		27	23.5
70	25	18,283	-61.5		27	20.0
60	23	19,244	-61.5		27	16.6
50	23	20,375	-61.1		28	14.7
40	22	21,755	-61.3		28	13.5
30	21	23,538	-60.4		29	11.2
25	18	24,662	-60.4		29	13.9
20	16	26,057	-58.8		29	13.4
15	13	27,875	-56.8		30	13.2
10	7	30,509	-54.2			
7						
5						

*** PITTSBURGH, PA. 975 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	1.9	-1.4	24	2.0
1000						
950	31	565	1.1	-1.7	24	4.2
900	31	1,000	.0	-2.6	25	8.6
850	31	1,457	-1.0	-6.1	26	11.4
800	31	1,941	-1.9	-8.5	26	14.3
750	31	2,453	-3.6	-10.6	27	16.7
700	31	2,996	-5.8	-14.4	27	18.2
650	31	3,574	-8.8	-17.0	27	20.2
600	31	4,190	-12.4	-20.4	27	22.1
550	31	4,850	-16.0	-23.8	27	24.8
500	31	5,562	-20.4	-28.9	27	28.2
450	31	6,335	-25.3	-33.8	27	30.1
400	31	7,180	-31.1	-40.2	27	34.6
350	31	8,117	-37.4	-42.7	26	37.8
300	31	9,163	-44.4		26	40.9
250	31	10,365	-52.0		26	45.4
200	31	11,789	-57.5		26	45.4
175	31	12,631	-58.1		26	43.7
150	31	13,601	-58.8		27	39.7
125	30	14,738	-60.3		26	34.7
100	26	16,105	-62.7		27	33.4
80	23	17,491	-62.0		27	25.1
70	23	18,318	-62.2		27	24.2
60	21	19,271	-62.3		27	20.7
50	19	20,389	-62.2		27	15.4
40	18	21,754	-63.2		28	14.4
30	17	23,537	-59.8		29	15.4
25	16	24,676	-60.6		29	11.2
20	15	26,078	-59.8		29	11.5
15	14	27,890	-57.9		29	14.1
10	14	30,464	-55.4		28	17.6
7	11	32,751	-52.0		27	28.9
5	5	34,845	-48.8			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	28.4	23.8	05	4.0
1000	31	85	27.2	23.1	06	4.5
950	31	538	23.5	21.2	07	8.0
900	31	1,009	20.0	17.8	07	9.1
850	31	1,502	17.4	13.1	08	8.4
800	31	2,020	16.2	6.0	07	7.0
750	31	2,567	13.6	2.7	08	5.0
700	31	3,145	10.4	-1.7	09	4.5
650	31	3,759	7.3	-6.5	10	5.2
600	31	4,414	3.8	-12.6	09	6.9
550	31	5,116	.1	-16.3	09	8.5
500	31	5,874	-3.8	-22.0	09	9.6
450	30	6,700	-8.5	-25.9	09	10.1
400	30	7,603	-14.1	-30.6	09	9.4
350	30	8,607	-20.6	-35.3	09	8.3
300	30	9,726	-29.0	-41.6	09	6.4
250	30	11,001	-39.6	-49.7	11	6.6
200	30	12,487	-52.2		12	8.8
175	30	13,338	-59.2		11	10.2
150	30	14,285	-67.4		11	11.6
125	30	15,362	-75.6		09	13.6
100	29	16,625	-82.4		09	15.8
80	29	17,873	-81.2		09	10.8
70	27	18,633	-77.2		09	11.4
60	27	19,530	-72.1		09	15.5
50	26	20,616	-66.6		09	22.1
40	26	21,984	-61.5		09	23.5
30	23	23,801	-54.4		09	18.6
25	23	24,981	-50.7		08	8.0
20	23	26,444	-48.1		26	3.0
15	22	28,348	-46.2		26	18.3
10	18	31,065	-42.8		27	26.9
7						
5						

PORTLAND, MAINE 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	-5.6	-9.4	35	2.4
1000	27	173	-5.0	-8.5	01	1.8
950	31	553	-4.4	-7.1	29	1.6
900	31	979	-5.0	-8.1	25	4.2
850	31	1,428	-5.2	-10.4	26	7.5
800	31	1,904	-5.9	-12.1	27	11.4
750	31	2,410	-6.3	-15.2	26	15.0
700	31	2,948	-8.3	-17.3	26	18.2
650	31	3,520	-11.1	-21.8	26	21.9
600	31	4,132	-14.0	-23.2	27	24.1
550	31	4,788	-17.8	-27.6	27	26.8
500	31	5,494	-22.4	-31.7	26	29.4
450	31	6,261	-27.5	-35.9	26	33.3
400	31	7,099	-32.9	-40.4	26	38.8
350	31	8,029	-38.9	-41.8	26	42.9
300	31	9,069	-45.9		26	45.2
250	31	10,262	-53.5		26	45.4
200	30	11,679	-57.6		27	41.6
175	30	12,521	-58.1		26	39.0
150	29	13,491	-58.1		26	37.7
125	27	14,651	-59.1		27	35.8
100	26	16,048	-60.1		27	28.1
80	25	17,437	-61.1		27	26.8
70	24	18,264	-61.4		27	23.7
60	23	19,228	-60.6		27	20.9
50	21	20,357	-60.5		28	16.9
40	21	21,746	-60.8		28	14.9
30	18	23,558	-59.4		29	11.0
25	18	24,699	-59.6		29	12.7
20	17	26,092	-59.4		29	11.6
15	13	27,894	-59.1			
10	8	30,421	-57.0			
7						
5						

*** QUILLAYUTE, WASH. 1010 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	2.7	.4	13	1.7
1000	26	152	2.1	-.2	13	2.2
950	31	547	1.1	-.9	17	5.1
900	31	981	-1.2	-3.6	19	5.3
850	31	1,435	-3.8	-8.1	22	5.5
800	31	1,912	-5.7	-11.9	24	7.1
750	31	2,416	-8.1	-15.8	25	8.2
700	31	2,949	-11.2	-20.0	26	9.2
650	31	3,515	-14.3	-22.6	27	10.2
600	31	4,118	-17.9	-24.8	27	11.5
550	31	4,765	-20.9	-28.4	28	13.6
500	31	5,464	-25.3	-32.6	29	15.2
450	31	6,221	-30.3	-36.4	29	17.7
400	31	7,050	-35.9	-40.4	30	19.5
350	31	7,967	-42.5	-42.7	30	21.8
300	31	8,991	-49.0		30	23.7
250	31	10,174	-53.7		30	22.7
200	28	11,603	-55.0		30	20.5
175	28	12,458	-54.3		30	20.3
150	28	13,446	-54.6		30	19.1
125	27	14,615	-54.7		30	19.5
100	26	16,036	-56.1		30	17.4
80	24	17,451	-55.8		31	14.0
70	24	18,300	-56.4		31	12.3
60	22	19,274	-56.1		32	10.9
50	20	20,424	-56.9		32	10.1
40	17	21,840	-55.6		33	10.1
30	17	23,674	-55.1		34	9.9
25	15	24,839	-55.2		35	10.9
20	1	26,249	-56.1		34	12.2
15	10	28,095	-55.3			
10	5	30,678	-58.3			
7						
5						

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	-9.5	-15.5	33	3.7
1000						
950						
900	21	1,018	-11.4	-17.7	32	1.9
850	31	1,436	-6.0	-15.2	32	7.6
800	31	1,909	-7.5	-16.7	31	8.4
750	31	2,411	-8.7	-17.6	30	9.4
700	31	2,944	-10.4	-19.2	30	10.8
650	31	3,513	-12.7	-22.1	29	13.2
600	31	4,120	-16.1	-25.4	29	15.5
550	31	4,770	-20.1	-28.9	28	17.0
500	31	5,470	-25.0	-32.9	28	19.0
450	31	6,228	-30.5	-36.0	28	21.2
400	31	7,054	-36.6	-41.5	27	22.6
350	31	7,969	-43.2	-47.0	27	23.9
300	31	8,989	-50.3		27	25.7
250	31	10,166	-54.5		27	27.4
200	30	11,600	-55.8		28	27.2
175	30	12,451	-55.4		27	26.7
150	29	13,436	-55.3		28	27.2
125	28	14,608	-55.8		28	[illegible]
100	28	16,023	-57.4		29	22.2
80	26	17,424	-58.9		28	18.4
70	26	18,261	-59.6		28	[illegible]
60	26	19,226	-59.7		28	15.1
50	26	20,366	-59.8		29	13.6
40	24	21,759	-59.6		30	10.7
30	23	23,576	-59.1		31	9.7
25	21	24,748	-58.7		32	11.0
20	19	26,149	-58.7		32	10.7
15	12	27,962	-60.0			
10						

ST CLOUD, MINN. 981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	-14.3	-18.1	36	.5
1000						
950	31	556	-12.8	-15.2	32	1.8
900	31	970	-10.8	-14.9	30	2.8
850	31	1,411	-9.1	-16.1	29	5.4
800	31	1,880	-9.9	-17.1	28	7.3
750	31	2,377	-11.1	-18.1	28	9.5
700	31	2,905	-12.5	-19.7	28	12.1
650	31	3,469	-14.7	-22.0	28	13.9
600	31	4,072	-17.8	-25.3	28	16.1
550	31	4,718	-22.0	-28.9	28	18.0
500	31	5,412	-26.9	-33.1	28	20.4
450	31	6,164	-32.2	-35.7	27	23.6
400	31	6,985	-37.9	-39.2	27	25.8
350	31	7,897	-43.6	-43.5	27	30.2
300	31	8,917	-49.6		27	33.0
250	31	10,096	-54.6		27	34.4
200	30	11,521	-55.0		27	31.0
175	30	12,376	-54.4		27	30.5
150	30	13,365	-54.0		27	27.9
125	29	14,538	-55.4		27	27.2
100	28	15,962	-56.9		28	23.0
80	27	17,379	-57.8		28	20.6
70	27	18,221	-58.0		28	19.2
60	26	19,187	-58.6		28	18.6
50	26	20,332	-58.9		29	17.0
40	25	21,736	-59.3		29	14.6
30	24	23,528	-60.2		30	12.1
25	19	24,684	-59.0		30	13.8
20	17	26,104	-59.5		33	14.3
15	10	27,882	-59.4			
10	5	30,400	-59.0			

*** ST PAUL IS., ALASKA 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	-.8	-3.2	08	4.2
1000	18	190	-.3	-2.6	16	3.2
950	31	491	-4.1	-5.7	09	4.2
900	31	915	-6.8	-7.7	11	3.2
850	31	1,360	-8.5	-12.4	12	2.3
800	31	1,829	-10.5	-16.4	12	1.5
750	31	2,324	-12.7	-19.6	13	1.2
700	31	2,848	-15.2	-22.6	15	2.2
650	31	3,405	-18.0	-25.3	17	1.7
600	31	3,999	-21.4	-27.2	19	2.4
550	31	4,636	-25.1	-31.1	20	2.8
500	31	5,323	-29.5	-35.2	21	3.2
450	31	6,067	-34.3	-39.1	22	4.3
400	31	6,882	-40.0	-40.1	23	4.9
350	31	7,785	-45.8	-43.4	22	7.6
300	31	8,795	-51.6		23	8.5
250	31	9,968	-55.6		22	11.1
200	31	11,388	-55.0		23	10.8
175	31	12,244	-53.3		23	11.9
150	31	13,239	-52.2		24	13.7
125	31	14,420	-52.1		24	13.5
100	31	15,868	-51.5		24	15.7
80	31	17,316	-51.4		24	15.2
70	31	18,184	-51.1		24	15.8
60	30	19,180	-51.3		25	16.4
50	28	20,374	-51.3		25	17.6
40	28	21,825	-51.4		25	18.7
30	28	23,692	-51.6		26	20.5
25	28	24,875	-51.9		26	20.7
20	27	26,310	-52.7		27	23.0
15	23	28,173	-54.3		27	23.9
10	16	30,837	-53.9		28	30.0

SALEM, ILL. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	-2.2	-4.5	30	.7
1000	11	228	-7.9	-11.3	31	2.7
950	31	568	-2.2	-5.6	25	3.8
900	31	999	-.3	-7.7	26	7.3
850	31	1,458	1.4	-8.0	26	9.3
800	31	1,945	.6	-11.9	26	11.2
750	31	2,462	-1.0	-13.3	26	13.5
700	31	3,011	-3.1	-15.6	26	16.5
650	31	3,595	-6.0	-19.7	26	19.0
600	31	4,217	-9.8	-23.4	26	21.3
550	31	4,883	-14.1	-27.6	25	23.1
500	31	5,600	-18.7	-31.9	26	25.9
450	31	6,377	-24.2	-36.6	26	28.4
400	31	7,225	-30.5	-40.8	26	31.7
350	31	8,164	-37.2	-46.1	26	32.3
300	31	9,209	-44.9		26	35.8
250	31	10,408	-52.3		26	34.3
200	31	11,834	-56.2		27	35.2
175	31	12,681	-57.2		27	35.0
150	31	13,652	-58.9		27	31.7
125	31	14,791	-61.1		27	31.8
100	31	16,171	-62.8		27	25.8
80	30	17,543	-63.3		27	19.3
70	30	18,364	-63.2		28	15.0
60	30	19,313	-63.0		28	13.0
50	29	20,440	-62.3		29	9.3
40	29	21,821	-61.7		30	6.7
30	28	23,611	-61.3		32	7.4
25	27	24,746	-60.7		32	6.3
20	25	26,133	-59.3		32	5.9
15	24	27,941	-57.5		30	9.0
10	17	30,551	-55.3		28	13.2

SALEM, OREG. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	1.3	-1.9	19	2.5
1000	29	164	1.9	-.7	20	3.4
950	31	568	1.8	-2.1	20	6.6
900	31	1,004	.5	-4.5	22	8.2
850	31	1,460	-2.2	-6.7	23	9.1
800	31	1,941	-4.2	-9.7	25	9.9
750	31	2,448	-6.7	-13.4	26	10.5
700	31	2,984	-9.7	-16.7	27	11.5
650	31	3,553	-12.4	-21.1	27	13.5
600	31	4,161	-16.0	-24.1	28	15.0
550	31	4,811	-20.2	-27.7	28	16.0
500	31	5,512	-24.7	-31.6	29	16.9
450	31	6,271	-29.4	-35.2	29	18.5
400	31	7,102	-35.1	-41.0	29	21.1
350	31	8,024	-41.5	-40.8	30	23.2
300	31	9,052	-47.8		29	26.3
250	31	10,240	-53.2		29	26.5
200	31	11,669	-54.6		30	24.6
175	31	12,524	-54.8		29	22.9
150	30	13,512	-54.4		29	22.5
125	29	14,675	-55.5		29	21.1
100	29	16,092	-57.2		30	18.0
80	28	17,503	-57.5		31	12.7
70	25	18,347	-57.1		31	9.6
60	24	19,312	-57.9		31	8.4
50	22	20,458	-57.1		33	7.5
40	22	21,873	-56.7		34	6.5
30	22	23,699	-56.2		01	6.9
25	22	24,858	-56.3		02	7.6
20	21	26,267	-56.7		01	8.6
15	13	28,097	-57.4		02	11.5
10	5	30,714	-57.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH
873 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	-6.1	-11.2	16	1.3
1000						
950						
900						
850	31	1,496	-4.6	-10.1	19	2.5
800	31	1,974	-4.3	-12.2	21	3.6
750	31	2,481	-6.5	-14.7	25	3.9
700	31	3,017	-9.3	-16.4	27	6.5
650	31	3,587	-12.6	-19.5	28	8.8
600	31	4,195	-16.1	-24.1	28	10.7
550	31	4,845	-19.8	-28.7	28	13.1
500	31	5,546	-24.6	-32.6	28	15.4
450	31	6,305	-29.6	-38.0	28	17.0
400	31	7,136	-35.1	-41.6	29	18.9
350	31	8,058	-41.3	-45.5	29	21.8
300	31	9,087	-47.8		29	24.5
250	31	10,275	-53.0		28	26.2
200	31	11,708	-54.2		28	27.1
175	31	12,564	-54.7		28	26.6
150	29	13,543	-54.7		28	24.0
125	29	14,705	-56.6		28	21.4
100	28	16,108	-59.0		28	17.9
80	28	17,502	-60.4		28	14.7
70	28	18,334	-60.5		29	12.3
60	28	19,294	-60.6		29	9.0
50	27	20,427	-60.0		29	7.4
40	23	21,808	-59.2		31	6.3
30	22	23,613	-58.0		32	5.9
25	21	24,775	-57.5		34	5.3
20	19	26,189	-57.1		34	6.6
15	13	28,022	-56.6		34	5.8
10	6	30,602	-58.0			
7						
5						

SAN DIEGO, CALIF.
1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	9.2	3.8	05	1.0
1000	28	155	11.8	2.2	06	1.2
950	31	580	12.1	-2.1	31	1.1
900	31	1,030	9.9	-4.3	30	2.4
850	31	1,503	7.5	-7.6	29	3.3
800	31	2,000	5.2	-11.1	29	4.5
750	31	2,525	3.0	-15.9	29	6.5
700	31	3,081	.5	-19.6	30	9.7
650	31	3,673	-2.2	-21.7	29	11.3
600	31	4,304	-6.2	-23.8	29	13.0
550	31	4,979	-10.7	-28.4	29	14.0
500	31	5,704	-16.2	-32.8	28	16.3
450	31	6,488	-22.0	-37.1	28	18.5
400	31	7,343	-28.6	-41.3	28	20.5
350	31	8,289	-35.5	-47.6	28	21.7
300	31	9,341	-43.5	-51.7	28	23.2
250	31	10,546	-51.2		28	24.9
200	31	11,979	-56.1		28	27.5
175	30	12,813	-57.2		27	27.4
150	28	13,796	-59.2		27	26.4
125	28	14,933	-61.8		27	22.2
100	24	16,328	-65.7		28	16.0
80	24	17,679	-66.6		29	11.0
70	23	18,489	-67.3		29	8.7
60	21	19,421	-66.2		29	6.1
50	21	20,533	-63.8		30	3.7
40	19	21,920	-61.1		32	2.3
30	19	23,717	-58.9		36	2.2
25	19	24,866	-57.4		02	3.0
20	18	26,278	-56.3		31	3.4
15	12	28,106	-54.3		28	9.4
10	5	30,731	-51.5			
7						
5						

SAN JUAN, P. R.
[illegible] MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	23.7	20.1	14	1.8
1000	31	141	23.7	20.4	10	4.4
950	31	589	20.8	18.0	09	7.0
900	31	1,055	17.7	14.7	09	7.2
850	31	1,543	14.6	10.3	08	7.3
800	31	2,054	12.2	5.7	08	7.2
750	31	2,594	9.6	-.1	08	6.4
700	31	3,165	7.5	-7.7	08	5.4
650	31	3,772	4.8	-13.6	08	5.2
600	31	4,420	1.2	-17.5	08	5.3
550	31	5,115	-2.9	-21.9	07	5.1
500	31	5,853	-7.1	-27.2	05	4.7
450	31	6,678	-12.0	-30.7	04	4.9
400	31	7,568	-18.5	-36.0	36	4.8
350	31	8,552	-25.7	-43.2	33	6.7
300	31	9,647	-34.4	-50.5	32	9.2
250	31	10,896	-43.9		31	12.7
200	31	12,363	-53.4		30	15.3
175	31	13,211	-58.9		30	14.5
150	31	14,165	-65.0		29	12.6
125	31	15,261	-70.9		30	10.3
100	31	16,564	-76.1		33	6.3
80	31	17,845	-77.3		04	3.8
70	31	18,617	-73.6		07	5.0
60	31	19,528	-69.0		07	5.4
50	30	20,634	-63.7		08	6.7
40	30	22,014	-60.2		08	7.3
30	30	23,832	-55.0		09	9.2
25	30	25,005	-52.6		09	8.0
20	27	26,458	-49.7		10	3.0
15	26	28,356	-45.2		27	4.1
10	14	31,096	-41.2			
7						
5						

* SAULT STE MARIE, MICH.
989 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-8.2	-10.3	05	.7
1000						
950	31	535	-8.6	-11.1	27	1.9
900	31	953	-10.0	-11.7	26	3.8
850	31	1,393	-11.4	-14.0	28	6.3
800	31	1,858	-11.5	-16.7	28	8.6
750	31	2,352	-12.5	-18.3	28	11.3
700	31	2,877	-14.1	-20.6	27	14.1
650	31	3,438	-16.3	-23.6	27	16.9
600	31	4,036	-19.3	-26.3	27	19.0
550	31	4,679	-22.9	-29.3	27	22.6
500	31	5,372	-27.3	-34.6	27	25.8
450	31	6,122	-32.6	-39.1	27	28.7
400	31	6,943	-38.1	-44.2	27	32.3
350	31	7,854	-44.0		27	37.5
300	31	8,871	-49.9		26	40.6
250	31	10,051	-54.1		26	44.0
200	31	11,478	-54.7		26	42.6
175	31	12,334	-54.5		26	39.4
150	31	13,321	-54.8		26	37.6
125	31	14,487	-55.0		27	34.1
100	31	15,910	-56.2		27	30.4
80	31	17,323	-57.6		27	26.3
70	30	18,158	-58.1		27	24.1
60	30	19,128	-58.6		27	22.6
50	29	20,279	-58.9		28	20.0
40	29	21,677	-59.4		28	19.5
30	29	23,477	-59.9		28	19.3
25	29	24,617	-59.4		28	19.4
20	26	26,011	-58.9		28	19.6
15	25	27,813	-58.4		29	20.8
10	23	30,396	-57.1		28	26.0
7	20	32,678	-54.0		28	28.4
5	15	34,887	-52.8			

* SHEMYA, ALASKA
1002 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	1.1	-2.3	17	2.8
1000	17	141	.5	-2.6	17	5.4
950	31	464	-2.2	-5.0	16	3.8
900	31	891	-5.3	-7.3	19	4.4
850	31	1,338	-8.0	-11.7	19	4.0
800	31	1,807	-10.5	-16.3	20	3.1
750	31	2,301	-13.4	-22.3	[illegible]	3.8
700	31	2,823	-16.1	-24.4	20	4.2
650	31	3,378	-19.5	-28.0	21	4.5
600	31	3,968	-23.3	-32.3	21	5.0
550	31	4,599	-27.5	-35.7	22	5.7
500	31	5,279	-31.8	-40.4	21	6.4
450	31	6,016	-36.9	-44.0	20	5.8
400	31	6,822	-42.5	-47.4	21	6.1
350	31	7,715	-48.3		22	7.0
300	31	8,717	-52.5		22	9.0
250	31	9,888	-55.0		23	10.8
200	31	11,323	-52.5		24	13.1
175	30	12,181	-51.2		24	14.5
150	30	13,184	-50.9		24	14.9
125	30	14,372	-50.7		24	15.9
100	28	15,811	-50.5		24	17.0
80	27	17,259	-50.6		24	16.8
70	25	18,139	-50.3		24	16.8
60	25	19,146	-50.2		24	17.2
50	24	20,330	-49.9		24	16.2
40	24	21,789	-50.3		24	16.2
30	22	23,659	-50.1		24	14.8
25	21	24,854	-49.9		24	14.8
20	20	26,319	-49.5		25	14.2
15	18	28,203	-50.8		26	12.9
10	12	30,765	-54.3		27	19.6
7	6	33,049	-57.7			
5						

* SHREVEPORT, LA.
1011 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	4.2	2.0	36	.6
1000	29	172	4.9	1.0	29	.3
950	31	584	6.9	.8	23	3.2
900	31	1,031	9.2	-.6	24	6.2
850	31	1,505	8.3	-3.0	24	8.7
800	31	2,005	7.0	-6.7	25	10.0
750	31	2,534	4.8	-9.7	25	12.0
700	31	3,093	1.8	-14.3	25	13.0
650	31	3,688	-1.0	-18.1	25	14.6
600	31	4,323	-4.6	-22.5	25	15.9
550	31	5,001	-9.1	-27.5	25	18.3
500	31	5,732	-13.9	-31.4	25	20.4
450	31	6,524	-19.7	-35.6	25	23.1
400	31	7,386	-26.4	-40.3	25	25.2
350	31	8,340	-33.4	-45.1	25	28.6
300	31	9,403	-40.9	-48.4	25	32.2
250	31	10,622	-48.7		25	38.0
200	31	12,063	-55.9		26	43.6
175	31	12,908	-58.8		26	42.4
150	31	13,869	-61.4		26	36.5
125	29	14,993	-64.6		26	30.9
100	27	16,348	-67.8		26	25.0
80	27	17,684	-69.1		26	20.6
70	25	18,487	-68.2		25	16.9
60	24	19,419	-66.6		26	13.7
50	23	20,528	-63.7		26	10.9
40	22	21,899	-62.7		25	10.9
30	21	23,679	-61.3		27	9.6
25	20	24,816	-59.6		28	7.9
20	19	26,222	-57.7		28	11.1
15	16	28,046	-55.8		28	10.7
10	13	30,673	-51.4		27	16.6
7	9	32,982	-47.1			
5	6	35,260	-41.3			

SPOKANE, WASH.
933 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	720	-4.4	-8.9	18	1.7
1000						
950						
900	31	999	-4.8	-8.7	20	3.3
850	31	1,448	-6.1	-11.1	23	5.4
800	31	1,922	-7.7	-12.9	25	6.6
750	31	2,423	-9.4	-14.5	26	7.8
700	31	2,953	-12.3	-17.6	27	9.2
650	31	3,517	-15.5	-20.7	27	10.9
600	31	4,117	-18.7	-24.8	27	12.9
550	31	4,761	-23.0	-28.9	28	15.1
500	31	5,453	-27.3	-34.4	28	16.8
450	31	6,205	-32.0	-38.5	28	18.7
400	31	7,028	-37.3	-40.8	29	20.1
350	31	7,942	-43.0	-43.9	29	22.8
300	31	8,964	-49.1		29	25.9
250	31	10,148	-53.5		29	28.8
200	31	11,579	-54.0		29	27.3
175	31	12,439	-53.3		29	24.7
150	31	13,434	-52.5		29	22.2
125	31	14,609	-53.9		29	21.6
100	31	16,038	-54.7		29	18.7
80	31	17,463	-55.5		29	16.4
70	31	18,315	-55.2		30	14.8
60	29	19,305	-56.0		30	11.8
50	29	20,463	-56.3		31	10.3
40	27	21,876	-56.2		31	10.9
30	24	23,717	-56.3		33	9.7
25	24	24,874	-56.6		34	10.4
20	19	26,322	-56.7		34	10.3
15	13	28,143	-56.7		36	11.0
10	5	30,841	-57.1			
7						
5						

* SWAN ISLAND, W. I.
1012 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	25.7	21.7	07	3.7
1000	31	116	25.2	21.1	06	5.3
950	31	566	21.8	19.0	07	6.8
900	31	1,034	18.6	15.2	08	6.3
850	31	1,523	15.3	11.9	09	5.5
800	31	2,036	12.6	8.5	10	4.8
750	31	2,576	10.3	2.8	10	5.3
700	31	3,149	8.2	-3.8	09	4.8
650	31	3,759	5.9	-8.7	09	5.3
600	31	4,411	2.9	-13.6	08	4.8
550	31	5,110	-.9	-17.1	07	4.2
500	31	5,864	-5.6	-22.0	06	3.7
450	31	6,682	-11.0	-27.3	04	3.2
400	31	7,576	-17.2	-32.3	35	2.3
350	31	8,566	-24.4	-39.3	31	2.8
300	31	9,666	-33.4	-46.6	29	4.5
250	31	10,921	-43.2		29	8.4
200	31	12,386	-54.7		28	10.7
175	31	13,228	-60.8		27	11.9
150	31	14,172	-67.1		27	10.2
125	31	15,257	-72.9		26	8.6
100	30	16,549	-78.1		26	3.6
80	30	17,817	-79.5		09	2.1
70	30	18,579	-76.0		08	4.1
60	29	19,481	-70.5		09	5.7
50	28	20,578	-65.8		09	6.5
40	28	21,949	-61.3		09	8.0
30	26	23,757	-55.8		08	7.8
25	25	24,923	-53.4		07	5.7
20	23	26,365	-51.1		04	1.8
15	23	28,254	-46.8		27	7.3
10	14	30,977	-40.7			
7	5	33,434	-39.3			
5						

TAMPA, FLA.
1020 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	14.5	12.2	06	1.6
1000	31	174	16.7	13.3	09	2.9
950	31	611	15.3	9.6	13	2.7
900	31	1,069	13.9	4.1	18	1.8
850	31	1,550	12.1	-.5	23	2.3
800	31	2,057	11.0	-6.2	25	3.3
750	31	2,593	8.8	-8.8	25	4.6
700	31	3,161	5.8	-13.1	25	5.5
650	31	3,764	2.6	-16.7	25	7.4
600	31	4,407	-1.1	-19.0	25	9.4
550	31	5,095	-5.4	-21.9	26	11.4
500	31	5,836	-10.4	-25.3	26	13.0
450	31	6,640	-15.6	-29.4	26	15.8
400	31	7,518	-21.6	-34.5	26	19.0
350	31	8,491	-28.6	-38.6	26	22.0
300	31	9,576	-36.3	-47.3	26	25.4
250	31	10,815	-46.0		27	30.9
200	31	12,266	-56.0		27	32.8
175	31	13,106	-60.4		27	31.7
150	31	14,058	-63.9		27	27.2
125	31	15,163	-68.7		26	22.7
100	31	16,485	-72.5		26	15.1
80	31	17,791	-73.1		26	9.9
70	31	18,579	-70.2		25	6.8
60	31	19,501	-67.4		26	5.1
50	31	20,608	-64.4		23	2.7
40	31	21,979	-61.9		26	3.1
30	30	23,772	-58.6		28	7.6
25	29	24,922	-57.4		28	10.1
20	28	26,336	-55.7		27	12.4
15	28	28,185	-51.4		27	14.9
10	23	30,856	-44.0		26	23.4
7	6	33,253	-39.4			
5						

TOPEKA, KANS.
987 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	268	-4.7	-8.3	32	.6
1000						
950	31	569	-4.5	-7.7	26	2.6
900	31	996	-3.2	-10.1	26	5.4
850	31	1,450	-1.3	-10.2	27	7.8
800	31	1,934	-.9	-11.1	27	10.1
750	31	2,449	-2.0	-13.8	27	12.6
700	31	2,995	-4.5	-16.4	26	14.3
650	31	3,576	-7.3	-19.2	26	15.8
600	31	4,195	-10.9	-22.7	26	17.8
550	31	4,859	-15.0	-27.1	26	19.5
500	31	5,573	-19.8	-30.5	26	22.2
450	31	6,346	-25.2	-34.4	26	23.7
400	31	7,191	-31.6	-39.7	26	25.4
350	31	8,124	-38.9	-43.9	27	27.0
300	31	9,164	-45.6		27	29.1
250	31	10,360	-52.5		27	31.4
200	31	11,788	-56.1		27	32.9
175	31	12,636	-56.4		28	30.4
150	30	13,613	-57.1		27	30.8
125	30	14,761	-59.2		27	28.4
100	30	16,155	-60.8		28	23.4
80	[illegible]	17,536	-62.4		28	18.1
70	29	18,362	-61.9		28	13.8
60	27	19,313	-62.0		27	12.4
50	27	20,441	-61.3		28	11.0
40	25	21,830	-61.0		28	8.5
30	25	23,623	-59.9		32	4.9
25	22	24,769	-59.6		33	4.2
20	[illegible]	26,176	-59.2		34	5.0
15	[illegible]	28,002	-57.7		33	7.2
10						
7						
5						

TRUK, CAROLINE IS.
+ 1011 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.1	24.1	05	4.7
1000	31	102	27.1	23.3	05	5.8
950	31	555	23.6	21.3	07	7.8
900	31	1,027	20.5	17.4	07	7.5
850	31	1,520	18.0	13.3	08	7.1
800	31	2,039	16.0	7.6	09	6.6
750	31	2,586	13.5	2.2	09	6.3
700	31	3,165	10.8	-3.2	08	5.9
650	31	3,779	7.3	-7.7	09	6.1
600	31	4,434	3.7	-11.1	09	7.6
550	31	5,136	.3	-15.9	09	9.4
500	31	5,894	-4.1	-19.6	09	9.8
450	31	6,717	-9.2	-24.7	09	11.0
400	31	7,620	-14.3	-30.6	09	10.9
350	31	8,622	-20.9	-37.2	09	8.7
300	31	9,740	-29.3	-44.4	10	7.6
250	31	11,014	-39.8	-52.9	11	7.1
200	30	12,500	-52.3		12	10.4
175	30	13,350	-59.5		11	10.7
150	30	14,296	-67.4		10	11.7
125	30	15,373	-75.6		09	13.6
100	30	16,637	-82.8		09	14.5
80	30	17,886	-80.9		09	11.9
70	29	18,645	-76.3		09	12.6
60	29	19,545	-71.9		09	16.8
50	29	20,635	-65.7		09	21.4
40	29	22,008	-60.2		09	23.4
30	28	23,832	-53.4		09	15.7
25	26	25,013	-50.1		07	5.4
20	24	26,480	-47.2		26	6.1
15	23	28,387	-45.6		26	20.9
10	18	31,107	-41.5		26	31.2
7						

* TUCSON, ARIZ.
926 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	4.9	-2.1	15	2.3
1000						
950						
900	31	1,024	8.7	-3.8	15	3.1
850	31	1,496	7.5	-7.5	18	2.3
800	31	1,993	5.2	-10.3	23	3.4
750	31	2,518	3.1	-14.6	26	4.9
700	31	3,074	.2	-18.3	26	6.8
650	31	3,664	-2.9	-21.6	27	9.3
600	31	4,294	-6.4	-26.0	27	12.6
550	31	4,968	-11.2	-29.8	27	14.8
500	31	5,693	-16.0	-33.1	27	17.4
450	31	6,478	-21.8	-38.2	27	19.5
400	31	7,334	-28.3	-42.4	27	21.6
350	31	8,280	-35.5	-47.6	26	24.5
300	31	9,333	-43.3		26	27.2
250	31	10,541	-50.2		26	32.1
200	31	11,976	-55.9		26	34.9
175	31	12,823	-57.1		26	31.9
150	31	13,794	-59.1		26	30.2
125	31	14,928	-62.3		26	25.1
100	31	16,295	-66.0		26	19.8
80	31	17,646	-67.4		26	14.9
70	31	18,451	-66.9		26	12.9
60	29	19,381	-66.0		27	10.5
50	26	20,495	-62.5		27	6.7
40	24	21,873	-61.6		26	5.5
30	22	23,669	-59.3		28	5.3
25	21	24,814	-58.2		28	2.7
20	19	26,224	-57.0		28	5.2
15	16	28,051	-54.9		27	8.5
10	14	30,654	-51.2		28	16.1
7	5	33,045	-44.9			

* VANDENBERG AFB, CALIF.
1008 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	7.9	4.6	05	1.2
1000	31	168	9.1	4.0	02	1.9
950	31	594	9.8	-.8	35	4.4
900	31	1,042	7.8	-4.1	33	5.0
850	31	1,512	5.8	-7.3	33	5.8
800	31	2,006	3.6	-12.0	32	7.2
750	31	2,527	1.4	-14.4	31	8.7
700	31	3,080	-1.1	-17.4	31	10.9
650	31	3,669	-3.8	-21.4	30	12.4
600	31	4,295	-7.9	-25.7	30	14.3
550	31	4,967	-11.9	-29.0	30	16.4
500	31	5,689	-17.0	-32.5	30	18.4
450	31	6,471	-22.6	-37.9	29	19.7
400	31	7,324	-29.1	-43.5	29	22.0
350	31	8,267	-36.4	-48.0	29	23.6
300	31	9,315	-44.4		30	23.9
250	31	10,515	-52.5		30	26.0
200	31	11,940	-56.4		29	24.9
175	31	12,785	-57.8		29	24.6
150	31	13,756	-58.7		29	22.7
125	31	14,895	-61.1		29	20.0
100	31	16,271	-64.0		29	15.2
80	30	17,631	-65.2		29	10.8
70	30	18,445	-65.3		29	8.7
60	30	19,384	-64.8		30	6.5
50	29	20,502	-63.1		31	5.0
40	28	21,883	-61.2		35	3.2
30	27	23,686	-58.6		01	3.6
25	[illegible]	24,834	-57.9		[illegible]	3.9
20	28	26,246	-57.2		06	5.2
15	18	28,068	-55.4		35	3.2
10	15	30,681	-52.1		29	11.3
7	8	33,004	-49.1			

VICTORIA, TEXAS
1015 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	6.9	4.9	36	2.7
1000	31	154	9.6	6.0	02	2.2
950	31	583	11.5	4.3	17	.7
900	31	1,036	12.3	3.0	20	4.7
850	31	1,515	10.8	.5	22	6.0
800	31	2,020	9.4	-5.4	23	7.2
750	31	2,553	7.6	-10.4	24	8.5
700	31	3,118	4.4	-14.0	25	9.3
650	31	3,718	1.1	-17.1	25	10.1
600	31	4,357	-2.8	-21.6	26	12.0
550	31	5,041	-7.4	-25.5	26	14.2
500	31	5,776	-12.5	-29.5	25	16.5
450	31	6,572	-18.1	-33.2	25	19.1
400	31	7,441	-24.6	-38.0	25	23.1
350	31	8,403	-31.1	-43.9	[illegible]	27.4
300	31	9,477	-38.5	-49.7	26	32.6
250	31	10,708	-46.6		26	38.3
200	31	12,157	-55.6		25	40.6
175	31	13,001	-59.5		26	38.9
150	31	13,957	-63.2		26	33.6
125	31	15,068	-66.9		26	29.8
100	31	16,403	-70.7		26	22.9
80	31	17,723	-71.3		26	15.4
70	30	18,516	-70.1		26	11.8
60	[illegible]	19,440	-67.1		25	[illegible]
50	[illegible]	20,550	-63.7		25	[illegible]
40	29	21,924	-62.1		25	[illegible]
30	28	23,715	-59.9		27	10.2
25	28	24,855	-59.6		27	[illegible]
20	26	26,257	-57.2		27	[illegible]
15	28	28,091	-54.4		27	15.0
10	18	30,734	-48.3		27	18.5
7						

* WAKE IS., PACIFIC AREA
1016 MB

Standard pressure surface (mb.)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	25.2	21.1	07	6.3
1000	31	146	24.2	19.3	07	7.3
950	31	594	20.5	17.4	08	8.0
900	31	1,059	17.2	14.1	08	7.9
850	31	1,546	14.4	7.7	09	7.3
800	31	2,058	13.3	.5	09	6.1
750	31	2,601	12.9	-7.7	09	4.7
700	31	3,178	10.7	-11.5	08	4.0
650	31	3,792	7.7	-15.1	07	3.4
600	31	4,447	4.1	-19.0	05	3.5
550	31	5,148	-.4	-22.9	03	3.2
500	31	5,903	-5.2	-27.0	36	3.7
450	31	6,722	-10.6	-31.5	34	4.4
400	31	7,617	-16.9	-36.2	32	5.9
350	31	8,610	-23.6	-41.5	[illegible]	6.8
300	31	9,716	-31.7	-48.7	29	9.3
250	30	10,980	-41.1	-55.9	29	12.0
200	29	12,459	-52.6		29	14.1
175	29	13,309	-58.8		29	13.2
150	28	14,261	-65.9		28	11.6
125	27	15,348	-73.3		29	9.1
100	24	16,630	-80.2		30	[illegible]
80	23	17,886	-80.7		[illegible]	4.3
70	22	18,647	-78.0		[illegible]	5.1
60	22	19,541	-72.4		[illegible]	[illegible]
50	22	20,632	-65.6		[illegible]	6.5
40	22	22,003	-61.5		[illegible]	6.1
30	22	23,812	-56.1		[illegible]	6.0
25	20	24,974	-55.3		[illegible]	5.3
20	18	26,402	-53.8		[illegible]	2.9
15	15	28,249	-51.8		[illegible]	1.8
10	14	30,894	-46.5		[illegible]	16.0
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	* WALLOPS IS., VA. NASA 1019 MB						WASHINGTON DULLES INT. AP 1009 MB					
					Resultant Wind						Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	4	5.8	2.8	29	1.3	31	85	2.0	-.9	29	1.0
1000	30	166	6.6	1.7	26	2.3	29	168	2.7	-1.5	27	1.5
950	31	581	6.2	1.0	26	5.9	31	576	3.6	-.7	26	4.4
900	31	1,025	5.5	-.7	26	8.3	31	1,015	2.5	-1.5	26	7.5
850	31	1,491	3.7	-3.3	26	10.7	31	1,476	1.7	-3.2	27	11.1
800	31	1,983	2.1	-7.6	26	12.9	31	1,965	1.1	-7.4	27	13.6
750	31	2,502	-.2	-11.3	26	15.2	31	2,483	-1.0	-9.4	27	14.7
700	31	3,052	-2.5	-15.4	26	17.8	31	3,031	-3.2	-13.4	26	17.1
650	31	3,637	-5.3	-18.1	26	20.3	31	3,615	-6.3	-15.6	26	20.2
600	31	4,262	-8.8	-21.3	26	22.6	31	4,237	-9.7	-20.3	26	22.5
550	31	4,931	-12.7	-25.3	26	24.9	31	4,904	-13.7	-22.5	26	24.7
500	31	5,652	-17.5	-28.0	26	26.1	31	5,623	-18.1	-27.4	26	28.3
450	31	6,434	-22.3	-32.3	26	26.8	31	6,402	-23.1	-31.2	26	30.8
400	31	7,289	-28.1	-37.2	26	28.1	31	7,255	-28.9	-37.2	26	33.7
350	31	8,238	-34.8	-43.1	26	30.8	31	8,201	-35.3	-42.3	25	36.6
300	31	9,293	-42.9	-47.2	27	34.4	31	9,255	-42.9	-47.3	26	39.2
250	31	10,499	-51.4		27	37.4	31	10,462	-51.5		26	41.9
200	31	11,923	-58.3		28	42.3	31	11,888	-57.6		27	46.4
175	31	12,762	-59.0		27	41.6	31	12,729	-58.9		27	46.6
150	31	13,727	-60.2		27	38.5	31	13,695	-59.5		27	40.9
125	29	14,850	-63.1		26	33.5	31	14,831	-61.7		27	36.0
100	28	16,213	-65.1		27	30.4	28	16,199	-63.9		27	31.1
80	27	17,579	-65.3		27	22.5	27	17,566	-64.1		27	24.5
70	27	18,393	-64.9		27	20.2	27	18,384	-64.0		27	22.3
60	26	19,328	-64.5		27	16.8	26	19,331	-63.2		27	20.0
50	26	20,445	-63.7		28	15.2	26	20,454	-62.4		27	17.3
40	25	21,820	-62.3		28	12.5	25	21,832	-61.8		28	14.7
30	24	23,603	-61.2		28	10.0	24	23,621	-60.8		28	13.3
25	22	24,732	-59.9		29	8.7	23	24,756	-59.5		28	14.6
20	21	26,128	-58.3		29	9.0	22	26,157	-58.0		28	13.4
15	19	27,938	-56.7		28	8.8	21	27,987	-55.9		27	14.9
10	14	30,531	-51.6				15	30,616	-52.9		28	19.2
7	7	32,931	-46.2									

Standard pressure surface (mb)	WAYCROSS, GA. 1015 MB						WINNEMUCCA, NEV. 872 MB					
					Resultant Wind						Resultant Wind	
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	44	10.2	8.3	31	.2	31	1,312	-8.9	-10.9	25	.3
1000	30	175	12.8	9.2	30	.4						
950	31	601	12.3	6.2	23	2.3						
900	31	1,054	11.0	2.4	24	4.0						
850	31	1,530	10.0	-2.2	25	4.8	31	1,513	-3.9	-8.5	21	1.5
800	31	2,033	8.7	-7.7	25	5.3	31	1,992	-4.0	-10.1	25	4.3
750	31	2,565	6.2	-11.3	25	7.4	31	2,500	-6.4	-13.5	26	6.3
700	31	3,128	3.9	-14.0	25	10.2	31	3,037	-9.1	-17.6	28	7.9
650	31	3,726	.9	-17.0	26	12.1	31	3,608	-11.7	-21.5	29	10.4
600	31	4,364	-3.2	-21.6	26	14.1	31	4,217	-15.1	-24.7	29	12.6
550	31	5,047	-7.5	-25.8	26	16.1	31	4,870	-19.0	-27.6	29	13.5
500	31	5,782	-12.7	-28.8	26	17.5	31	5,574	-23.1	-31.6	29	14.6
450	31	6,578	-18.1	-33.1	26	19.6	31	6,338	-28.3	-35.5	29	16.4
400	31	7,448	-23.7	-37.7	26	24.3	31	7,172	-34.5	-40.0	29	19.2
350	31	8,413	-30.6	-41.9	26	27.1	31	8,095	-40.9	-42.9	29	21.5
300	31	9,488	-38.2	-48.0	26	30.7	31	9,126	-47.3		29	20.8
250	31	10,719	-47.1		26	35.9	31	10,318	-52.5		30	23.4
200	31	12,167	-55.7		27	40.0	29	11,745	-54.5		29	23.7
175	29	13,012	-59.4		27	37.3	29	12,600	-55.0		29	23.6
150	29	13,970	-62.2		27	31.6	28	13,593	-55.8		29	22.1
125	27	15,085	-66.3		27	29.1	27	14,762	-57.7		29	19.5
100	24	16,421	-69.6		27	22.6	27	16,165	-59.2		29	16.6
80	22	17,742	-69.9		27	15.8	26	17,559	-60.6		29	13.0
70	19	18,544	-68.4		27	12.9	25	18,391	-60.7		29	9.7
60	19	19,474	-66.2		27	9.2	22	19,349	-60.5		30	7.1
50	19	20,585	-64.0		26	9.5	21	20,486	-59.1		31	4.9
40	19	21,958	-62.4		26	9.6	21	21,886	-59.0		34	4.1
30	17	23,733	-60.9		28	9.2	19	23,704	-57.6		02	3.0
25	15	24,870	-58.9		28	10.7	18	24,854	-57.3		03	3.9
20	15	26,278	-56.3		27	13.2	15	26,289	-57.0		05	7.9
15	13	28,114	-54.0		27	18.1	13	28,117	-56.3			
10	10	30,741	-47.6									
7	5	33,110	-40.8									

Standard pressure surface (mb)	WINSLOW, ARIZ. 852 MB					
					Resultant Wind	
	No of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	1,487	-3.2	-6.7	23	.8
1000						
950						
900						
850	22	1,543	-3.1	-8.0	20	.3
800	31	1,992	-.5	-8.5	24	3.3
750	31	2,508	-1.2	-13.5	26	5.8
700	31	3,056	-3.2	-17.2	26	7.7
650	31	3,639	-6.1	-20.7	27	9.4
600	31	4,262	-9.7	-22.8	27	11.0
550	31	4,928	-14.1	-26.9	27	13.3
500	31	5,645	-18.4	-31.5	28	16.6
450	31	6,423	-23.7	-35.8	28	19.3
400	31	7,273	-29.9	-40.7	28	21.5
350	31	8,215	-36.7	-45.2	28	24.1
300	31	9,263	-44.3		27	25.9
250	30	10,458	-51.1		27	30.6
200	29	11,903	-54.8		27	28.2
175	27	12,767	-55.4		27	26.0
150	27	13,747	-57.1		27	23.3
125	25	14,892	-59.6		27	21.5
100	25	16,274	-63.7		27	18.4
80	22	17,640	-65.7		27	15.3
70	21	18,447	-66.0		29	12.3
60	21	19,386	-64.6		29	8.4
50	20	20,508	-62.4		29	5.8
40	19	21,901	-60.9		30	3.5
30	17	23,704	-59.1		30	1.8
25	16	24,842	-58.5		33	3.8
20	15	26,241	-58.2		30	2.1
15	11	28,056	-56.4			
10						
7						

Standard pressure surface (mb)	YAKUTAT, ALASKA 1009 MB						+ YAP, CAROLINE IS. 1010 MB						YUCCA FLAT, NEV. 883 MB					
					Resultant Wind						Resultant Wind						Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	12	-4.8	-7.3	07	2.3	31	14	28.0	24.1	08	4.2	31	1,198	-4.4	-9.8	31	1.3
1000	20	171	-.3	-4.7	06	1.6	31	103	26.6	23.4	07	5.4						
950	31	489	-2.0	-5.8	10	5.2	31	556	23.2	20.9	07	8.8						
900	31	918	-3.9	-8.9	12	5.8	31	1,027	20.2	16.8	08	9.1						
850	31	1,367	-5.9	-10.8	15	5.6	31	1,519	17.6	11.5	08	8.9	31	1,501	1.6	-9.8	34	1.9
800	31	1,841	-8.2	-13.1	17	4.8	31	2,036	15.6	5.0	08	8.3	31	1,988	-.2	-11.1	30	1.1
750	31	2,340	-10.7	-17.6	19	3.8	31	2,582	13.3	1.0	08	7.7	31	2,503	-1.9	-13.4	30	2.8
700	31	2,867	-13.8	-21.6	22	2.9	31	3,160	10.3	-3.6	08	7.2	31	3,049	-4.3	-16.5	29	5.2
650	31	3,427	-17.4	-24.4	26	2.6	31	3,774	7.1	-7.3	09	7.6	31	3,630	-7.4	-19.8	29	8.3
600	31	4,022	-21.5	-29.6	25	2.5	31	4,428	3.3	-10.9	09	8.4	31	4,249	-10.7	-23.2	29	10.9
550	31	4,657	-25.9	-32.8	27	3.8	31	5,129	-.4	-16.0	09	8.7	31	4,913	-14.9	-26.6	29	13.5
500	31	5,341	-30.8	-36.4	28	5.0	31	5,885	-4.5	-22.5	09	9.8	31	5,628	-19.5	-30.6	28	16.5
450	31	6,081	-35.8	-38.0	29	9.1	31	6,707	-9.3	-27.0	09	10.2	31	6,403	-24.7	-36.0	29	18.6
400	31	6,891	-41.1	-41.9	29	12.6	31	7,608	-14.8	-32.3	09	9.1	31	7,249	-31.0	-41.8	29	20.3
350	31	7,790	-46.7		29	15.1	30	8,608	-21.9	-37.9	09	8.3	31	8,186	-37.8	-46.3	29	23.3
300	31	8,797	-52.1		29	16.6	30	9,721	-30.3	-45.1	09	6.5	31	9,229	-45.1		29	24.1
250	31	9,969	-55.2		30	16.1	30	10,991	-40.5	-52.9	10	6.6	31	10,428	-51.9		29	27.2
200	31	11,388	-56.2		30	17.1	30	12,472	-52.8		11	8.0	31	11,861	-54.8		29	24.9
175	31	12,239	-54.9		29	17.1	30	13,321	-59.4		11	9.7	31	12,713	-56.0		29	24.7
150	31	13,228	-53.4		29	17.6	30	14,268	-67.1		11	10.8	31	13,691	-56.9		28	23.9
125	31	14,402	-53.6		29	18.5	30	15,348	-74.8		10	11.1	31	14,841	-58.8		29	20.9
100	30	15,829	-53.2		28	20.8	30	16,619	-81.4		10	11.1	31	16,233	-61.6		28	16.8
80	30	17,265	-53.8		28	22.1	30	17,868	-81.7		09	11.6	29	17,598	-62.5		28	12.6
70	30	18,123	-53.8		28	24.4	28	18,624	-77.6		09	12.0	29	18,421	-63.1		29	10.3
60	27	19,099	-54.1		28	25.6	28	19,521	-72.1		09	14.8	28	19,365	-62.1		29	8.4
50	26	20,270	-54.5		28	26.9	28	20,607	-66.6		09	19.4	28	20,496	-61.1		29	4.9
40	22	21,729	-55.1		29	26.7	28	21,977	-60.7		09	23.5	27	21,884	-60.1		34	3.2
30	19	23,554	-55.7		29	33.2	27	23,796	-54.3		09	19.0	24	23,695	-57.8		36	2.7
25	19	24,714	-56.5		29	33.6	27	24,969	-52.3		09	11.2	23	24,845	-57.8		03	4.3
20	18	26,121	-57.5		29	36.3	27	26,424	-49.2		25	2.8	14	26,239	-56.4		05	4.3
15	7	27,894	-61.7				25	28,325	-46.8		26	17.0						
10							21	31,049	-42.2		26	24.3						
7							13	33,490	-36.5									

[illegible] station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used [illegible] namic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

[illegible] more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

DECEMBER 1972

ALBUQUERQUE, N. MEX.

Date	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Dec.									
1-----	1.03	1.17	1.27	1.39	1.41	1.37	1.22	1.10	1.00
2-----	1.11	1.18	1.30	1.43	1.45	1.41	1.26	1.16	1.05
3-----	1.07	1.17	1.28	1.41	(1.39)	1.37	1.25	1.14	1.06
4-----	1.03	1.13	----	----	1.35	----	----	----	----
5-----	----	----	----	----	1.37	1.34	1.21	1.11	1.02
6-----	1.00	1.09	1.20	----	----	----	----	----	----
8-----	.93	1.02	1.10	1.26	1.29	1.29	1.16	1.02	.95
9-----	----	----	----	----	----	----	----	----	.95
10----	.97	1.07	1.18	1.30	1.32	1.30	1.17	1.06	.98
12----	1.02	1.12	1.25	1.38	1.39	1.39	1.21	1.11	1.02
14----	.96	1.04	1.15	1.33	1.36	1.35	1.24	1.17	1.09
15----	1.06	1.14	1.23	1.36	----	----	----	1.06	.98
16----	----	----	(1.15)	(1.32)	----	----	(1.14)	(1.08)	(.92)
17----	1.07	1.14	1.17	1.21	1.24	1.22	1.08	----	----
18----	----	(1.16)	1.24	----	1.33	----	1.20	1.11	1.01
19----	----	1.14	1.23	1.36	1.36	1.33	1.16	1.05	----
20----	----	----	----	----	1.32	1.30	1.15	1.06	.97
21----	1.04	1.14	1.24	1.35	1.33	1.33	(1.17)	(1.10)	1.02
22----	1.04	1.16	1.24	1.38	1.36	1.38	1.22	1.13	1.12
23----	1.02	1.14	1.26	1.39	1.36	1.35	1.23	1.14	1.06
24----	1.07	----	1.27	----	1.38	1.34	----	1.12	1.02
25----	----	----	----	----	----	----	1.21	1.12	1.02
26----	1.06	1.15	1.24	1.36	1.38	1.37	1.22	1.12	1.03
27----	1.08	1.17	1.25	(1.35)	1.37	----	----	----	----
30----	1.00	1.10	1.20	1.33	----	1.35	(1.18)	----	.93
31----	----	----	1.21	1.38	1.41	1.39	----	----	----
Averages	1.03	1.13	1.23	1.35	1.36	1.34	1.20	1.10	1.01

TUCSON, ARIZ.

Date	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Dec.									
1-----	1.05	1.13	1.24	1.37	1.42	1.38	1.2[illegible]	1.13	1.03
2-----	1.00	1.10	1.21	1.38	1.44	1.37	1.2[illegible]	1.10	.98
3-----	1.08	1.19	1.30	1.43	1.46	1.36	1.28	1.17	1.06
4-----	1.07	1.17	1.29	1.40	1.49	1.40	1.28	1.17	1.07
5-----	----	----	----	----	----	1.37	1.11	.99	.88
6-----	----	----	----	----	1.43	1.37	1.2[illegible]	----	.97
10----	.88	.98	1.18	1.36	----	----	----	----	----
12----	.95	1.06	1.24	1.41	1.47	1.42	1.23	1.11	1.02
14----	.80	.88	1.10	1.33	1.35	1.34	1.17	1.06	.96
15----	1.04	1.18	1.28	1.41	1.42	1.38	----	1.10	----
16----	----	----	----	1.44	1.48	1.42	1.25	1.15	1.04
18----	----	----	----	1.29	1.37	1.31	1.12	1.01	.92
19----	.96	1.09	1.20	1.34	1.39	1.35	1.17	1.08	.99
20----	.87	.97	1.09	1.29	1.33	1.25	1.08	.95	.82
21----	.97	1.01	1.18	1.31	1.41	1.35	1.21	1.08	1.01
22----	1.02	1.11	1.24	1.38	1.43	1.35	1.20	1.09	.97
23----	.91	1.03	1.13	1.30	1.38	1.35	1.22	1.05	.96
25----	----	----	----	----	----	----	1.22	1.10	1.01
26----	1.00	1.11	1.25	1.41	1.42	1.36	1.20	1.06	.97
28----	----	----	----	----	----	----	1.15	1.02	.89
29----	D .52	D .71	D .79	D 1.11	D 1.20	D 1.16	D .96	D .81	D .75
30----	1.00	1.10	1.23	1.39	1.43	1.38	1.22	1.10	1.02
31----	.94	1.08	1.24	1.41	1.43	1.36	1.23	1.11	1.03
Averages	0.94	1.05	1.19	1.36	1.41	1.35	1.19	1.07	0.97

OMAHA, NEBR.

Date	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78

DATA NOT RECEIVED IN TIME FOR PUBLICATION.

MADISON, WIS.

Date	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Dec.									
6----	S 0.97	S 1.08	S 1.23	----	----	----	S 1.25	S 1.13	S 1.03
13---	M .80	M .92	M 1.10	----	M 1.18	----	M 1.13	M 1.01	M .91
14---	S .86	M .90	----	----	S 1.25	---	S 1.16	----	----
16---	S .98	S 1.10	S 1.22	----	S 1.30	----	S 1.24	S 1.12	S 1.02
Averages	0.90	1.00	1.18	----	1.24	----	1.20	1.09	0.99

( )	Clouds Present
*	Values corresponding to true solar noon
BD	Blowing Dust
BN	Blowing Sand
D	Dust
DI	Intense Dust
DM	Moderate Dust
DS	Slight Dust
F	Fog
GF	Ground Fog
H	Haze
HI	Intense Haze
HM	Moderate Haze
HS	Slight
I	Intense Haze-indeterminable
K	Smoke
KI	Intense Smoke
KM	Moderate Smoke
KS	Slight Smoke
M	Moderate Haze-indeterminable
N	Sand
S	Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	- 68	- 64	- 17	- 46	- 15	10	6	- 4	3	- 12	4	- 9	- 82	-133	-120	- 81	-108	- 72	- 78	- 62	- 85	- 80	- 84	- 53	- 32	5	- 29	- 51	- 51	- 10	- 49	-47

The measurement is made with a CISRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	4.63	4.14	3.90	1.46	3.77	5.72	2.92	4.38	2.92	5.48	3.41	1.34	3.53	5.85	6.21	6.21	5.85	5.24	2.31	2.07	3.29	5.24	3.41	3.53	1.34	5.48	5.11	5.11	0.97	2.19	3.77	3.89

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder.

This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λs Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

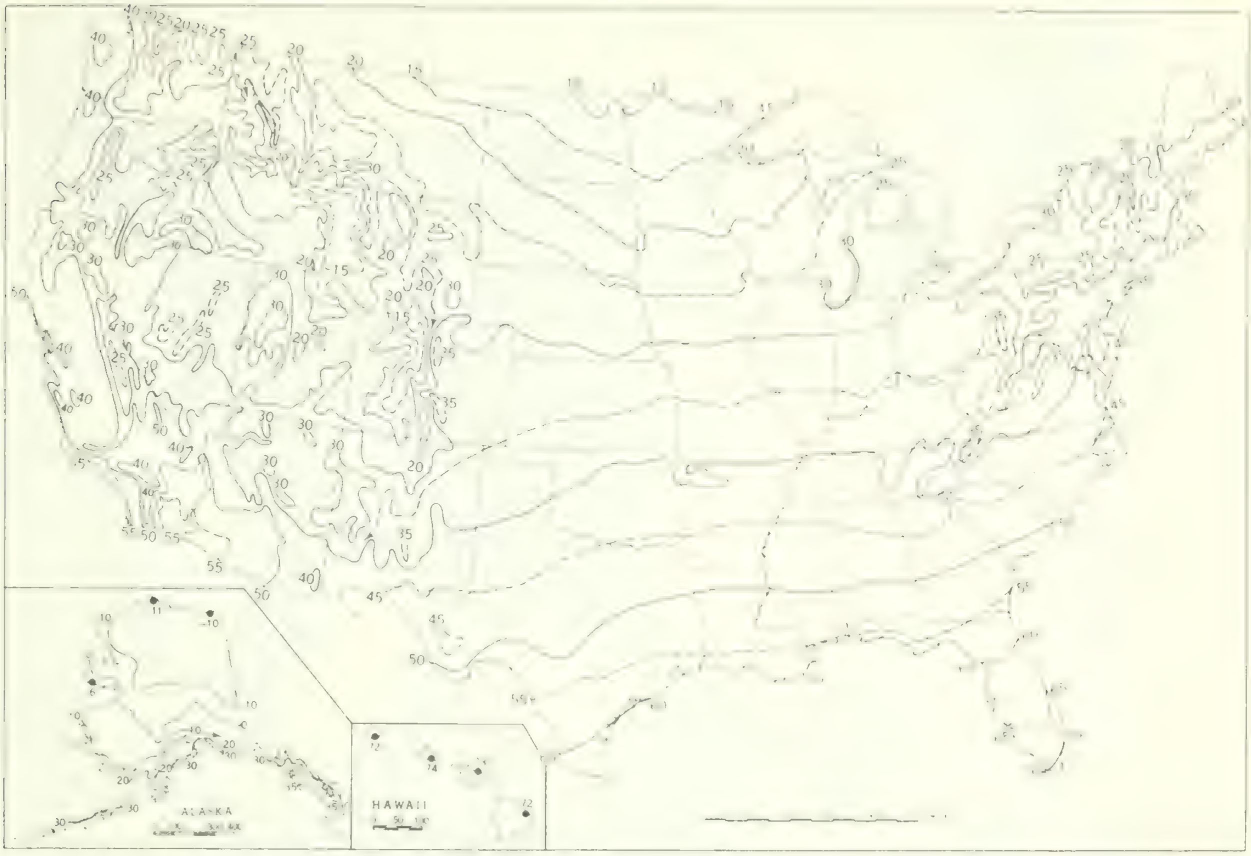
Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

Data not received in time for publication.

The spectrophotometer measures the total amount of ozone in the atmosphere, i e . the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0. 350 centimeter thick The code λ s designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), December



B. Temperature Departure from 30 - Year Mean (°F 1931-60), December 1972

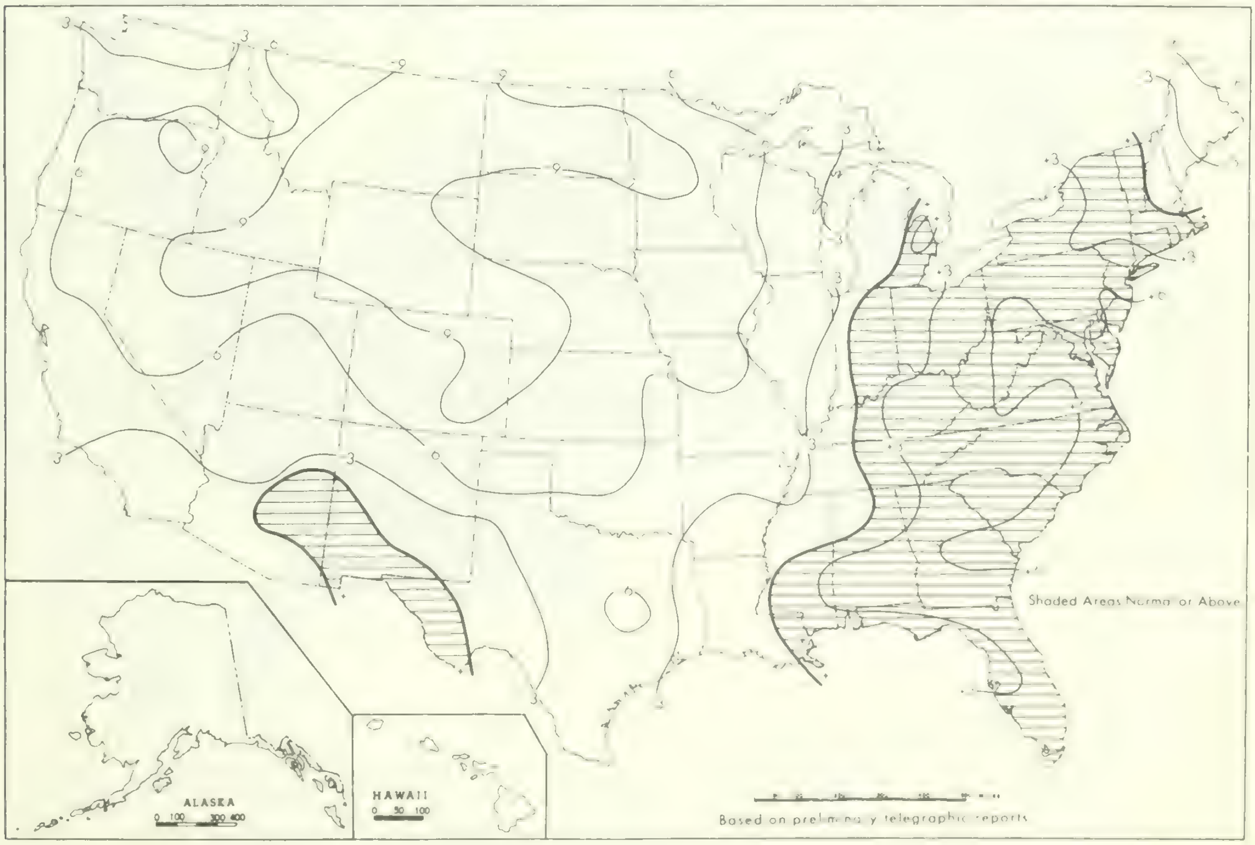
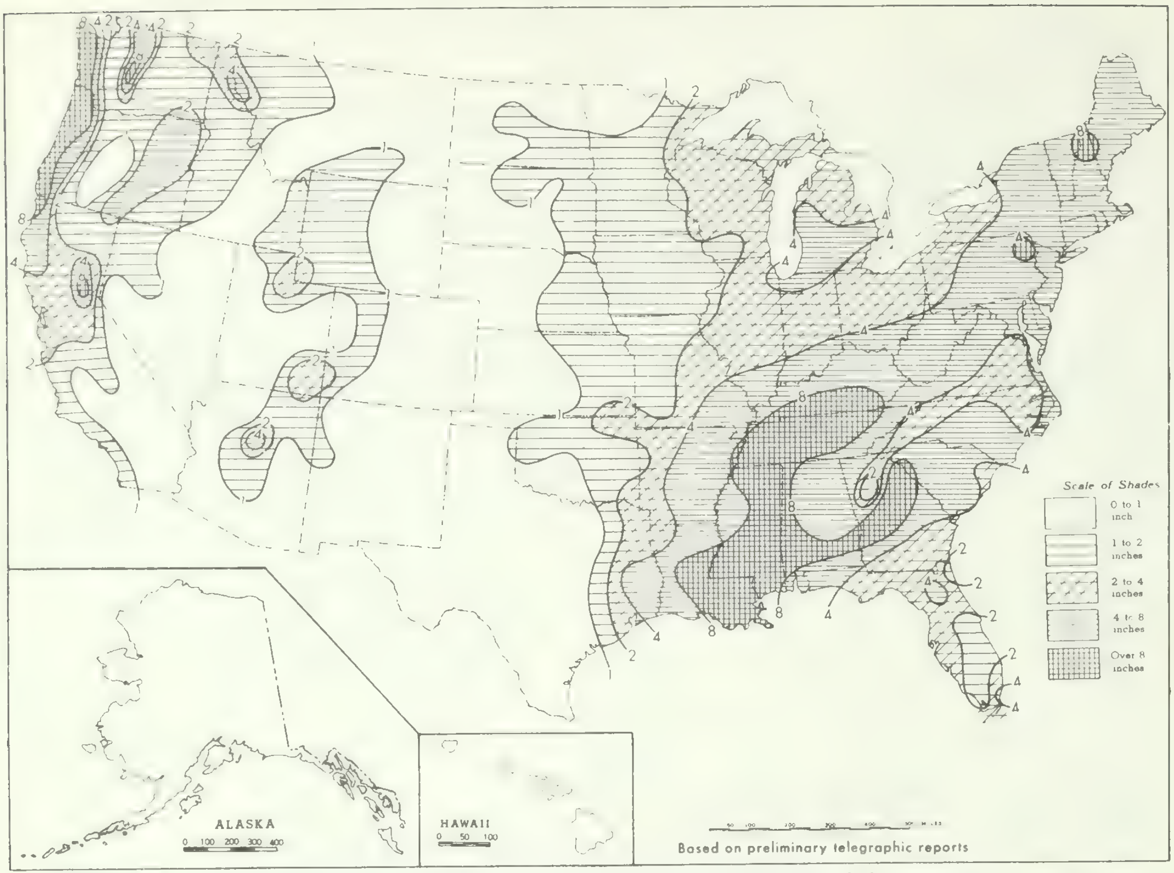
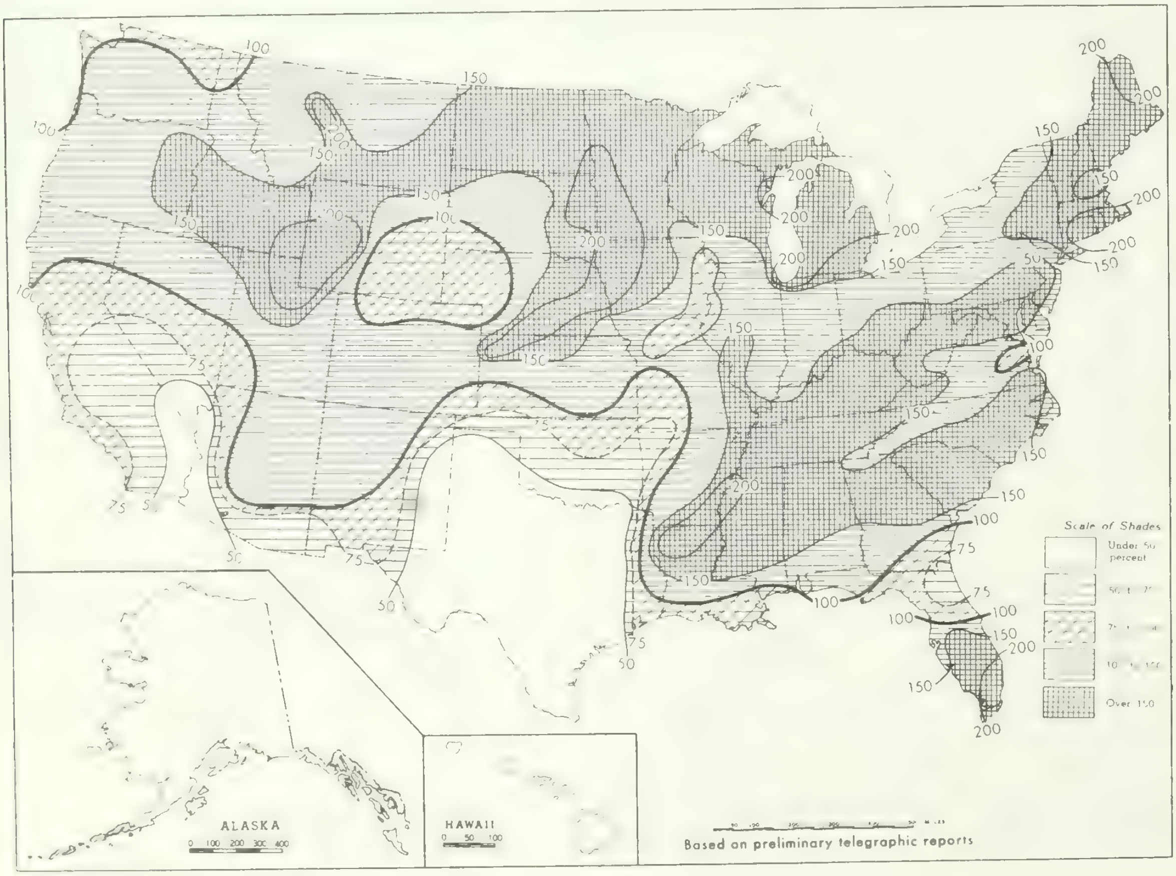

ALASKA
0 100 300 400
HAWAII
0 50 100
Shaded Areas Normal or Above
Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), December 1972



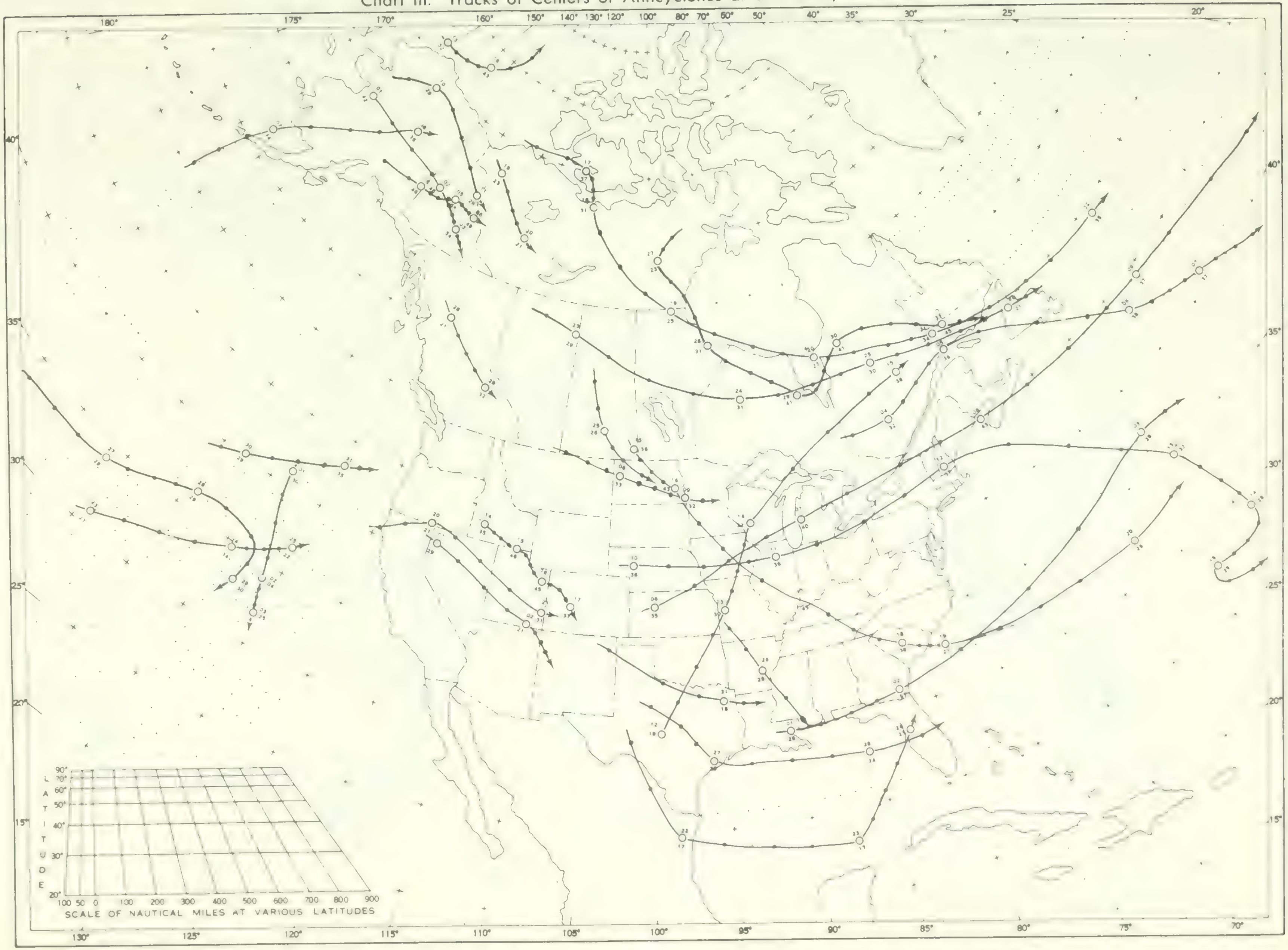
Based on preliminary telegraphic reports

B. Percentage of Normal Precipitation, December 1972



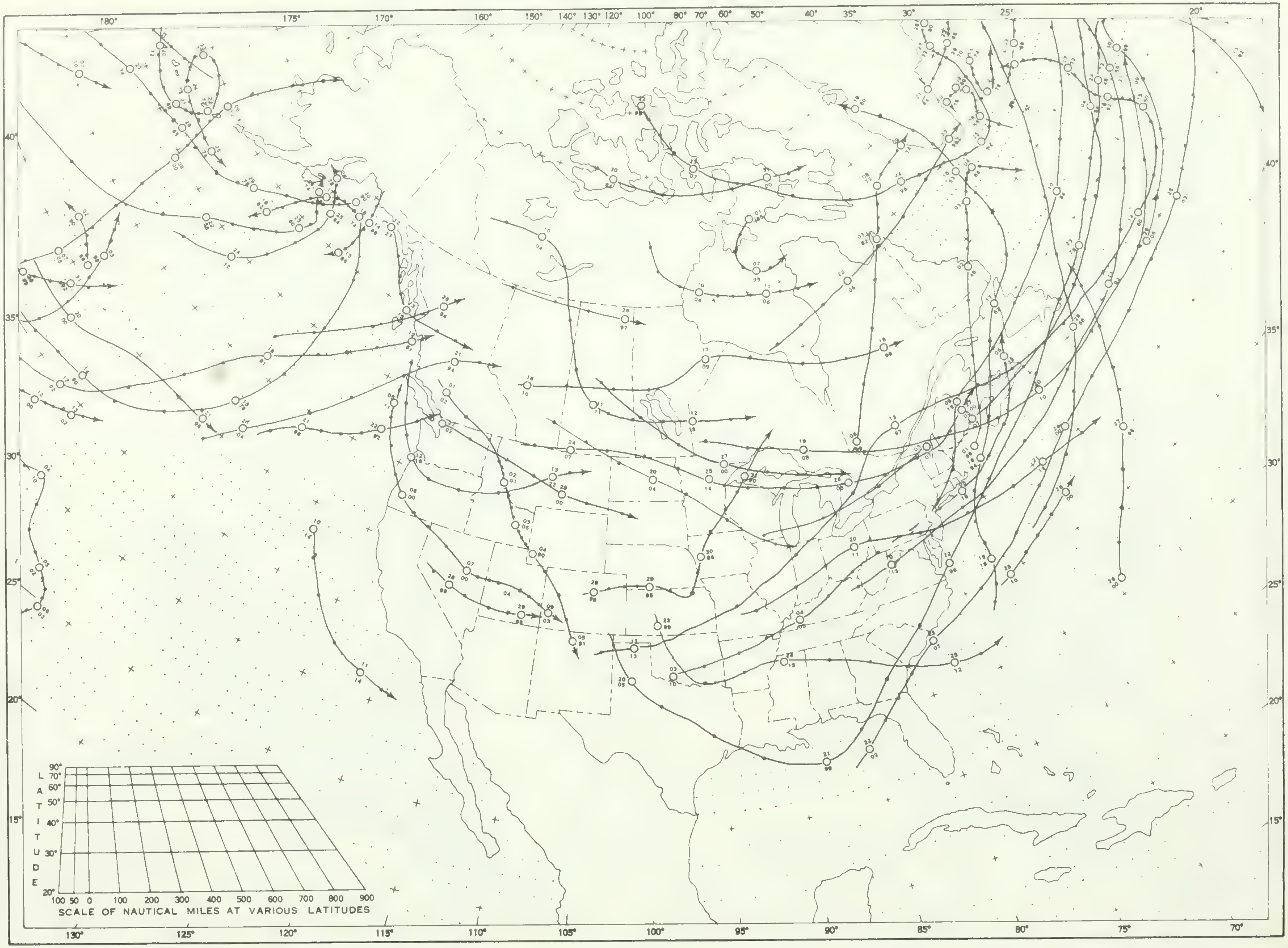
Based on preliminary telegraphic reports

Chart III. Tracks of Centers of Anticyclones at Sea Level, December 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, December 1972



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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RAWINSONDE DATA (Average Annual Values) - tabulation discontinued. The tabulation RAWINSONDE DATA (Average Monthly Values) is carried in the monthly issue of the publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 23 No. 13 YEAR 1972

GENERAL SUMMARY OF WEATHER CONDITIONS

Lucius W. Dye, Climatologist

HIGHLIGHTS:

1. A number of weather-related disasters took the lives of hundreds of our citizens, and caused billions of dollars of property damage.
2. Bone-chilling cold gripped much of the Nation in January, February, and December.
3. Autumn rains delayed the harvest of corn and soybeans in the Corn Belt.
4. A severe drought occurred in the Southwest in the spring and early summer.

WINTER--Bone-chilling cold prevailed over the northern Great Plains through most of the winter. Temperatures over that area averaged 4° to 9° colder than normal. In contrast, most of the area south of a line from Yuma, Ariz., to Burlington, Vt., averaged warmer than normal through the winter months. Southern Mississippi, nearby parts of neighboring States, and the eastern half of the Florida Peninsula averaged 4° to 5° warmer than normal.

January was cold from the northern Rocky Mountains to the Great Lakes and southward to Oklahoma and northern Arkansas. A massive outbreak of cold arctic air pushed into the northern Rocky Mountains and northern Great Plains early in the month and, by the 4th, subzero weather had reached the Texas Panhandle. By January 6, almost the entire Nation was in the "deep freeze." Mild weather continued only in the Deep South and in Florida. At midmonth, moist, southerly winds warmed the eastern half of the Nation. Southern Florida was especially balmy with nighttime temperatures in the seventies. A few days after midmonth, two large polar highs--one over the Great Basin, the other in the East--caused clear sunny weather over much of the country. Brisk southerly winds behind the eastern High warmed the central and southern Great Plains. Bitter cold plunged southward over mid-America in the last week of the month.

Cold weather gripped almost the entire Nation in the first week of February. The Far West and the northern and central Rocky Mountains warmed in the second week but bitter cold continued over much of the Great Plains, the Great Lakes Region, and the Ohio River Valley. Most of the Nation averaged warmer than normal in the third week. Temperatures over the southern Great Plains were especially mild. The West and South continued mild in the last week of February but bitter cold prevailed from the northern Great Plains to the Atlantic Ocean.

Heavy rains fell along the northern Pacific Coast. This is not unusual; winter is the rainy season in the Pacific Northwest. Also not unusual were the deep snows that occurred in the nearby hills and mountains and eastward to the Great Plains, the flurries in the Great Lakes Region, nor the heavier snows that fell in the Appalachians. The time distribution of precipitation over the East was not quite normal. For instance, precipitation over the Northeast was only about half of normal in January but near or above normal in February. Heavy rains fell in the Deep South in January. At the other extreme, large areas in the Southwest received less than 25 percent of normal in January and February.

The weather was comparatively tranquil on New Year's Day but two storms got underway on January 2. One of these brought heavy snow to the Northwest, especially to southeastern Idaho, western Montana, and the Big Horn River Valley in Wyoming. The second storm spread wet weather over the eastern third of the country. Snow fell from northern Illinois to northern New England. Freezing rain iced an area south of the snow belt and thunderstorms dotted the land from the Ohio River Valley to the

Gulf of Mexico. By January 4, snow or sleet was falling over a belt extending from New Mexico to New York and Pennsylvania. Moist tropical air, overriding the cold arctic air, released snow, sleet, and freezing rain that marked the advance of the cold air. Deep drifts, icy roads, and strong winds hampered automobile travel.

At midmonth, moist, southerly winds brought clouds and rain to a large area from the southern Great Plains to New England. A few tornadoes occurred in the South. Blizzards swept across the central Rocky Mountains. Fog, light rain, and drizzle blanketed the middle Atlantic coast and a large and powerful storm gained strength in the Pacific Northwest.

Precipitation slackened briefly a day or so after midmonth but near the end of the third week of January, a new outbreak of cold air poured into Montana bringing heavy snow accompanied by strong winds. The snow area spread eastward across the Great Plains to the Upper Mississippi River Valley. Southerly winds caused cloudy skies, showers, and thunderstorms from the Ohio River to the Gulf of Mexico. Snow, mixed with sleet and freezing rain, slicked the highways and made travel difficult over a narrow strip which separated the snow zone on the north from the showers and thunderstorms on the south. Heavy rains west of the Cascades completed the gloomy picture.

The last week of the month brought more snow to the Rocky Mountains and the nearby Great Plains. Ice again coated wires, trees, pavement, and other outdoor objects south of the snow belt. Heavy rains soaked the Northwest. Blizzards occurred across the central Great Plains and Great Lakes Region and spread eastward to New York and New England. Generous rains fell in parts of the Deep South.

Two major storms were in progress in the first week of February. The first, centered over the central Great Plains and moving toward the Great Lakes, caused snow over an eight-state area from Colorado and New Mexico to the middle Mississippi River Valley, while an Atlantic storm soaked the Atlantic seaboard with heavy rain accompanied by gales. Snow fell in the higher Appalachians and north of the rain belt. A storm over the East produced widespread precipitation in the second week of February. A large storm brought miserable weather to the eastern third of the Nation shortly after midmonth. Large waves pounded the coast. One to 2 feet of snow fell in the northern and central Appalachians. Blizzards raged in many areas. Deep snowdrifts blocked highways and byways and stranded hundreds of motorists. A series of winter storms paraded across the northern States in the last week of the month. Snow at Stampede Pass, Wash., accumulated to 16 feet . Heavy rains produced flash floods in eastern Kentucky, southern West Virginia, and western North Carolina. A coal-slag dam in Logan County, W. Va., broke. Water rushed down Buffalo Creek carrying away houses, automobiles, and people. Dozens of persons were drowned and hundreds became homeless.

SPRING--Most of the Nation west of a line from Roseau, Minn., to Savannah, Ga., averaged warmer than normal in the spring months, March to May. Parts of the Great Basin, the central Rocky Mountains, central Oklahoma, and central and southern Texas averaged 2° to 4° warmer than normal. The Great Lakes Region, the Ohio River Valley, the Northeast, and the Middle Atlantic States were slightly cooler than normal.

Most of the Nation averaged warmer than normal in March. The main exceptions were a large area from Wisconsin to New England and a smaller area from Ohio to northern Alabama.

Arctic air poured into the northern Great Plains in the last few days of February and by March 2, subzero weather had reached Iowa. Devils Lake, N. Dak., registered 28° below zero on March 2. The leading edge of the cold air marched southeastward and by March 6 had reached the Atlantic Coast. Jacksonville, Fla., recorded 33° on the 6th.

A storm center moved from southern Alberta to the Great Lakes region near the end of the first week of March and continued on to Quebec and Ontario early in the second week. Cold arctic air pushed into the northern Great Plains and spread southward and eastward. A long front marked the advance of the cold air. Southerly winds warmed the area south of the front. Cold, northerly winds behind the eastward-moving storm brought falling temperatures. In some places, the winds, gusting to 50 m.p.h., picked up snow and dust which reduced the visibility to less than 2 miles. Mild weather continued along the Gulf of Mexico. The Far Southwest was hot.

Warm weather prevailed over most of the Nation in the third week of March. The warm temperatures melted the snow rapidly in western North Dakota. The rapid snowmelt, combined with ice jams on some streams, caused severe flooding of lowland fields, highways, and a few suburban areas. Rising waters on the Cannonball River forced 30 families in the western part of Mott, N. Dak., to evacuate their homes. At Beulah, N. Dak., the water was in 200 homes and some families moved out. Severe flooding also occurred at Hazen and Zap, both in North Dakota.

Near the end of the third week of March, a large High was centered over the Great Plains. Warming occurred in the central Rocky Mountains on the back side of the High. Northerly winds kept afternoon temperatures in the thirties and forties east of the High from the Great Lakes to the Ohio River. Northerly winds and deep snow kept temperatures low over the north-central States in the last few days of March. In contrast, the South warmed to the seventies and eighties.

April temperatures averaged near or above normal over the western edge of the Great Plains from Montana to Texas, over the central and southern Rocky Mountains, and across the South from central and southern California to Florida. It was cooler than normal over the Pacific Northwest, in the Great Lakes Region, and along the Atlantic Coast from New England to Georgia.

Temperatures were quite changeable. In general, the West was warm and the East was cool in the first week. The reverse was true in the second and third weeks. Cool weather prevailed over most of the Nation in the last week of April.

May temperatures averaged above normal over the West and the northern States and cooler than normal across the South. Cool weather predominated over the first 2 weeks of May. The last half of the month was very warm.

The Southwest was very dry. Many localities in the Southwest received no rain in the first 5 months of 1972; others received only light sprinkles. Totals in the Far Northwest ranged from 4 to 16 inches, most of which fell in March and April. Except in the Far Northwest, only a few localities received more than 4 inches of rain in the 3-month period, March to May. East of the Rocky Mountains, 3-month totals ranged from 4 inches to 12 inches or more. Totals were in the 4- to 12-inch range over most of the Great Plains and exceeded 8 inches from the eastern edge of the central Great Plains eastward and southeastward to the Atlantic Ocean and the Gulf of Mexico.

Except in the dry Southwest, the weather was fairly typical in early March. Storms and fronts distributed the rains fairly well over the Nation. A few tornadoes occurred in the South. Heavy rains produced floods in western New York, western Pennsylvania, extreme southeastern Ohio, West Virginia, and the eastern portions of Kentucky and Tennessee early in March. Miserable mixtures of snow, sleet, and freezing rain fell along an area that separated snow on the north from rain over the south. The mixtures slicked the highways and byways and made automobile travel dangerous.

About midmonth, a storm centered south of the Great Lakes moved eastward to the Atlantic Ocean, spreading wet and windy weather from the Great Lakes to the Ohio River Valley and eastward to New England. About the time the storm reached the Atlantic Ocean, another disturbance developed in the Oklahoma Panhandle. It set off thunderstorms in the central Great

Plains, duststorms in the Texas Panhandle, and moving eastward across the Ohio River Valley, it spread light snow over the upper Great Lakes, rain and thunderstorms from the lower Great Lakes to the Gulf of Mexico, and heavy snow over New York and portions of New England. Utica, N. Y., received 14 inches of snow in 6 hours early on March 15.

More disagreeable weather occurred in the last half of March. Snow in the North, duststorms, sandstorms, and thunderstorms in the South, and mixtures of rain, snow, sleet, and freezing rain sandwiched between. Gusty winds, blowing snow, and drifting snow snarled automobile traffic, delayed air travel, and closed schools. Moline, Ill., received 11 inches of snow on March 29.

Winter tarried in April. Rain fell along the northern Pacific coast on many days. Snow fell in the nearby hills and mountains. Cold airmasses produced snow flurries in the northern Great Plains, thunderstorms, and a few tornadoes in the South, and dust and sandstorms in the thirsty Southwest.

May was dry in the Southwest and parts of the Northwest. In contrast, too much rain delayed planting crops in the northern Great Plains. A "cloudburst" on the night of May 11 dumped up to 16 inches of rain north of New Braunfels, Tex., sending a 30-foot wall of water down Blueders Creek into the Comal and Guadalupe Rivers, washing away people, houses, and automobiles. More than a dozen persons drowned; a few others were washed away and presumed lost. Property damage was estimated at $20 million.

SUMMER--Summer temperatures averaged warmer than normal over most of the area west of the Rocky Mountains and cooler than normal from the Rocky Mountains to the Atlantic Ocean. The Far West averaged warmer than normal in each of the 3 months, June to August. June was warmer than normal over mid-America, but July and August were relatively cool. The East averaged cooler than normal in each of the 3 months, with two minor exceptions. New York and New England averaged warmer than normal in the early part of the summer and the eastern Gulf and the southern Atlantic Coasts were slightly warmer than normal in August.

It was one of the coolest Junes of record in large areas of the East and Southeast, with temperatures averaging 4° to 6° below normal. Southeastern Arizona, southern New Mexico, and western Texas averaged 1° or 2° cooler than normal. Most of the rest of the Nation averaged 1° or 2° warmer than normal.

A warming trend occurred over the Great Plains early in June. Temperatures climbed to the nineties over the central and southern Great Plains and summer weather continued over much of that area until after midmonth. Cool air moved into the northern Great Plains shortly after midmonth, dropping afternoon temperatures about 20°.

The Southwestern Deserts continued hot through most of the month, typical for June. Maximums in the warmest localities exceeded 100° on most afternoons. Death Valley, Calif., registered 124° on June 29. This is 10° cooler than the all-time record for California (and the Unites States), 134°, recorded at Greenland Ranch, Calif., July 10, 1913.

Cold air moved into the north-central Great Plains early in July, ending the heat wave which had been in progress over that area. Norfolk, Nebr., registered 95° on July 1, but only 70° on July 2. Near the middle of the first week, a cold front stretched from northern Utah through the Texas Panhandle to New England. Early morning temperatures north of the front were in the thirties and forties. Maximums reached the sixties. These temperatures are 15° to 20° cooler than normal for early July. Warm, humid air drifted northward south of the front. Temperatures averaged about 30° warmer than in the cool air. A large High pushed into the central Great Plains. it helped hold temperatures down over the East, but the West warmed. By July 5, Havre, Mont., had warmed to 86°. This was 10° warmer than Birmingham, Ala. The High weakened and moved off the Atlantic Coast. It pumped 90° heat northward. By the middle of the second week of July, summer heat prevailed over most of the Nation. Afternoon temperatures reached the nineties over most of New York and New England. Boston, Mass., registered 94° on July 12.

At midmonth, cold air moved into the central Great Plains. Salina, Kans., recorded 107° on the 14th but only 73° on the 15th. The heat intensified in the Northwest. The Dalles, Oreg., recorded 99° on the afternoon of July 16. Blistering heat continued in the Sacramento Valley of California. Red Bluff, at the northern end of the Valley recorded 118° on the 14th and Stockton registered 114°, the warmest Stockton has ever been. Furnace Creek, Death Valley, Calif., recorded 128° on both the 14th and 15th.

Shortly after midmonth the Bermuda High moved westward from a position about 600 miles northeast of Bermuda. By the 21st, it had become quasi-stationary over the western Carolinas. The very light but generally southerly winds on the west side of the High spread warm, humid, hazy weather over the eastern half of the Nation. The light thunderstorms in the moist air brought little relief from the heat, humidity, and atmospheric pollution. Patches of light early-morning fog dotted the eastern half of the Nation on most mornings and the rising sun was reddish orange due to the pollutants in the air. In the last week of July, a cold front brought relief to the Northeast after almost 2 weeks of humid 90° heat. A few days before the end of July, the front became stationary from Utah to the middle Atlantic coast. The Southeast continued hot but the North was comfortably cool.

August was a cool month over most of the Nation. The western portions of the central and southern Great Plains averaged 3° to 6° cooler than normal. The Northwest and the Deep South averaged slightly warmer than normal. The Far West averaged warmer than normal early and late in August and cooler than normal at midmonth. The opposite regime prevailed over mid-America. This area was cool early and late in August and warm in the third week.

Storm systems sweeping across the eastern half of the Nation caused quick temperature changes and some large diurnal temperature ranges. The Southwestern Deserts continued hot. Furnace Creek, Death Valley, Calif., registered 121° on the afternoon of August 8. The soil temperature was 194°. In contrast, autumn temperatures were noted in the high Rocky Mountains. Big Piney, Wyo., and Leadville, Colo., registered 30° on August 21 and 22, respectively.

In general, summer rainfall totals were less than 4 inches west of the Rocky Mountains, between 4 and 8 inches over the western Great Plains, and more than 8 inches over the eastern half of the Nation. Numerous spots over the East received more than 16 inches of summer rain. Over the Florida Peninsula, the 3-month totals ranged from 16 to more than 26 inches. Totals were mostly between 50 percent and 150 percent of normal. An important exception was parts of southern California where the normals are small. This area has a "Mediterranean" climate; most of the rain falls in winter, with almost none occurring in summer. The light rains which did fall were several times the summer normals.

Almost the entire area from Oregon to the continental Divide and southward to the Mexican Border received less than 1 inch of rain in June. Most stations in that large dry area received less than 0.50 inch. Elsewhere over the Nation, the rainfall was very unevenly distributed and ranged widely. A large area from central New York to central Virginia received 8 to more than 12 inches, most of which fell from Tropical Storm Agnes in the week ending June 25.

Afternoon thundershowers in the first week of June dotted the dry Southwest--the Mountains and the Deserts. The 0.06-inch rain at Phoenix on the 7th was important because it ended a 160-day period of no rain or only very light sprinkles. Heavy thundershowers at the end of the first week of June in west-central Iowa, 3 to 5 inches in spots, flooded roads and stalled traffic.

Torrential rains in northern and eastern Black Hills on the evening of June 9, caused the worst natural disaster in South Dakota history. The 3- to 5-inch rains flooded portions of the Keystone, Sturgis, and Rapid City areas.

About 200 persons were drowned. Hundreds were left homeless. Many bridges and many miles of roads and railroad tracks were destroyed. Property damage was in the neighborhood of $100 million. Widespread thundershowers occurred over much of the central and eastern portions of the Nation about midmonth. Generous rains soaked a large area from northeastern Texas to western Indiana where May rainfall was generally less than 50 percent of normal. Many citizens in parts of Rapid City, S. Dak., left their homes on the 17th after 2 to 3 inches of rain fell in the area accompanied by winds gusting to 50 m.p.h. Hurricane Agnes played the star roll in the weather news in the fourth week of June. She reached hurricane strength June 17, about 300 miles southwest of Key West, Fla. She crossed the Florida Panhandle Monday, June 19. The winds decreased and she was downgraded to "Tropical Storm" Agnes. This powerful storm continued northward, dumping 6 to 12 inches of rain over the Appalachians and eastward to the Atlantic Ocean.

Agnes deluged the central and southern Appalachians and their eastern slopes and foothills early in the third week of June and by midweek was soaking northern Virginia before continuing on to Pennsylvania, New York, and New England. The torrential rains forced thousands of persons from their homes; dozens were drowned. Roads became flooded and bridges were washed away. Loss in Pennsylvania alone was estimated at over $1 million.

Phoenix, Ariz., received a heavy shower, 1.64 inches, on June 21 and 22. This is more rain than ever fell in the month of June at Phoenix. A locality a few miles north of Phoenix Airport received 4.20 inches of rain in 2-1/2 hours. This is one of the vagaries of desert climate--the wettest June of record can follow the driest 5-month period in weather history. The month ended as heavy thunderstorms rumbled across the South, large hail fell in Oklahoma and Missouri, and tornadoes occurred in scattered parts of the Great Plains.

A quasi-stationary front from western New York caused some dismal rainy weather early in July. As the front became active, tornadoes occurred in spots in the Great Plains from North Dakota to Texas. Property damage was light. Thunderstorms developed along the front and in the humid air that lay over the central and southern Great Plains and the middle and lower Mississippi River Valley. Heavy showers doused spots in the central Great Plains about midmonth. Four to 6 inches of rain caused streams to rise in western Kansas and south-central Nebraska. A weak tropical storm moved inland near Myrtle Beach, S.C., on the evening of July 11. It dumped 2-day totals of 3 to 6 inches of rain over the eastern portions of the Carolinas and northward to New England. With the soils already saturated, only moderate showers were required to produce local flooding in some areas.

Vigorous thunderstorms broke out along a quasi-stationary front which, shortly after midmonth, stretched from the Great Lakes to the Texas Panhandle. A few twisters occurred in central Kansas, east-central Iowa, and northern Illinois on the evening of July 17. Some farmsteads were damaged and some cattle injured. Heavy rains and strong winds on the 18th caused property damage west of Chicago, Ill. After the front dissipated another front farther north brought active weather to the northern and central Great Plains. The showers were especially heavy north of St. Cloud, Minn., where 24-hour rainfall totals exceeded 8 inches at a few localities. Vigorous thunderstorms caused torrential downpours in South Dakota and Nebraska in the last week of July. Rains in western Tennessee swelled the creeks and small rivers to overflowing.

No rain or only widely scattered light sprinkles fell in California and nearby portions of neighboring States. Early in August an active cold front stretched from the Great Lakes to the central Great Plains. Numerous thunderstorms occurred along the front as it moved southeastward to the Gulf and Atlantic Coasts. Some of the thunderstorms produced heavy rain; some were accompanied by hail and strong winds. One thunderstorm uprooted trees near Lost Nation, Iowa. Others drenched spots in southern Illinois and in eastern Kentucky. More fronts swept eastward from the western Great Plains to the Atlantic Ocean in the second week of August. Thunderstorms occurred along the fronts and from the southern Great Plains to the Atlantic Seaboard in the warm humid air that covered the Southland. Heavy thunderstorms spotted parts of the central and eastern portions of the Nation in the third week of August. The central Great Plains received no rain or only light scattered sprinkles. Heavier showers fell from the northern Great Plains to the Great Lakes and in the warm humid areas in the South. Severe thunderstorms hit Wisconsin and Michigan on the 18th, 19th, and 20th. Frontal thunderstorms continued in the fourth week of August. One of these dumped 1.30 inches of rain at St. Cloud, Minn., in 18 minutes. When rain falls at such intensity, it falls as streams rather than drops. These downpours are called "cloudbursts." The last few days of the month saw more thunderstorms, some moderate to heavy. Tropical Storm Gwen, about 300 miles south-southwest of San Diego, Calif., brought some heavy showers to the mountains in the Southwest. Heavy rains also fell in the Southeast. Savannah, Ga., received 4.14 inches in 6 hours early August 29 and 3.26 inches fell at Orlando, Fla., on the afternoon of the 30th. Practically no rain fell in the entire month in the Far West. Spots in California received no rain. Monthly totals elsewhere in the Far West were generally less than 1 inch. The greatest monthly totals were in northern Florida where some localities received more than 16 inches.

AUTUMN--Temperatures averaged below normal over almost the entire Nation in the autumn months. A notable exception was the Southeast where the southern portions of Mississippi, Alabama, and Georgia, and all of Florida averaged warmer than normal. The Florida Peninsula was especially warm. Much of the northern and central Great Plains averaged 2° to more than 4° colder than normal.

Generally, September temperatures averaged cooler than normal from Washington and Oregon to the Great Lakes and from California to western Texas. Above normal temperatures predominated from eastern Texas to the middle and southern Atlantic coast. A series of cold fronts during the month brought refreshing autumn weather to much of the central and eastern portions of the country, while warm, humid air flowed over the southern States.

October temperatures averaged cooler than normal over most of the Nation. The main exceptions included an area from east-central Arizona to the western Gulf Coast and from Louisiana to southern Georgia.

Some quick temperature changes occurred in October due to several cold fronts that crossed the Great Plains. One of these fronts dropped temperatures sharply shortly after midmonth. Southerly winds preceding the front warmed the central Great Plains. The mercury at Wichita Falls, Texas, climbed to 102° on the 17th when Oklahoma City, Okla., warmed to 96°. Neither city had ever seen such high temperatures so late in the season. Northwesterly winds following the frontal passage dropped the temperatures in Oklahoma to the thirties and forties by the 19th. The freezing line in the East pushed southward across eastern Tennessee and western North Carolina.

Floridians basked in summer weather during the entire month. In contrast, the mercury at West Yellowstone, Montana, tumbled to -5° on the 29th.

November temperatures averaged slightly above normal along the Canadian border from Washington to Minnesota and along the Atlantic Coast from Norfolk, Va., to Key West, Fla. The rest of the Nation was colder than normal in November. A large area from the central and southern Rocky Mountains to the Mississippi River averaged 4° to 9° colder than normal. Cold weather prevailed over the Rocky Mountains and Great Plains throughout the month except for brief warming over the Great Plains shortly before midmonth and over the northern Border States in the fourth week. Subzero weather occurred over the northern Rockies and northern Great Plains late in November and temperatures over the Gulf States dropped to near or below freezing.

Total rainfall during the autumn months ranged from 1 inch in Montana to over 20 inches in parts of Missouri and Arkansas. While the 21.2 inches at Springfield, Mo., was only twice the normal rainfall for the area, the 2.7 to 12.0 inches that fell over Arizona was over three times the normal rainfall, much of it falling duirng the month of October.

A cold front pushed into the northern Great Plains early in September. The leading edge of the cold air set off showers and thunderstorms. Light rain fell in the cold air behind the front. Heavy rains, 2 to 4 inches in 24 hours, fell in east-central Kansas on September 1 and 2, causing substantial flooding along Gypsum Creek, Turkey Creek, and the tributaries of the lower Smoky Hill River. Flooding also occurred in south-central New Mexico due to the heavy showers in that area. Meanwhile, Tropical Storm Carrie dumped heavy rain over eastern Massachusetts - 8 inches southwest of Hyannis Port and over 5 inches at Chatham in 6 hours. Showers and thunderstorms, some heavy, occurred about the middle of the first week of September from the southern Great Plains to the middle and southern Atlantic Coast. Near the end of the first week, light showers splattered the Texas Panhandle, northeastern Kansas, and nearby parts of Nebraska, Iowa, and Missouri. Heavy rains splashed down in Illinois and Indiana. Shortly before midmonth a slow moving front stretched from a low centered near Hudson Bay, across Lake Superior to the central Great Plains, and westward to another low centered in northern Utah. Scattered showers and a few thunderstorms, some heavy, rumbled in the vicinity of the front. Especially heavy rains fell in eastern Nebraska and western Iowa. Storm totals exceeding 5 inches were common in that area; some locations received more than 10 inches on the evening of September 17 and in the early morning of the 18th. One of the largest totals was 21 inches at Earling, Iowa. The continued heavy rains in Shelby County, Iowa, caused record river stages along the west and east forks of the Nishnabotna River. The heavy rains in Nebraska, Iowa, Kansas, and Missouri caused important rises on the main stem of the Missouri River. Much rain fell on saturated soil where it was not needed. Frontal thunderstorms continued in the third week of September. A storm in the Pacific Northwest brought rain to the coastal areas and nearby hills and snow in the higher Cascades. Stampede Pass, Wash., measured 5 inches of snow on the ground on the morning of the 20th. About 5 inches of rain on September 20 and 21 drenched Duluth, Minn. Hail and high winds occurred in Minnesota and Wisconsin. While a band of frontal thunderstorms moved across the Great Plains, airmass thunderstorms dotted the Deep South in the hot, sultry air that covered that region.

Northeasterly upslope winds produced heavy snow over portions of Montana on September 24 and 25. Miles City measured 3 inches on the ground on the morning of the 25th. Heavy rains fell at Charles City, Iowa, and at Poplar Bluff, Mo. Mixtures of rain and snow slicked the roads and highways in parts of Idaho and Nevada. Near the end of the month, showers and thunderstorms occurred along a front that stretched from the southern Great Plains to New England and in the warm humid air that lay over the Deep South. The areas that received only light rains in September were the Desert Southwest, southern Georgia, and parts of Florida.

Rainfall in October was very unevenly distributed over the Nation. Hurricane Joanne, about 500 miles south of San Diego, Calif., became Tropical Storm Joanne, and moved across northern Mexico. It became an extra-tropical low and produced heavy rains over portions of the Desert Southwest. About 3 inches of rain fell in the Prescott-Flagstaff, Ariz., area in 24 hours on October 6 and 7. The 4-

day total (October 3 to 7) at Phoenix of 1.93 inches is more than four times the October normal for Phoenix for the entire month. The heavy rains filled reservoirs but damaged cotton. Another storm off the coast of North Carolina intensified. Onshore winds brought moisture to the hill country of the middle Atlantic States. Almost 11 inches of rain fell at Amelia, Va. Three-day totals over interior Virginia for October 5 to 7 ranged from 6 to 12 inches with slightly lesser amounts in western Maryland and in North Carolina. The intense rains caused serious flooding at Richmond, Va., on the James River and the worst flooding in the 20th century at Petersburg on the Appomattox River. Weak thunderstorms spattered the central Great Plains in the second week of October. Amounts of rain were mostly light and wide areas in the southern Great Plains received no rain or only light sprinkles. Heavy rains caused flash floods in eastern Arizona and central Oklahoma in the third week of October. Snow fell in the Rocky Mountains and in the lee of the Great Lakes. The heaviest rains in the last week in October fell in East Texas, southern Oklahoma, northern Louisiana, and western Arkansas where some weekly totals ranged from 6 to 13 inches.

Monthly totals in October ranged widely from less than an inch along the western edge of the northern and central Great Plains to 4 to 6 inches or more in southeastern Arizona and from northeastern Texas across southern Missouri, Arkansas, and Louisiana to Tennessee. October rains exceeded the October normals over the Far Southwest, over the southern Great Plains, and over portions of the northern Great Plains. The heavy rains in the Desert Southwest shortly after midmonth were several times the normals for the entire month. In the Far Northwest, October precipitation was less than 25 percent of normal.

November, in general, was a stormy month. Most of the Nation received above-normal precipitation. The main exception was the Northwest. Severe thunderstorms occurred over the middle and lower Mississippi River Valley early in the month. Several storms were in progress at midmonth. One whitened the central Great Plains and the Great Lakes Region before continuing to New England. The second lashed the Pacific Coast before crossing the Rocky Mountains, the Great Plains, and the middle Mississippi River Valley. The third brought rain to central California, heavy snow from central New Mexico to the central Great Plains, freezing drizzle or sleet from the central Great Plains to the Lower Mississippi River Valley and scattered thunderstorms over the southern Great Plains. Later in the month, a vigorous storm centered off the northern Atlantic Coast produced heavy rain along the Coast and snow in northeastern New York and northern New England. A storm in the Southwest crossed the central and southern Rocky Mountains and dumped heavy snow on the eastern slopes of the Rockies. More snow fell from the Great Lakes to Tennessee and spread eastward to the northern Appalachians. A variety of precipitation fell from the Mississippi River to the Atlantic Ocean in the last weekend in November. The last few days of the month brought rain and drizzle to the Pacific Coast, snow from the Upper Mississippi River Valley to the northern Appalachians, and rain or drizzle along the Gulf and southern Atlantic Coasts.

DECEMBER--Typical winter weather covered much of the Nation in the first three weeks of December. The weekend of the 2d and 3d brought a cold wave as Canadian air poured southward into the northern Great Plains. Subzero weather struck the northern Great Plains on the 2d, and some spots were still below zero on the morning of the 4th. Winds gusting to 70 m.p.h. at Livingston, Mont., dropped the temperature from 52° to 18° in 20 minutes. The mercury at Glasgow, Mont., plunged to 31° below zero on the 6th and warmed only to -20° on the 7th.

Although cold arctic air covered much of the Nation, the Southwest and the Gulf of Mexico Coast were enjoying balmy weather. McAllen, Texas, registered 93° on the afternoon of the 5th. By the 6th and 7th, cold air covered much of Texas and temperatures remained mostly in the thirties and forties. The highest temperature at Amarillo on the 6th was 19°.

By December 7, the leading edge of the cold air had reached the Gulf Coast States and the Carolinas. McComb, Miss., registered 33° on the 7th and on that date the temperatures at Little Rock, Ark., ranged from 23° in the morning to 31° in the afternoon. Bitter cold continued over much of the West. The mercury at West Yellowstone, Mont., plunged to 48° below zero on the 10th. Mild weather continued along the Gulf and middle and southern Atlantic Coasts where afternoon readings ranged generally from the sixties to the eighties. The northern Rocky Mountains and the northern Great Plains continued about 30° to 40° colder than normal.

At midmonth, "Old Man Winter" was still doing his "thing", combining cold temperatures, strong winds, ice, and snow. Record warmth in Florida, 84° at Vero Beach on the 14th, was replaced by maximums in the fifties and sixties by the 16th. A large high centered over Illinois poured cold arctic air into the Nation's midsection. Temperatures in Iowa and Illinois dropped to -15° or colder. As the system moved up through New England, some respite from the severe cold occurred in the Northern Great Plains, but another cold front later in the week dropped temperatures there once again. By the 15th, a frigid airmass was wedged over the Nation's midsection between major storms over northeastern and northwestern portions of the country. While a large low pressure system was settled in over the Northeast, three high pressure systems over the middle U.S. poured cold air southward. One high was located just north of the North Dakota-Canada border, one over the Texas-Oklahoma Panhandle, and the third over Utah and Wyoming. A low pressure system over the Pacific battered the coasts of Washington and Oregon. By the 17th, the large high had brought clear skies and cold temperatures to much of the Nation. The cold arctic air lowered temperatures below the freezing level into the deep South. The only portion of the U.S. not experiencing freezing temperatures were the southern portion of Texas and the southern two-thirds of Florida on the morning of the 17th. Gainesville, Fla., reported 31°.

As the Christmas weekend approached, the western Great Plains warmed to the forties and fifties and Florida emerged from the "deep freeze." In the last week of December, the Southwest averaged slightly cooler than normal. Relatively mild weather continued over most of the rest of the Nation.

The first few days of December brought heavy snow to the Northeast and lighter snow accompanied by high winds from the northern Rocky Mountains to the Upper Mississippi River Valley. Snow at Rumford, Maine, and Bradford, Pa., accumulated to 14 inches, and 10 inches fell at Lebanon, N.H., and Binghamton and Utica, N.Y. A cold wave accompanied the snow in the northern Rocky Mountains and northern Great Plains. The blizzard conditions made travel difficult or impossible. Farm chores became difficult.

Severe weather spread over much of the Nation near the end of the first week of December. Snow blanketed the northern states from Washington to the California Mountains, the northern and Central Great Plains, the Great Lakes Region, and New England. Rain fell over the Southland and thundershowers popped up along the Gulf of Mexico Coast. Heavy fog covered the parts of the Southeast on some mornings. In some places a belt of freezing rain, freezing drizzle, and sleet separated the snow belt on the north from the rains over the south.

Strong winds occurred in places in connection with the massive storm. Winds gusted to 50 m.p.h. or more along portions of the Oregon Coast. Portland, Oreg., clocked gusts of 55 m.p.h. late on the 5th, and gusts at Detroit, Mich., reached 61 m.p.h. early on the 6th. Snow accumulated to 4 to 11 inches in the Intermountain Region, to 12 inches in some passes in the Rocky Mountains, and up to 12 inches in spots in the northern Great Plains. Wausau, Wisc., measured 12 inches of snow on the ground on the morning of the 6th, when the snow was 9 inches deep at Alexandria, Minn. The snow depth reached 19 inches at Houlton, Maine, on the 6th. The deep snow, the strong winds, and the icy roads made highway travel dangerous in some places and impossible in others. A number of schools were closed because of the inclement weather.

The 11th and 12th were especially stormy. A major storm was centered over the Great Basin. Snow fell from the coastal mountains of Oregon and California to the Great Lakes. Mixtures of snow, freezing rain, and freezing drizzle fell over the middle Mississippi River Valley, the Ohio River Valley, and northeastward to New England. Dense fog covered the western Gulf Coast. Rain fell over the lower Mississippi River Valley. Combinations of the various elements made highway travel difficult and, in some places, dangerous. Flooding occurred in some places where the rain fell on saturated or frozen ground. Freezing rain and snow pelted an area from the southern Great Plains up through the Midwest to New England. Very heavy rains fell over the Southeast and eastern Seaboard, and also along the Pacific Coast.

On the 11th freezing rain glazed portions of the Southern Plains into the Lower Mississippi and Tennessee Valleys. As the storm system moved northeastward, freezing rain fell over parts of Illinois, Ohio, and Michigan. By the 13th, freezing rain, combined with snow in some areas, extended well up into New England.

On the 14th an intense low pressure system began developing over the northern Gulf. As this low developed, it moved northward dropping large amounts of rain over the Gulf States. Athens, Georgia, received 4.25 inches during the 24-hour period ending on the afternoon of the 17th. As the low moved northward, it dumped heavy rains all along the Atlantic Seaboard.

The low pressure system combined with a second low over Ontario to drop considerable snow over New England. The heaviest snowfall occurred over northern New York, Vermont, and the northern portions of New Hampshire and Maine. Six to 12 inches fell in many areas. The pressure differences between this storm system and the high located over the Great Plains resulted in gale-force winds and blowing snow, making travel very treacherous.

In the Northwest, the weather was being dominated by a complex low pressure system over the Gulf of Alaska. Gale-force winds were felt along the Washington and Oregon coast. Rain fell along the coastal region from northern California to Washington. The storm pushed moisture well into the interior sections of the Northwest, much of it falling as freezing rain. Freezing rain fell as far eastward as western Montana, Idaho, and Utah.

As the Christmas weekend approached, the Pacific storm intensified and heavy thundershowers drenched parts of the Deep South.

Heavy rains fell in the Pacific Northwest in the last week of the year. Santa Ana winds whipped southern California. Snow spread across the northern Rocky Mountains to the Great Lakes and to New England. In the last few days of the year a storm in the Southwest intensified and dumped heavy snow in many areas west of the Continental Divide. Mixtures of rain and snow fell in southern Rocky Mountains, portions of the Great Plains, the upper and middle portions of the Mississippi River Valley, the Great Lakes Region, the Ohio River Valley, and northeastward to New England. On the last day of 1972, a severe blizzard blocked roads in the central Great Plains, light to heavy showers and few thunderstorms occurred over the southern Great Plains, and freezing rain was sandwiched between the snow and rain areas. The glaze broke tree limbs and powerlines and made travel dangerous.

EXCESSIVE PRECIPITATION

(Excessive Short Duration Rainfall)

YEAR 1972

This table contains statistics of maximum amounts of rainfall during the calendar year 1972. Data presented in this table are generally from stations equipped with recording gages. Stations are at airport locations unless otherwise shown.

Excessive precipitation data for the years 1896-1935 inclusive, generally present the accumulated amounts of precipitation for each 5, 10, or 20 minute intervals during storms in which the rate of fall equaled or exceeded .25 inch in any 5 minute period, or .30 in any 10 minute period, or .35 in any 15 minute period, etc., the tabulation beginning with the 5 minute period where the rate of .05 inch in 5 minutes began and continuing by 10 or 20 minute intervals up to 120 minutes. A detailed explanation of the method used may be found in the publications listed in the last paragraph of this explanation.

The present method, adopted with data for the calendar year 1936, gives the maximum fall of precipitation for the periods 5 to 180 minutes, the maximum amounts being taken for the periods in which the fall is greatest for the given time, and is tabulated to show maximum amounts for 5, 10, 15, 20, 30, 45, 60, 80, 100, 120, 150 and 180 minutes, even if the fall does not equal the excessive rate for some of the periods. (The 15 minute amount was not computed for 1936-43 and the 150 minute amount was not computed for 1944 through 1948).

The following Table A shows limits at which precipitation was considered excessive in this publication:

TABLE A

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.25	60	.80
10	.30	80	1.00
15	.35	100	1.20
20	.40	120	1.40
30	.50	150	1.70
45	.65	180	2.00

This table is made up from the formula, $A = t + 20$ where A is the accumulated depth in hundredths of inches and t is the time in minutes.

For the years 1936 through 1948 stations in North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, Oklahoma, and San Juan, P. R., used the limits shown in the following Table B:

TABLE B

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.40	60	1.50
10	.50	80	1.90
15	.60	100	2.30
20	.70	120	2.70
30	.90	150	3.30
45	1.20	180	3.90

This table is made up from the formula $A = 2t + 30$. Its use, however, was discontinued at the end of 1948 and Table A is used by all sections for 1949 and the following years.

Publication of Data. A summary of maximum precipitation data for the years prior to 1896 is published in the annual report of the Chief of the Weather Bureau for 1895-1896. Excessive precipitation data for the period 1881-1896 are published in the annual report of the Chief of the Weather Bureau 1896-1897. Data for the years 1897 through 1934 have been published in the appropriate annual reports of the Chief of the Weather Bureau. For the years 1935 through 1949 these data are published in the appropriate issue of the United States Meteorological Yearbook. For 1950 and succeeding years, excessive precipitation is presented in the annual issues of the Climatological Data National Summary.

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ALABAMA												
BIRMINGHAM												
JAN 2	.29	.44	.53	.60	.71	.75	.82	.89	.94	.98	.99	1.00
JAN 4	.30	.35	.41	.42	.46	.50	.61	.62	.65	.71	.75	.82
JAN 10	.22	.32	.43	.55	.70	.72	.83	1.05	1.37	1.44	1.55	1.80
MAR 8	.25	.32	.33	.34	.36	.37	.42	.47	.54	.62	.72	.75
APR 4	.15	.30	.32	.33	.37	.39	.47	.55	.59	.60	.60	.60
APR 16	.30	.43	.43	.43	.45	.47	.49	.53	.57	.58	.58	.58
APR 22	.14	.27	.35	.41	.42	.42	.43	.53	.54	.57	.69	.71
JUN 25	.28	.33	.35	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUN 25	.24	.47	.49	.53	.55	.55	.56	.56	.56	.56	.56	.57
JUN 27	.25	.37	.37	.40	.45	.52	.57	.63	.63	.63	.63	.63
JUL 3	.37	.62	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64
JUL 30	.20	.35	.52	.55	.77	.82	.83	.85	.90	.95	.95	.95
AUG 21	.25	.50	.70	.79	.88	1.20	1.30	1.36	1.40	1.41	1.47	1.53
SEP 4	.43	.78	.98	1.20	1.35	1.50	1.60	1.63	1.78	1.84	1.85	1.85
SEP 17	.25	.43	.43	.45	.48	.47	.47	.47	.47	.47	.47	.48
SEP 29	.17	.31	.35	.41	.48	.53	.56	.64	.83	.93	1.00	1.08
OCT 14	.35	.70	.75	.93	1.03	1.10	1.15	1.21	1.28	1.33	1.40	1.43
NOV 13	.33	.41	.45	.58	.84	.89	.95	1.00	1.08	1.13	1.26	1.26
HUNTSVILLE												
MAR 2	.25	.40	.40	.40	.45	.45	.70	.78	.78	.83	.96	.98
MAR 28	.26	.35	.37	.39	.45	.52	.58	.65	.67	.67	.69	.70
APR 16	.55	.65	.70	.72	.80	.81	.86	.92	.93	.93	.94	.94
APR 22	.10	.20	.30	.38	.50	.65	.82	1.00	1.05	1.20	1.32	1.37
MAY 14	.53	.55	.55	.55	.55	.55	.57	.57	.57	.57	.57	.57
JUN 27	.30	.35	.42	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUN 27	.28	.39	.39	.40	.44	.47	.48	.48	.48	.48	.48	.48
JUL 2	.25	.35	.37	.44	.45	.47	.47	.47	.47	.47	.47	.47
JUL 4	.26	.31	.33	.44	.55	.64	.73	.75	.97	1.07	1.07	1.07
JUL 23	.35	.66	.75	.93	1.03	1.11	1.13	1.13	1.14	1.14	1.16	1.18
JUL 28	.40	.61	.68	.71	.97	1.17	1.17	1.17	1.31	1.31	1.31	1.50
AUG 6	.42	.65	1.07	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
SEP 28	.40	.48	.50	.64	.68	.74	.81	.87	.90	.90	.90	.90
MOBILE												
JAN 2	.20	.40	.48	.49	.49	.49	.49	.49	.49	.49	.59	.88
JAN 20	.23	.36	.38	.40	.48	.53	.64	.74	.83	.88	.92	.96
FEB 6	.23	.33	.40	.45	.72	.82	1.00	1.00	1.00	1.10	1.20	1.35
FEB 26	.36	.50	.52	.54	.56	.66	.69	.69	.69	.70	.70	.70
MAR 2	M	M	M	M	M	M	.95	1.04	1.11	1.16	1.28	1.35
MAR 8	.35	.50	.65	.72	.75	.80	.80	.82	.84	.86	1.05	1.07
APR 4	.45	.46	.46	.47	.49	.51	.52	.53	.55	.59	.59	.59
APR 22	.37	.62	.68	.72	.80	.83	.83	.84	.85	.85	.85	.85
MAY 7	.21	.41	.43	.46	.52	.55	.63	.71	.96	1.15	1.30	1.58
MAY 7	.21	.34	.36	.45	.48	.52	.77	1.20	1.30	1.39	1.56	1.65
MAY 30	.27	.49	.52	.56	.65	.65	.90	.93	.94	.97	1.00	1.02
JUN 10	.38	.75	.83	1.10	1.62	1.96	2.01	2.01	2.01	2.01	2.01	2.01
AUG 13	.32	.45	.55	.62	.65	.65	.65	.65	.65	.65	.65	.65
SEP 27	.37	.63	.69	.81	1.35	1.74	1.85	1.86	1.86	1.86	1.86	1.86
NOV 7	.38	.67	.71	.81	.93	.93	.93	.93	.93	.93	.93	.93
NOV 10	.18	.30	.37	.46	.55	.56	.66	.66	.66	.66	.66	.66
NOV 13	.40	.51	.55	.57	.62	.65	.70	.76	.81	.85	.92	.92
DEC 15	.32	.51	.58	.66	.76	.82	1.03	1.26	1.33	1.35	1.36	1.37
MONTGOMERY												
MAR 1	.48	.69	.74	.79	.85	1.04	1.10	1.22	1.28	1.33	1.38	1.55
APR 22	.25	.42	.53	.56	.60	.65	.69	.79	.91	.95	.97	.97
JUN 25	.57	.90	1.28	1.44	1.56	1.61	2.03	2.58	2.63	2.65	2.65	2.72
JUL 30	.21	.31	.40	.45	.58	.81	.99	1.28	1.53	1.78	2.26	2.35
AUG 21	.50	.88	1.19	1.41	1.49	1.60	1.60	1.60	1.60	1.62	1.63	1.66
NOV 13	.17	.24	.35	.45	.55	.64	.75	.85	.92	.98	1.03	1.13
DEC 14	.28	.53	.60	.66	.76	.79	.80	.84	.84	.84	.86	.90
DEC 14	.29	.34	.37	.37	.38	.40	M	M	M	M	M	M
DEC 20	.38	.44	.46	.48	.60	.61	.61	.61	.61	.63	.67	.67
ALASKA												
ANCHORAGE						NONE						
ANNETTE						NONE						
COLD BAY						NONE						
FAIRBANKS						NONE						
JUNEAU						NONE						
KING SALMON						NONE						
MC GRATH						NONE						
ST. PAUL ISLAND						NONE						
YAKUTAT						NONE						
ARIZONA												
FLAGSTAFF												
AUG 4	.28	.35	.55	.60	.65	.67	.68	.68	.68	.68	.68	.68
PHOENIX												
JUN 22	.20	.40	.52	.55	.62	.88	.92	.93	1.19	1.20	1.21	1.26
AUG 5	.20	.28	.31	.41	.58	.65	.66	.67	.67	.67	.67	.68
OCT 18	.30	.36	.40	.43	.45	.46	.46	.46	.46	.46	.46	.46
TUCSON												
JUL 15	.20	.33	.53	.59	.64	.65	.66	.67	.67	.67	.67	.67
JUL 16	.40	.55	.84	.99	1.34	1.45	1.48	1.52	1.54	1.55	1.55	1.55
JUL 24	.18	.29	.33	.42	.53	.53	.53	.53	.53	.55	58	.59
AUG 5	.20	.32	.33	.34	.34	.34	.34	.34	.34	.40	.42	.42
AUG 9	.22	.38	.40	.40	.41	.42	.42	.42	.42	.42	.42	.42
SEP 1	.26	.48	.56	.60	.62	.67	.73	.75	.75	.75	.75	.76
OCT 18	.28	.45	.48	.49	.51	.51	.51	.51	.51	.51	.51	.52
OCT 19	.19	.32	.37	.42	.46	.51	.56	.56	.59	.60	.60	.60
WINSLOW												
JUN 7	.25	.30	.32	.34	.38	.48	.52	.53	.57	.57	.57	.57
JUN 14	.36	.53	.71	.88	1.01	1.13	1.18	1.22	1.22	1.22	1.22	1.23
ARIZONA												
YUMA						NONE						
ARKANSAS												
FORT SMITH												
APR 20	.31	.32	.33	.33	.34	.35	.37	.38	.38	.38	.39	.39
APR [illegible]	.20	.30	.37	.47	.63	.75	.95	.98	.98	.98	.98	.98
MAY 1	.16	.25	.33	.41	.62	.95	1.24	1.51	1.51	1.51	1.51	1.51
MAY 29	.40	.43	.44	.45	.53	.53	.53	.53	.53	.53	.53	.53
[illegible]	.25	.39	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49
JUL 1	.47	.83	.92	1.15	1.32	1.37	1.43	1.44	1.44	1.45	1.49	1.50
JUL 20	.17	.27	.37	.43	.58	.60	.65	.73	[illegible]	[illegible]	.79	.79
AUG 22	.40	.66	.68	.71	.71	.71	.71	.71	.73	.73	.73	.73
SEP 26	.25	.50	.70	.85	1.00	1.09	1.09	1.10	1.10	1.10	1.10	1.10
SEP 29	.25	.33	.40	.41	.41	.41	.41	.42	.42	.42	.42	.43
OCT 30	.22	.27	.32	[illegible]	[illegible]	.83	1.03	1.15	1.26	[illegible]	1.42	1.44
LITTLE ROCK												
APR 21	.25	.42	.55	.62	.65	.67	.67	.67	.67	.67	.67	.67
JUN 25	.30	.35	.45	.48	.51	.52	.52	.52	.52	.52	.52	.52
JUL 3	.30	.50	.70	.71	.72	.73	.75	.76	.80	.81	.89	.90
AUG 8	.25	.35	.41	.43	.55	.55	.63	.63	.63	.63	.63	.63
AUG 22	.25	.39	.50	.60	.66	.70	.78	.85	.94	.95	.95	.95
SEP 1	.43	.68	.90	1.09	1.25	1.30	1.30	1.32	1.32	1.32	1.32	1.32
NOV 6	.25	.33	.43	.46	.60	.84	1.17	1.31	1.37	1.71	1.95	2.05
NOV 6	.20	.35	.39	.40	.41	.46	.52	.55	.56	.65	.70	.75
NOV 6	.38	.40	.47	.52	.59	.62	.67	.74	.75	.77	.92	.95
CALIFORNIA												
BAKERSFIELD												
JUN 7	.26*	.49*	.70	.78*	.84	.98*	1.06	1.09	1.09*	1.09	1.09	1.09
BISHOP						NONE						
BLUE CANYON						NONE						
EUREKA U						NONE						
FRESNO												
JUN 7	.21	.32	.41	.45	.47	.49	.50	.51	.51	.54	.58	.59
LOS ANGELES												
OCT 18	.35	.62	.83	.97*	1.35	1.61*	1.68	1.69	1.69	1.69	1.71	1.72
MT SHASTA R						NONE						
OAKLAND						NONE						
RED BLUFF						NONE						
SACRAMENTO						NONE						
SANDBERG R						NONE						
SAN DIEGO												
NOV 16	.26*	.49	.64	.70	.79	.82	.84	.90	.93	.94	.95	.98
SAN FRANCISCO U												
OCT 11	.19	.26	.30	.36	.51	.62	.70	.87	.93	.98	1.05	1.18
SANTA MARIA						NONE						
COLORADO												
ALAMOSA						NONE						
DENVER												
JUN 4	.21	.39	.49	.56	.58	.66	.67	.67	.68	.68	.69	.70
AUG 23	.12	.22	.32	.40	.51	.56	.60	.69	.78	.83	.92	.95
AUG 27	.30	.41	.47	.49	.50	.50	.50	.51	.52	.53	.53	.53
SEP 7	.30	.51	.77	[illegible]	.88	.88	.88	.88	.88	.88	1.00	1.20
GRAND JUNCTION						NONE						
PUEBLO												
JUL 31	.26	.30	.34	.34	.35	.35	.35	.35	.47	.47	.48	.54
AUG 1	.30	.46	.66	.76	.90	.94	.94	.94	.94	.94	.94	.94
SEP 8	.20	.31	.38	.39	.40	.40	.40	.40	.40	.40	.40	.40
CONNECTICUT												
BRIDGEPORT												
JUN 17	.26	.49	.57	.64	.76	.86	1.01	1.09	1.12	1.13	1.21	1.68
JUN 19	.22	.34	.38	.40	.53	.72	[illegible]	1.12	1.12	1.42	1.76	2.02
JUN 30	.18	.27	.30	.39	.52	.69	.88	1.06	1.15	1.21	1.24	1.25
DEC 6	.14	.22	.28	.36	.54	.60	.64	.72	.74	.78	.80	.84
HARTFORD												
MAY 31	.21	.39	.42	.53	.58	.61	.81	.83	1.05	1.28	1.40	1.45
JUN 9	.15	.30	.33	.35	.43	.45	.49	.51	.53	.55	.55	.63
JUN 23	.38	.45	.46	.48	.61	.63	.73	.75	.75	.75	.75	.75
JUL 3	.18	.27	.30	.40	.42	.67	.73	.74	.74	.74	.75	.75
AUG 15	.28	.42	.44	.48	.48	.48	.54	.56	.59	.65	.73	.82
AUG 27	.60	.87	.90	.95	1.05	1.10	1.10	1.10	1.10	1.10	1.10	1.10
DELAWARE												
WILMINGTON												
MAR 3	.20	.26	.40	.41	.42	.43	.45	.50	.51	[illegible]	[illegible]	.54
APR 16	.26	.40	.42	.47	.52	.61	.64	.65	.66	.66	.69	.70
JUN 22	.22	.32	.43	.62	.79	[illegible]	1.27	1.48	1.65	1.88	2.24*	2.47
JUL 8	.18	.33	.43	.44	.45	.45	.45	.46	.45	.46	.48	.48
SEP 14	.27	.33	.37	.39	.41	.49	.51	.51	.51	.51	.51	.51

EXCESSIVE SHORT DURATION RAINFALL

YEAR 1972

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
DIST OF COLUMBIA												
WASH NATL AP												
APR 16	.20	.39	.40	.40	.40	.40	.41	.41	.41	.42	.42	.42
JUN 21 T	M	M	M	M	M	M	M	M	M	M	M	M
JUL 12	.17	.28	.30	.35	.53	.68	.77	.81	.81	.81	.84	.84
JUL 13	.42	.68	.79	.82	.91	.98	.99	1.02	1.02	1.02	1.02	1.03
JUL 16	.29	.56	.61	.65	.66	.66	.66	.66	.66	.66	.66	.66
AUG 13	.38	.64	.75	.94	1.20	1.52	1.65	1.68	1.69	1.70	1.72	1.72
OCT 28	.18	.27	.37	.45	.64	.70	.76	.81	.88	.94	.99	1.01
FLORIDA												
APALACHICOLA U												
JAN 11	.17	.32	.40	.50	.73	1.01	1.19	1.25	1.34	1.46	1.56	1.62
JAN 22	.31	.55	.72	.92	1.19	1.35	1.44	1.45	1.51	1.52	1.53	1.54
JAN 30	.30	.40	.46	.57	.58	.63	.66	.69	.72	.74	.74	.74
FEB 3	.32	.58	.77	.81	.83	.84	.84	.85	.86	.86	.88	.88
FEB 27	.27	.53	.53	.53	.54	.54	.54	.57	.61	.65	.71	.72
MAR 5	.21	.30	.35	.37	.44	.50	.51	.59	.66	.66	.73	.73
MAR 19	.41	.74	.84	.89	.97	1.08	1.17	1.22	1.24	1.25	1.27	1.27
MAR 29	.35	.51	.53	.54	.55	.56	.56	.56	.56	.57	.57	.57
AUG 7	.38	.70	1.02	1.14	1.32	1.37	1.50	1.51	1.51	1.51	1.51	1.51
AUG 13	.34	.57	.75	.88	1.10	1.18	1.20	1.20	1.20	1.20	1.20	1.20
AUG 24	.25	.36	.46	.62	.67	.79	.98	.98	1.05	1.06	1.06	1.06
AUG 24	.33	.45	.68	.75	.83	.92	.92	.92	.92	1.01	1.01	1.01
OCT 24	.18	.28	.38	.48	.66	.79	.79	.80	.81	.81	.81	.81
OCT 21	.15	.23	.30	.45	.55	.66	.80	.90	.98	1.06	1.13	1.17
NOV 13	.23	.43	.58	.60	.63	.65	.69	.71	.76	.82	.87	.87
DEC 21	.27	.36	.43	.48	.49	.53	.62	.77	.81	.82	1.21	1.37
DAYTONA BEACH												
MAR 5	.20	.40	.44	.48	.60	.75	.85	.97	1.03	1.06	1.06	1.06
MAR 16	.20	.34	.40	.44	.50	.53	.54	.54	.56	.60	.61	.61
MAR 29	.20	.37	.42	.49	.64	.70	.74	.79	.88	.97	1.11	1.16
MAR 31	.28	.50	.63	.70	.80	1.05	1.25	1.35	1.48	2.16	2.44	2.69
MAY 15	.20	.30	.35	.36	.37	.37	.37	.38	.38	.40	.71	.76
MAY 16	.45	.85	1.05	1.17	1.26	1.30	1.34	1.34	1.34	1.34	1.34	1.34
JUN 19	.10	.18	.25	.33	.40	.50	.75	1.00	1.30	1.42	1.55	1.60
JUN 22	.27	.42	.48	.73	.78	.96	1.00	1.04	1.25	1.47	1.52	1.53
JUL 6	.27	.45	.54	.57	.57	.57	.57	.57	.57	.57	.57	.57
JUL 12	.16	.31	.39	.43	.45	.47	.47	.47	.47	.47	.47	.47
JUL 25	.22	.32	.41	.52	.62	.64	.64	.64	.64	.64	.64	.64
AUG 7	.23	.30	.33	.40	.45	.47	.47	.47	.47	.47	.47	.47
AUG 11	.20	.37	.44	.46	.48	.49	.50	.55	.59	.60	.60	.60
NOV 6	.45	.58	.66	.72	.83	.90	.98	1.07	1.12	1.19	1.28	1.41
NOV 6	.35	.45	.47	.49	.55	.71	.73	.76	.79	.87	.97	1.08
NOV 7	.18	.35	.37	.38	.40	.43	.45	.48	.52	.55	.57	.58
NOV 7	.40	.78	.90	.99	1.13	1.16	1.16	1.16	1.16	1.16	1.16	1.16
NOV 25	.24	.36	.46	.52	.65	.72	.82	.91	1.14	1.34	1.48	1.58
DEC 21	.20	.30	.40	.50	.80	.89	.94	.99	1.03	1.05	1.08	1.10
FORT MYERS												
FEB 3	.25	.32	.34	.35	.36	.40	.50	.58	.61	.63	.63	.67
MAR 31	.75	1.30	1.45	1.70	2.70	3.15	*3.75	3.86	3.97	4.00	4.05	4.05
MAY 13	.77	.90	1.10	1.40	2.00	2.30	3.00	3.90	4.20	*4.30	4.42	4.51
JUN 4	.45	.55	.58	.65	.73	.76	.77	.78	.80	.81	.81	.81
JUN 13	.22	.33	.38	.48	.58	.58	.62	.64	.67	.70	.72	.72
JUN 18	.73	1.04	1.10	1.28	1.65	1.95	2.36	2.73	2.92	3.02	3.10	3.20
JUL 2	.75	1.05	1.15	1.30	1.40	1.41	1.41	1.41	1.41	1.41	1.41	1.42
JUL 4	.28	.35	.36	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUL 10	.50	.90	1.15	1.65	2.25	2.41	2.55	2.55	2.55	2.55	2.55	2.55
JUL 15	.50	.62	.65	.70	.75	.87	.90	.90	.90	.90	.90	.90
JUL 16	.30	.40	.43	.46	.56	.63	.66	.66	.66	.66	.66	.66
JUL 31	.30	.40	.43	.46	.50	.50	.50	.50	.50	.50	.50	.50
AUG 10	.38	.50	.55	.75	.83	.87	.90	.90	.90	.90	.90	.90
AUG 13	1.10	1.85	2.02	2.25	2.40	2.42	2.43	2.43	2.43	2.43	2.43	2.43
AUG 14	.41	.70	.82	.95	1.15	1.37	1.59	1.88	1.90	1.90	1.90	1.90
AUG 19	.30	.34	.34	.34	.35	.35	.36	.37	.37	.37	.37	.37
AUG 20	.30	.56	.65	.85	1.03	1.51	1.59	1.60	1.60	1.60	1.60	1.60
AUG 21	.45	.50	.52	.55	.55	.55	.55	.55	.55	.55	.55	.55
AUG 22	.50	.75	.78	.85	1.03	1.07	1.09	1.10	1.13	1.14	1.14	1.15
AUG 26	.55	1.00	1.15	1.35	1.63	1.71	1.73	1.75	1.80	1.80	1.80	1.80
AUG 27	.60	1.10	1.25	1.70	2.40	3.50	*3.78	3.81	3.82	3.82	3.82	3.82
SEP 2	.27	.40	.45	.55	.83	.87	.90	.90	.90	.90	.90	.90
OCT 2	.50	.80	.90	1.05	1.22	1.22	1.22	1.23	1.25	1.25	1.26	1.26
NOV 14	.25	.31	.32	.33	.43	.62	.76	.85	.86	.90	.94	.95
NOV 25	.30	.35	.35	.38	.39	.39	.49	.49	.49	.49	.49	.49
DEC 21	.32	.40	.45	.55	.65	.68	.74	.80	.83	.85	.85	.85
JACKSONVILLE												
JAN 14	.41	.56	.64	.82	.91	1.24	1.37	1.53	1.58	1.60	1.63	1.63
JAN 22	.36	.45	.49	.52	.56	.59	.67	.70	.76	.80	.81	.81
MAR 29	.30	.50	.64	.71	.77	.84	.85	.87	.87	.88	.93	.94
APR 22	.33	.38	.52	.69	.86	.91	.92	.92	.92	.92	.92	.92
MAY 11	.22	.34	.45	.56	.63	.67	.67	.67	.68	.82	.80	.82
MAY 20	.33	.48	.62	.71	.73	.73	.73	.73	.75	1.12	1.28	1.28
MAY 22	.29	.40	.54	.63	.71	.76	.91	.96	.98	.98	1.02	1.03
MAY 29	.30	.49	.65	.78	.88	1.05	1.53	1.60	1.76	1.78	1.82	1.89
JUN 19	.34	.60	.67	1.01	1.28	1.71	1.96	2.19	2.23	2.32	2.76	2.93
JUL 9	.22	.32	.42	.47	.54	.60	.64	.74	.77	.81	1.02	1.02
JUL 31	.33	.35	.35	.35	.35	.35	.36	.36	.36	.36	.36	.36
AUG 4	.30	.37	.44	.46	.46	.46	.46	.46	.46	.46	.46	.46
AUG 6	.40	.64	.87	1.08	1.18	1.35	1.53	1.61	1.63	1.63	1.64	1.70
AUG 11	.17	.32	.37	.38	.39	.40	.41	.51	.56	.60	.61	.61
AUG 23	.32	.40	.48	.59	.79	1.14	1.44	1.68	1.82	1.82	1.82	1.82
AUG 31	.34	.53	.63	.69	.73	.75	.76	.80	.83	.84	.84	.84
SEP 10	.25	.43	.47	.49	.55	.66	.68	.68	.68	.68	.68	.68
SEP 30	.25	.33	.42	.44	.55	.79	.80	.80	.80	.82	.82	.82
OCT 10	.19	.31	.44	.50	.55	.55	.55	.55	.55	.55	.55	.55
KEY WEST												
JAN 15	.35	.53	.70	.97	1.10	1.30	1.40	1.40	1.40	1.40	1.40	1.40
FEB 9	.18	.26	.31	.35	.58	.78	.89	.93	.95	.98	.98	.98
MAY 6	.30	.52	.68	.82	1.00	1.28	1.30	1.30	1.31	1.32	1.35	1.45
MAY 18	.30	.42	.45	.46	.47	.59	.91	.91	.91	.91	.91	.91
JUN 2	.24	.33	.43	.48	.52	.55	.57	.58	.58	.58	.58	.58
JUN 6	.25	.38	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51
JUN 13	.18	.26	.38	.48	.67	.82	.85	.88	.94	1.00	1.04	1.06
JUN 14	.19	.31	.34	.36	.37	.40	.47	.48	.48	.50	.53	.57
JUN 15	.32	.54	.58	.59	.62	.65	.79	.82	.84	.86	.89	.92
JUN 20	.30	.57	.62	.68	.71	.77	.77	.77	.77	.77	.77	.77
JUN 29	.26	.29	.29	.29	.29	.29	.30	.35	.42	.46	.46	.46
JUL 14	.32	.45	.64	.72	.79	.82	.82	.82	.82	.82	.82	.82
JUL 20	.21	.30	.37	.42	.45	.47	.47	.47	.47	.47	.47	.50
JUL 30	.34	.61	.69	.82	.82	.82	.82	.85	.85	.85	.85	.85
JUL 30	.23	.33	.35	.50	.69	.71	.72	.72	.72	.72	.72	.72
FLORIDA												
KEY WEST												
AUG 18	.41	.62	.76	.76	.76	.76	.76	.76	.76	.76	.76	.76
AUG 29	.50	.85	1.01	1.13	1.24	1.25	1.25	1.25	1.25	1.25	1.25	1.25
AUG 30	.17	.30	.39	.47	.67	.86	.89	.89	.89	.89	.89	.89
SEP 15	.38	.55	.64	.87	1.11	1.35	1.53	1.56	1.56	1.56	1.56	1.56
SEP 20	.36	.60	.73	.83	1.22	1.52	1.54	1.54	1.54	1.54	1.54	1.54
SEP 24	.22	.30	.40	.46	.50	.65	.70	.71	1.00	1.01	1.01	1.01
NOV 10	.30	.60	.78	.79	.92	.93	.93	.93	.93	.93	.93	.93
DEC 16	.28	.51	.53	.57	.65	.67	.75	.81	.90	.91	.91	.92
MIAMI BEACH U												
JAN 22	.50	.52	.55	.60	.78	.95	1.07	1.10	1.10	1.10	1.10	1.10
FEB 9	.20	.35	.40	.48	.56	.57	.58	.60	.60	.60	.67	.74
MAR 5	.27	.41	.60	.67	.71	.71	.71	1.08	1.28	1.29	1.29	1.29
APR 9	.27	.32	.33	.33	.35	.35	.35	.36	.36	.36	.36	.41
APR 30	.26	.40	.48	.54	.80	1.03	1.17	1.27	1.33	1.35	1.35	1.36
MAY 18	.40	.80	1.05	1.10	1.15	1.40	1.56	1.58	1.58	1.58	1.58	1.58
MAY 18	.50	.65	.70	.73	.76	.76	.76	.79	.80	.83	1.02	1.10
JUN 30 T	M	M	M	M	M	M	M	M	M	M	M	M
JUL 19	.35	.60	.70	.85	1.00	1.17	1.32	1.40	1.53	1.60	1.65	1.80
JUL 19	.25	.30	.32	.33	.35	.36	.36	.36	.36	.36	.36	.41
JUL 31	.26	.30	.31	.32	.45	.58	.68	.75	.77	.83	.86	.87
AUG 30	.30	.50	.51	.52	.54	.56	.56	.56	.56	.56	.56	.56
NOV 7	.42	.60	.62	.70	.73	.73	.73	.73	.73	.73	.73	.73
DEC 3	.22	.38	.52	.65	1.00	1.30	1.50	1.67	1.97	2.02	2.02	2.02
DEC 4	.15	.27	.35	.45	.66	.89	.91	1.20	1.36	1.50	1.52	1.68
DEC 15	.27	.47	.57	.67	.82	.90	.90	.90	.90	.90	.90	.94
MIAMI												
FEB 2	.25	.45	.49	.60	.75	.79	.81	.85	.86	.87	.87	.88
MAR 5	.26	.44	.49	.55	.55	.55	.55	.55	.58	.78	.78	.78
MAR 17	.28	.31	.36	.38	.39	.40	.40	.40	.40	.40	.40	.40
APR 1	.25	.36	.40	.53	.55	.62	.63	.63	.67	.75	.77	.82
MAY 6	.14	.27	.37	.40	.58	.70	.82	1.05	1.25	1.37	1.40	1.50
MAY 10	.19	.32	.39	.48	.55	.70	.76	.80	.81	.81	.81	.81
MAY 18	.45	.65	.85	1.05	1.55	1.72	1.75	1.76	1.76	1.76	1.76	1.76
MAY 18	.35	.48	.63	.78	.87	1.07	1.15	1.15	1.15	1.15	1.15	1.15
MAY 19	.25	.44	.55	.71	.93	.94	1.02	1.05	1.07	1.07	1.07	1.07
MAY 20	.29	.53	.60	.66	.77	.82	.87	.92	.92	.92	.92	.92
MAY 22	.25	.35	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
MAY 26	.60	1.16	1.40	1.42	1.62	1.90	2.07	2.07	2.07	2.09	2.11	2.11
MAY 31	.28	.31	.32	.32	.34	.34	.34	.34	.34	.44	.65	.65
JUN 1	.40	.70	.80	.90	.91	.95	1.07	1.09	1.11	1.11	1.11	1.11
JUN 11	.60	.90	1.00	1.20	1.80	1.95	2.00	2.01	2.05	2.07	2.17	2.24
JUN 11	.30	.52	.60	.65	.83	1.20	1.38	1.45	1.50	1.53	1.56	1.65
JUN 12	.40	.62	.70	.73	.90	1.15	1.32	1.52	1.74	1.74	1.79	1.82
JUN 26	.25	.33	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUL 11	.55	.85	1.00	1.05	1.07	1.08	1.08	1.08	1.08	1.08	1.08	1.08
JUL 19	.22	.30	.50	.60	.80	.89	.91	.91	.92	1.16	1.16	1.18
JUL 31	.25	.50	.52	.54	.57	.59	.62	.70	.74	.77	.82	.84
AUG 6	.35	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
AUG 15	.41	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
AUG 23	.22	.43	.47	.50	.55	.57	.58	.85	.90	.93	.95	.95
AUG 28	.45	.65	.86	1.20	1.70	1.85	1.97	1.99	2.00	2.01	2.05	2.05
SEP 4	.27	.32	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
SEP 4	.20	.33	.40	.45	.62	.65	.65	.65	.65	.65	.65	.65
SEP 24	.30	.55	.60	.65	.92	.93	.95	1.05	1.20	1.22	1.25	1.27
OCT 3	.22	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
OCT 28	.33	.60	.68	.75	.78	.78	.78	.78	.78	.78	.78	.78
NOV 15	.27	.36	.43	.47	.50	.53	.58	.62	.68	.72	.75	.75
DEC 4	.20	.35	.40	.45	.55	.75	.90	1.00	1.07	1.15	1.18	1.20
DEC 15	.30	.36	.39	.43	.55	.65	.68	.68	.68	.68	.82	1.08
MIAMI U												
MAR 19	.18	.25	.30	.48	.52	.58	.62	.69	.69	.69	.69	.69
MAR 31	.31	.42	.49	.51	.52	.71	.74	.77	.80	.82	.87	.94
APR 1	.35	.36	.36	.36	.37	.37	.37	.37	.39	.39	.44	.46
APR 30	.45	.65	.73	1.10	1.45	1.79	2.07	2.31	2.70	2.82	3.20	3.55
MAY 6	.32	.53	.74	.93	1.26	1.77	2.29	2.50	2.63	2.66	2.72	2.81
MAY 18	.34	.60	.80	1.14	1.43	1.50	1.54	1.54	1.54	1.54	1.54	1.54
MAY 18	.28	.40	.45	.47	.49	.50	.51	.54	.56	.56	.57	.57
MAY 20	.41	.79	.91	.94	.98	.97	1.00	1.00	1.00	1.00	1.00	1.00
MAY 28	.25	.35	.43	.46	.48	.55	.56	.57	.57	.58	.58	.58
JUN 1	.36	.57	.80	.91	1.04	1.10	1.16	1.18	1.18	1.18	1.19	1.19
JUN 5	.37	.57	.59	.59	.60	.60	.78	.81	.82	.82	.82	.82
JUN 11	.28	.49	.66	.77	.91	1.17	1.17	1.20	1.23	1.25	1.35	1.40
JUN 11	.18	.33	.43	.56	.74	1.04	1.23	1.34	1.39	1.47	1.50	1.57
JUN 12	.23	.37	.53	.61	.69	1.12	1.23	1.44	1.50	1.52	1.55	1.59
JUN 17	.39	.46	.54	.82	.87	.87	.87	.87	.88	.88	.88	.89
JUN 26	.26	.38	.50	.62	.74	.91	1.06	1.15	1.24	1.28	1.28	1.28
JUL 11	.27	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42	.42
JUL 16	.27	.38	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUL 19	.24	.47	.70	.86	1.11	1.22	1.27	1.29	1.31	1.46	1.57	2.33
JUL 19	.31	.59	.84	1.08	1.46	1.83	2.18	2.88	3.12	3.40	3.57	3.68
JUL 24	.21	.31	.38	.42	.48	.48	.48	.48	.48	.48	.48	.48
AUG 26	.26	.43	.54	.54	.54	.54	.54	.55	.55	.55	.56	.56
AUG 30	.21	.34	.44	.48	.54	.59	.61	.62	.62	.62	.62	.62
SEP 9	.27	.44	.54	.66	.75	.75	.78	.78	.78	.78	.78	.78
OCT 4	.17	.27	.38	.39	.41	.44	.46	.49	.51	.55	.56	.57
OCT 5	.28	.36	.37	.37	.38	.46	.46	.46	.46	.46	.46	.50
OCT 20	.33	.51	.65	.73	.76	.76	.76	.76	.76	1.02	1.43	1.43
OCT 29	.28	.55	.66	.79	1.12	1.27	1.28	1.29	1.29	1.29	1.29	1.29
NOV 7	.33	.52	.66	.70	.74	.76	.76	.76	.76	.76	.76	.76
DEC 15	.32	.51	.75	.91	1.19	1.36	1.36	1.36	1.36	1.36	1.36	1.57
DEC 15	.50	.73	.86	1.12	1.13	1.14	1.15	1.15	1.16	1.16	1.16	1.57
ORLANDO												
MAR 31	.45	.65	.80	.99	1.13	1.57	1.71	2.12	2.65	2.95	3.50	3.81
APR 23	.47	.80	.81	.87	.88	.88	.88	.88	.88	.93	.93	.93
MAY 7	.24	.38	.42	.51	.54	.54	.55	.55	.72	.74	.76	.76
MAY 17	.26	.38	.42	.44	.65	.86	1.07	1.12	1.14	1.25	1.56	1.65
JUN 12	.31	.46	.46	.47	.49	.49	.49	.49	.49	.51	.51	.51
JUL 15	.35	.70	.80	1.00	1.50	1.89	2.05	2.10	2.11	2.12	2.13	2.14
AUG 8	.37	.60	.83	1.15	1.65	2.10	2.38	2.65	3.20	3.53	3.56	3.56
AUG 12	.32	.56	.67	.80	.92	1.24	1.44	1.66	1.93	1.94	1.94	1.94
AUG 14	.23	.35	.44	.60	.63	.63	.77	.85	.85	.85	.85	.85
AUG 19	.50	.65	.68	.72	.74	.75	.75	.75	.75	.75	75	.75
AUG 24	.17	.31	.39	.50	.64	.74	.78	.81	.82	.85	.85	.85
AUG 26	.27	.45	.58	.72	1.07	1.21	1.44	1.48	1.58	1.68	1.73	1.87
AUG 30	.42	.80	.97	1.22	1.80	2.73	2.97	3.16	3.21	3.23	3.24	3.26
AUG 31	.25	.32	.35	.46	.62	.66	.68	.68	.68	.68	.68	.68
OCT 1	.27	.31	.35	.36	.37	.37	.37	.37	.37	.37	.37	.37
OCT 2	.32	.46	.50	.58	.78	.97	1.06	1.12	1.14	1.14	1.17	1.19
NOV 25	.37	.55	.60	.75	.87	.88	.88	.88	.88	.88	.92	.96
DEC 21	.43	.57	.58	.62	.82	.88	.98	1.01	1.06	1.08	1.17	1.22

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
FLORIDA												
TALLAHASSEE												
JAN 11	.35	.68	.70	.73	.78	.80	.80	.80	.80	.80	.80	.87
JAN 14	.35	.60	.62	.68	.68	.68	.86	.88	.88	.89	.91	.91
FEB 7	.22	.29	.35	.42	.54	.63	.64	.71	.84	.94	1.04	1.27
FEB 27	.27	.52	.53	.63	.70	.83	.95	1.11	1.23	1.25	1.25	1.25
MAR 2	.14	.25	.35	.47	.55	.60	.64	.67	.73	.80	.95	1.10
MAR 28	.35	.40	.41	.43	.47	.55	.59	.64	.68	.68	.68	.68
MAR 30	.25	.43	.60	.70	.99	1.37	1.40	1.40	1.42	1.42	1.46	1.46
MAY 8	.55	1.10	1.40	1.85	2.29	2.44	2.52	2.57	2.59	2.68	2.84	2.98
MAY 13	.30	.48	.52	.53	.57	.67	.67	.67	.67	.67	.67	.67
MAY 15	.35	.57	.60	.65	.68	.75	.80	.82	.83	.85	.89	.89
MAY 30	.37	.54	.75	.98	1.32	1.34	1.34	1.34	1.34	1.34	1.34	1.34
MAY 31	.13	.26	.30	.40	.50	.53	.66	.72	.72	.72	.72	.72
JUN 24	.25	.29	.35	.36	.38	.67	.68	.71	.73	.73	.73	.73
JUN 30	.29	.51	.53	.69	.84	.87	.89	.99	1.11	1.13	1.16	1.16
JUL 1	.25	.49	.52	.60	.98	1.26	1.28	1.28	1.31	1.32	1.32	1.32
JUL 5	.25	.39	.40	.42	.42	.42	.42	.42	.42	.42	.42	.42
JUL 17	.30	.44	.45	.47	.47	.47	.47	.47	.47	.47	.47	.47
JUL 31	.50	.63	.66	.70	.77	.80	.83	.84	.85	.86	.87	.88
AUG 26	.23	.41	.45	.50	.54	.54	.54	.54	.59	.64	.68	.74
AUG 29	.44	.64	.67	1.09	1.10	1.19	1.44	1.53	1.59	1.59	1.59	1.59
AUG 31	.32	.56	.63	.68	.69	.71	.71	.71	.71	.71	.71	.71
NOV 3	.58	1.15	1.35	1.78	1.88	1.88	1.90	1.95	1.95	1.95	1.95	1.95
NOV 13	.29	.55	.67	.85	1.30	1.44	1.58	1.67	1.78	1.80	1.87	1.88
NOV 25	.55	1.10	1.35	1.57	2.23	2.52	2.80	3.19	3.37	3.46	3.52	3.61
DEC 6	.27	.53	.64	.68	.73	.75	.75	.75	.75	.75	.75	.75
DEC 21	.10	.18	.25	.32	.48	.64	.84	.97	1.10	1.26	1.50	1.68
TAMPA												
FEB 3	.35	.45	.45	.46	.56	.66	.74	.83	.93	.97	1.04	1.07
MAR 2	.20	.30	.30	.30	.35	.48	.50	.50	.55	.55	.58	.62
MAR 16	.15	.30	.30	.32	.32	.33	.40	.40	.40	.40	.42	.44
MAR 31	.29	.58	.61	.68	.72	.76	.78	.86	.96	.98	1.00	1.00
MAY 11	.50	.75	.80	.87	.92	.93	.93	.93	.93	.93	.93	.93
JUN 9	.25	.38	.43	.50	.51	.52	.52	.52	.52	.52	.52	.52
JUL 4	.17	.30	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUL 13	.60	.95	1.20	1.45	1.80	2.20	2.22	2.42	2.45	2.48	2.48	2.48
JUL 19	.25	.32	.35	.38	.40	.47	.48	.48	.49	.49	.50	.50
JUL 23	.33	.60	.68	.78	.80	.83	.83	.83	.83	.86	.90	.90
JUL 25	.25	.47	.57	.80	1.07	1.23	1.35	1.41	1.45	1.48	1.48	1.48
AUG 14	.27	.45	.47	.51	.69	.79	.91	.97	.99	1.01	1.02	1.02
AUG 16	.34	.64	.68	.71	.72	.72	.72	.72	.79	.86	.86	.86
AUG 19	.41	.81	.96	1.28	1.71	2.19	2.69	3.13	3.16*	3.16	3.37*	3.43
AUG 24	.28	.39	.44	.49	.50	.54	.56	.56	.56	.56	.57	.57
AUG 27	.30	.60	.68	.82	1.24	1.45	2.02	2.09	2.12	2.13	2.14	2.19
OCT 2	.39	.69	.77	.87	1.06	1.18	1.29	1.35	1.38	1.46	1.51	1.52
OCT 28	.25	.45	.50	.61	.85	.93	1.03	1.04	1.38	1.43	1.43	1.43
DEC 21	.29	.55	.58	.62	.68	.71	.75	.81	.89	.92	.97	1.12
WEST PALM BEACH												
JAN 2	.28	.42	.70	.79	.90	1.15	1.17	1.25	1.25	1.25	1.25	1.25
JAN 9	.20	.30	.31	.40	.49	.49	.50	.50	.50	.50	.50	.50
MAR 1	.15	.27	.31	.42	.45	.59	.60	.60	.60	.60	.60	.60
MAR 31	.51	.92	1.01	1.05	1.30	1.45	1.62	1.73	1.78	1.79	1.81	1.90
APR 9	.18	.35	.48	.53	.58	.63	.70	.73	.74	.75	.82	.98
APR 19	.45	.75	.95	1.15	1.32	1.47	1.54	2.18	2.62	2.80	2.85	2.96
APR 24	.45	.75	.80	.83	.90	.98	.98	.98	1.06	1.32	1.47	1.47
APR 29	.17	.27	.35	.40	.50	.70	.78	.85	.86	.86	.86	.86
APR 30	.25	.42	.50	.65	1.00	1.15	1.45	1.75	1.85	1.95	2.65	2.96
MAY 12	.20	.35	.40	.47	.54	.58	.60	.68	.85	.87	.87	.90
MAY 19	.15	.26	.32	.40	.49	.53	.56	.58	.58	.58	.58	.58
MAY 25 T	M	M	M	M	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
JUN 1	.25	.45	.58	.67	.76	.78	.81	.81	.85	.98	1.11	1.25
JUN 4	.30	.45	.65	.80	.85	.85	1.22	1.68	1.70	1.70	1.90	2.03
JUN 8	.65	1.10	1.16	1.20	1.25	1.30	1.30	1.31	1.31	1.31	1.83	1.93
JUN 25	.35	.63	.65	.72	.74	.75	.76	.76	.76	.76	.79	1.08
JUL 11	.55	.85	1.15	1.50	1.85	2.58	2.76	2.78	2.79	2.80	2.80	2.80
JUL 14	.17	.27	.35	.48	.56	.60	.64	.65	.65	.65	.65	.65
JUL 19	.30	.55	.80	.90	1.25	1.70	1.80	1.92	2.35	2.85	3.65	3.84
JUL 20	.30	.47	.48	.50	.50	.50	.50	.50	.50	.50	.50	.55
JUL 31	.35	.50	.70	.74	.75	.75	.75	.75	.75	.75	.75	.75
JUL 31	.35	.54	.60	.85	1.00	1.20	1.44	1.55	1.60	1.67	1.75	1.82
SEP 10	.21	.33	.53	.65	.92	1.15	1.40	1.62	1.75	1.85	1.92	1.93
NOV 7	.25	.40	.55	.72	.95	1.21	1.30	1.51	1.81	2.21	2.81	3.15
DEC 22	.15	.25	.37	.50	.57	.63	.66	.68	.70	.70	.70	.71
GEORGIA												
ATHENS												
JAN 10	.25	.33	.37	.38	.43	.45	.49	.57	.60	.82	.92	1.07
MAR 22	.25	.35	.39	.43	.48	.51	.53	.53	.53	.53	.53	.53
MAR 29	.28	.35	.36	.37	.40	.40	.40	.40	.40	.40	.40	.40
MAY 18	.23	.39	.40	.41	.42	.46	.46	.48	.50	.51	.56	.57
JUN 28	.51	.81	.87	.96	1.04	1.05	1.07	1.12	1.15	1.15	1.15	1.22
JUN 28	.25	.33	.36	.39	.40	.40	.40	.40	.40	.40	.40	.40
JUL 2	.26	.37	.40	.43	.45	.45	.45	.45	.45	.45	.45	.45
JUL 3	.25	.30	.32	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUL 17	.40	.54	.58	.72	1.15	1.36	1.89	1.97	1.98	2.01	2.02	2.02
AUG 10	.40	.72	.78	.81	.87	1.01	1.02	1.03	1.04	1.05	1.06	1.06
AUG 23	.41	.53	.58	.68	.81	.82	.82	.82	.82	.82	.82	.82
AUG 27	.23	.34	.40	.46	.51	.54	.55	.57	.57	.57	.57	.57
DEC 14	.28	.39	.42	.45	.55	.65	.84	.92	.94	1.10	1.23	1.45
ATLANTA												
JAN 9	.30	.41	.46	.49	.59	.63	.73	.77	.79	.86	.92	1.11
JAN 10	.29	.48	.50	.52	.55	.58	.63	.73	.75	.79	.80	.81
APR 7	.26	.36	.39	.45	.54	.61	.71	.73	.77	.78	.78	.78
JUL 31	.31	.58	.87	1.05	1.08	1.17	1.21	1.24	1.24	1.29	1.39	1.42
AUG 5	.26	.37	.46	.47	.50	.50	.50	.50	.50	.65	.65	.65
AUG 20	.34	.52	.69	.77	.80	.80	.87	.89	.89	.89	.89	.89
AUGUSTA												
JAN 13	.20	.32	.40	.55	.67	.77	.82	.89	.94	.95	.95	1.04
MAR 29	.43	.44	.47	.50	.54	.59	.65	.66	.66	.66	.66	.66
MAY 18	.20	.38	.40	.41	.46	.48	.48	.50	.50	.51	.51	.54
JUN 28	.32	.44	.59	.88	.97	1.03	1.14	1.46	1.72	1.87	2.10	2.10
JUL 2	.25	.40	.44	.45	.47	.49	.49	.49	.49	.49	.49	.49
JUL 25	.20	.38	.41	.55	.78	.78	.78	.78	.78	.78	.78	.78
AUG 11	.30	.52	.68	.82	.95	1.02	1.05	1.07	1.23	1.32	1.44	1.50
AUG 28	.30	.45	.49	.52	.55	.55	.55	.55	.55	.55	.55	.55
SEP 4	.16	.29	.38	.44	.52	.68	.87	.89	.91	.92	.92	.92
SEP 9	.28	.44	.49	.52	.67	.68	.69	.70	.70	.70	.70	.70
SEP 17	.37	.46	.47	.47	.48	.55	.55	.55	.55	.55	.55	.55
DEC 5	.42	.69	.96	1.24	1.34	1.40	1.46	1.55	1.61	1.64	1.70	1.74
GEORGIA												
COLUMBUS												
JAN 9	.41	.43	.44	.47	.54	.59	.62	.67	[illegible]	.72	.72	.72
JAN 11	.36	.41	.49	.56	.81	.84	.89	.98	1.01	1.04	1.05	1.09
MAR 28	.26	.28	.29	.30	.32	.34	.35	.36	.37	.38	[illegible]	[illegible]
MAY 17	.42	.75	.88	.94	.99	1.02	1.04	1.12	1.13	1.13	1.13	1.13
JUN 25	.35	.54	.60	.67	.70	.71	.73	.74	.74	.74	.74	.74
JUN 27	.21	.30	.38	.42	.67	.73	.73	.73	.73	.73	.73	.73
JUL 1	.48	.77	.81	.91	.97	.99	1.00	1.01	1.03	1.03	1.03	1.03
JUL 3	.27	.33	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUL 23	.30	.50	.61	.70	.75	.76	.76	.78	.79	.79	.79	.79
JUL 25	.30	.55	.72	.81	.99	1.23	1.26	1.30	1.33	1.43	1.45	1.45
JUL 29	.32	.63	.65	.70	.82	.89	.91	.92	.93	.96	.96	.96
JUL 30	.23	.36	.37	.39	.47	.61	.66	.71	.71	.71	.71	.71
JUL 30	.24	.36	.39	.39	.40	.40	.42	.43	.43	.43	.45	.45
AUG 4	.35	.50	.67	.77	.93	.93	.93	.93	.93	.93	.93	.93
SEP 30	.32	.61	.71	.77	.83	.95	1.07	1.10	1.13	1.13	1.13	1.17
OCT 27	.27	.46	.53	.55	.60	.65	.68	.72	.78	.87	.93	.96
DEC 6	.31	.45	.55	.70	.80	.90	1.09	1.14	1.18	1.21	1.32	1.42
MACON												
JAN 10	.25	.31	.34	.35	.37	.38	.39	.39	.40	.40	.40	.42
JAN 11	.22	.30	.31	.40	.55	.60	.62	.63	.68	.72	.86	1.05
JAN 13	.22	.36	.41	.49	.72	.95	1.23	1.24	1.24	1.24	1.40	1.40
MAR 29	.26	.39	.55	.59	.63	.63	.63	.63	.63	.63	.63	.63
MAY 3	.25	.36	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUN 27	.37	.55	.66	.74	.76	.79	.79	.79	.79	.79	.79	.79
JUN 27	.21	.36	.42	.48	.62	.71	.73	.78	.81	.82	.84	.84
JUN 28	.39	.64	.85	.85	.87	.87	.87	.87	.87	.87	.87	.87
JUL 16	.35	.52	.67	.73	.83	.90	.93	.94	.94	.94	.96	.97
JUL 24	.31	.52	.71	.85	1.00	1.19	1.25	1.25	1.26	1.27	1.29	1.31
AUG 27	.15	.25	.36	.45	.54	.55	.55	.55	.56	.56	.56	.56
AUG 28	.21	.38	.48	.55	.67	.95	1.05	1.06	1.26	1.40	1.40	1.40
NOV 13	.25	.35	.39	.42	.51	.61	.71	.79	.83	.89	.98	1.04
DEC 6	.28	.47	.70	.94	1.28	1.43	1.49	1.59	1.72	1.96	2.13	2.43
DEC 15	.25	.30	.30	.31	.34	.35	.40	.41	.41	.44	.45	.46
ROME												
APR 7	.20	.24	.36	.37	.60	.76	.80	.80	.80	.80	.80	.80
JUN 6	.21	.30	.35	.36	.48	.48	.48	.49	.49	.49	.49	.49
JUN 9	.20	.37	.40	.60	.80	1.20	1.28	1.31	1.31	1.31	1.32	1.35
JUL 4	.41	.49	.54	.58	.59	.65	.73	.81	.82	.84	.84	.84
JUL 28	.30	.42	.55	.55	.55	.55	.55	.55	.55	.57	.57	.57
JUL 29	.46	.88	.98	.98	.98	.98	.98	.98	1.28	1.36	1.08	1.99
AUG 4	.21	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
NOV 2	.28	.37	.41	.41	.41	.41	.42	.47	.51	.68	.80	.80
SAVANNAH												
MAR 16	.19	.31	.34	.40	.48	.55	.61	.82	.89	1.12	1.19	1.20
MAR 16	.28	.48	.61	.71	.74	.83	.88	.94	.94	.97	.98	1.03
APR 24	.19	.36	.39	.40	.41	.41	.41	.41	.41	.41	.41	.41
MAY 3	.31	.36	.38	.39	.53	.62	.63	.65	.67	.99	1.28	1.28
MAY 22	.19	.32	.45	.57	.74	.85	.87	.87	.87	.87	.87	.87
MAY 31	.38	.68	.88	1.16	1.36	1.36	1.37	1.37	1.43	1.43	1.44	1.44
JUN 10	.30	.51	.72	.89	.99	1.01	1.01	1.03	1.05	1.55	1.56	1.56
JUN 29	.24	.35	.40	.41	.41	.44	.46	.48	.48	.48	.48	.48
JUL 17	.41	.57	.57	.57	.57	.57	.57	.57	.62	.71	.71	.71
AUG 11 T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 20 T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 25	.18	.29	.36	.44	.55	.68	.73	.74	.74	.74	.74	.74
AUG 29	.43	.78	1.18	1.51	2.03	2.75	3.40	4.06	4.16	4.18	4.19	4.33
DEC 6	.35	.66	.86	1.00	1.08	1.11	1.16	1.19	1.19	1.26	1.31	1.38
HAWAII												
HILO												
JAN 24	.17	.29	.40	.53	.75	1.00	1.16	1.39	1.66	1.83	1.91	2.06
FEB 9	.27	.43	.50	.55	.61	.82	.83	.83	.84	.91	1.38	1.49
FEB 9	.15	.27	.34	.39	.53	.64	.78	.81	.81	.91	.82	.92
APR 1	.32	.56	.79	.96	1.22	1.32	1.44	1.52	1.60	1.81	1.96	2.29
APR 1	.17	.28	.43	.50	.62	.76	.91	1.04	1.28	1.40	1.66	1.82
APR 2	.20	.32	.41	.58	.80	.86	1.01	1.06	1.08	1.13	1.20	1.46
APR 2	.26	.40	.43	.46	.58	.67	.68	.76	.77	.77	.77	.78
APR 17	.22	.31	.39	.48	.61	.78	.97	1.06	1.14	1.19	1.25	1.40
APR 27	.25	.26	.26	.28	.30	.30	.30	.34	.34	.35	.36	.36
OCT 3	.18	.33	.46	.58	.68	1.04	1.30	1.47	1.57	1.64	1.68	1.73
NOV 11	.19	.28	.38	.44	.44	.69	.75	.87	1.06	1.24	1.38	1.43
NOV 17	.23	.36	.44	.44	.44	.44	.44	.44	.44	.44	.51	.79
DEC 19	.16	.29	.36	.38	.39	.39	.40	.40	.41	.45	.50	.51
HONOLULU												
JAN 23	.46	.63	.72	.75	.83	.88	.95	1.02	1.16	1.22	1.36	1.57
FEB 4	.24	.31	.35	.41	.44	.44	.52	.55	.58	.61	.61	.61
FEB 23	.38	.63	.68	.73	.79	1.09	1.51	1.60	1.66	1.76	1.93	2.06
MAR 3	.42	.57	.75	.82	.87	.95	1.06	1.07	1.10	1.16	1.21	1.32
APR 14	.25	.44	.67	.76	.85	[illegible]	1.55	1.81	2.03	2.12	2.19	2.24
APR 14	.27	.38	.50	.62	.73	.77	.78	1.12	1.46	1.53	1.59	1.70
SEP [illegible]	.21	.36	.44	.45	.55	.57	.57	.57	.57	.57	.65	.77
KAHULUI												
FEB 24	.45	.67	1.01	1.16	1.36	1.53	1.93	2.33	[illegible]	2.72	2.76	2.85
FEB 24	.36	.66	.79	.98	1.10	1.14	1.17	1.17	1.17	1.17	1.17	1.17
LIHUE												
JAN 22	.25	.36	.41	.43	.46	.55	.68	.73	.85	.86	.95	1.05
JAN 23	.30	.55	.69	.80	1.08	1.23	1.39	1.56	1.63	1.72	1.84	2.11
FEB 4	.37	.63	.85	.99	1.08	1.09	1.09	1.13	1.28	1.32	1.34	1.39
FEB 22	.62	.88	1.11	1.27	1.72	1.97	2.18	2.36	2.41	2.41	2.44	2.50
FEB 22	.36	.40	.40	.40	.41	.43	.44	.45	.58	.58	.61	.65
APR 2	.14	.22	.35	.40	.43	.44	.45	.45	.45	.45	.48	.49
APR 14	.26	.35	.39	.39	.43	.46	.46	.46	.53	.57	.62	.65
APR 14	.16	.28	.36	.39	.43	.46	.58	.73	.78	.82	.86	.87
APR 15	.37	.57	.71	.78	.94	1.12	1.42	1.62	1.80	2.05	2.67	3.12
APR 16	.46	.55	.68	.74	.83	.87	.92	1.03	1.07	1.11	1.19	1.23
JUL 15	.22	.39	.52	.60	.71	.76	.81	.83	.83	.89	1.06	1.10
AUG 21	.18	.31	.34	.34	.35	.35	.35	.35	.35	.35	.35	.36
SEP 4	.25	.30	.32	.33	.33	.38	.40	.44	.48	.49	.69	.74
OCT 29	.27	.47	.65	.79	.98	1.07	1.11	1.16	1.19	1.24	1.25	1.26

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
IDAHO												
BOISE						NONE						
LEWISTON						NONE						
POCATELLO						NONE						
ILLINOIS												
CAIRO U												
MAR 15	.28	.30	.34	.36	.43	.50	.55	.63	.74	.80	.80	.85
APR 15	.37	.45	.47	.49	.58	.66	.88	1.14	1.31	1.53	1.79	1.96
APR 21	.25	.36	.37	.37	.37	.37	.41	.45	.53	.56	.58	.58
MAY 29	.19	.33	.38	.44	.54	.62	.65	.71	.71	.72	.72	.72
JUN 28	.43	.56	.66	.77	.80	.80	.80	.80	.93	1.03	1.03	1.03
JUL 2	.24	.38	.42	.43	.44	.48	.53	.55	.77	.81	.90	.91
JUL 16	.22	.36	.44	.49	.52	.57	.61	.75	.96	1.00	1.10	1.15
JUL 27	.17	.27	.36	.39	.43	.45	.48	.49	.49	.49	.49	.49
JUL 27	.14	.24	.32	.42	.60	.66	.69	.69	.70	.77	.77	.93
JUL 28	.28	.40	.51	.69	.74	.86	1.15	1.38	1.59	1.70	1.82	1.89
AUG 12	.40	*.74	*1.09	1.20	1.37	1.48	1.53	1.60	1.65	1.67	1.68	1.70
AUG 20	.22	.43	.59	.66	.78	.88	.91	.92	.95	.99	1.02	1.02
AUG 22	.18	.30	.42	.47	.53	.54	.55	.57	.61	.65	.68	.69
SEP 23	.19	.34	.51	.66	.82	1.10	1.34	1.61	1.64	1.68	1.69	1.70
SEP 29	.30	.38	.44	.47	.60	.82	.89	.91	.91	.92	.93	.94
CHICAGO O HARE												
APR 16	*.75	.80	.90	.95	1.24	1.44	1.60	1.65	1.80	1.93	2.09	2.20
MAY 14	.61	.64	.66	.66	.66	.66	.66	.67	.67	.69	.69	.69
JUN 14	.25	.40	.42	.50	.56	.63	.85	.95	1.25	1.40	1.40	1.42
JUN 28	.20	.32	.35	.45	.51	.53	.55	.59	.61	.62	.62	.62
JUL 2	.19	.38	.50	.53	.56	.56	.56	.56	.57	.57	.58	.60
JUL 14	.25	.46	.62	.72	.77	.82	.87	.87	.87	.87	.87	.87
JUL 15	.36	.44	.45	.52	.62	.62	.63	.67	.67	.67	.67	.67
JUL 17	.60	.67	.69	.70	.74	.80	.84	.88	.90	.91	.94	.98
AUG 23	.24	.32	.38	.39	.46	.52	.57	.57	.57	.58	.60	.60
AUG 25	.54	.88	1.05	1.26	1.47	1.65	1.84	1.92	2.02	2.11	2.16	2.21
SEP 12	.25	.47	.47	.47	.47	.53	.53	.53	.53	.53	.53	.53
SEP 17	.55	.85	.94	.98	1.23	1.31	1.43	1.46	1.51	1.61	2.13	2.51
CHICAGO MIDWAY												
APR 12	.25	.31	.35	.37	.39	.40	.40	.40	.41	.41	.42	.42
MAY 14	.16	.31	.44	.48	.54	.57	.59	.62	.62	.62	.62	.62
JUL 17	.23	.34	.43	.50	.65	.86	.91	.93	1.01	1.07	1.14	1.20
AUG 12	.23	.35	.40	.49	.70	.78	.95	.98	.99	.99	1.01	1.02
AUG 22	.25	.48	.55	.55	.55	.55	.58	.59	.60	.60	.60	.60
AUG 25	.28	.54	.78	.97	1.23	1.40	1.57	1.73	1.80	1.83	1.84	1.84
SEP 28	*.87	.97	1.05	1.20	1.64	2.14	2.48	3.12	3.28	3.37	3.51	*3.59
DEC 30	.27	.33	.57	.60	.70	.77	.80	.89	.96	1.00	1.04	1.05
MOLINE												
MAR 12	.17	.31	.34	.36	.40	.48	.60	.77	.99	1.06	1.10	1.10
MAY 7	.24	.44	.47	.51	.58	.59	.60	.69	.71	.72	.72	.72
JUN 12	.49	.57	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58
JUN 14	.29	.45	.50	.56	.68	.70	.71	.72	.72	.72	.72	.72
JUN 14	.23	.43	.45	.47	.51	.51	.51	.51	.51	.51	.57	.70
JUN 14	.31	.40	.46	.62	.75	.89	1.22	1.38	1.49	1.53	1.67	1.79
JUN 19	.24	.37	.40	.46	.54	.57	.58	.60	.61	.63	.63	.66
JUL 9	.27	.30	.30	.31	.31	.31	.31	.31	.38	.54	.54	.54
JUL 14	.49	.92	1.08	1.34	1.49	1.50	1.53	1.62	1.64	1.67	1.68	1.69
AUG 5	.22	.37	.47	.55	.64	.84	.88	1.14	1.22	1.27	1.44	1.92
AUG 6	*.80	*1.20	1.21	1.22	1.32	1.61	1.66	1.66	1.66	1.66	1.66	1.66
AUG 19	.22	.33	.38	.50	.53	.54	.56	.56	.56	.56	.56	.56
AUG 25	.34	.60	.90	.97	.98	.98	.98	.98	.98	.98	.98	.98
AUG 25	.38	.42	.42	.43	.44	.49	.51	.53	.58	.60	.60	.60
SEP 28	.39	.67	.74	.78	.88	.92	.94	.94	.95	.95	.97	.97
PEORIA												
JUN 19	.29	.42	.51	.77	.96	1.29	1.36	1.39	1.44	1.56	1.56	1.69
JUL 9	.14	.22	.33	.42	.57	.68	.81	.86	.86	.86	.86	.86
JUL 17	.29	.45	.53	.54	.54	.57	.57	.57	.57	.57	.57	.57
AUG 6	.28	.52	.55	.56	.63	.64	.66	.72	.72	.72	.72	.72
AUG 23	.20	.34	.37	.41	.54	.71	1.05	1.23	1.50	1.66	1.69	1.69
SEP 14	.26	.35	.43	.48	.77	.93	1.13	1.29	1.52	1.64	1.91	2.04
SEP 20	.18	.33	.37	.37	.44	.49	.53	.54	.55	.62	.71	.71
SEP 28	.24	.34	.42	.48	.51	.53	.56	.59	.59	.59	.60	.60
ROCKFORD												
JUN 9	.20	.30	.45	.54	.67	.69	.83	1.04	1.15	1.20	1.26	1.30
JUN 12	.48	.95	1.07	1.25	1.38	1.44	1.46	1.50	1.52	1.54	1.54	1.54
JUN 14	.30	.51	.52	.70	.88	.90	.93	.93	.95	1.00	1.02	1.02
JUN 14	.28	.53	.56	.56	.60	.77	1.01	1.23	1.55	1.80	1.88	1.94
JUL 2	.25	.48	.52	.65	.85	.95	.99	1.02	1.03	1.03	1.03	1.03
JUL 9	.17	.30	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUL 14	.39	.75	.97	1.19	1.40	1.82	2.07	2.28	2.42	*2.42	2.42	2.43
JUL 17	.55	.92	1.11	1.27	1.38	1.52	1.72	1.82	2.15	2.25	2.39	2.42
AUG 11	.25	.32	.36	.44	.57	.65	.72	.75	.77	.88	.88	.94
AUG 25	.52	.68	.75	1.03	1.50	1.70	*2.38	2.76	3.21	*3.58	4.00	*4.11
SEP 7	.23	.39	.41	.48	.52	.54	.55	.60	.60	.61	.66	.67
SEP 13	.20	.35	.45	.52	.63	.71	.75	.87	1.01	1.07	1.19	1.75
SEP 28	.36	.50	.53	.55	.84	.91	1.07	1.12	1.17	1.18	1.27	1.27
OCT 11	.18	.28	.36	.38	.47	.56	.67	.76	.82	.84	1.06	1.26
SPRINGFIELD												
MAR 12	.31	.48	.62	.73	.91	.94	1.01	1.10	1.22	1.29	1.37	1.43
JUN 14	.29	.47	.52	.55	.66	.76	.77	.79	.82	.82	.82	.82
JUN 28	.36	.56	.75	.89	.91	.92	.94	.97	.99	.99	.99	.99
JUL 9	.18	.26	.36	.40	.44	.65	.84	.86	.87	.90	.90	.90
AUG 3	.28	.39	.41	.42	.58	.62	.63	.67	.71	.81	.87	.89
AUG 6	.18	.28	.37	.43	.54	.57	.60	.62	.62	.63	.66	.70
AUG 12	.40	.54	.82	1.02	1.22	1.26	1.26	1.26	1.26	1.26	1.26	1.26
INDIANA												
EVANSVILLE												
MAR 2	.18	.26	.36	.52	.56	.72	.83	.89	.89	.90	.93	1.11
JUN 4	.22	.34	.42	.50	.57	.58	.72	.78	.79	.80	.81	.81
JUL 15	.36	.58	.80	.82	.83	.84	.85	.85	.88	.92	.96	.96
JUL 27	.48	.78	.95	.99	.99	.99	.99	.99	.99	.99	.99	.99
AUG 3	.17	.34	.37	.37	.39	.41	.59	.77	.80	.82	.85	.85
AUG 23	.40	.50	.53	.54	.54	.54	.83	.83	.83	.83	.83	.83

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
INDIANA												
FORT WAYNE												
APR 12	.44	.52	.60	.67	.72	.76	.86	.96	.99	1.16	1.33	1.34
APR 30	.62	.71	.72	.72	.73	.73	.73	.73	.74	.74	.74	.74
MAY 29	.24	.36	.46	.50	.53	.53	.54	.56	.58	.59	.59	.60
JUN 9	.30	.58	.71	.77	.78	.78	.78	.78	.78	.78	.78	.78
JUN 15	.18	.36	.46	.60	.81	.93	1.27	1.46	1.59	1.62	1.68	1.85
AUG 7	.29	.52	.73	.86	.92	.93	.93	.97	.98	1.00	1.00	1.00
AUG 19	.34	.48	.49	.49	.49	.50	.51	.52	.52	.52	.52	.52
SEP 12	.18	.32	.50	.54	.82	.92	.92	.92	.92	.98	1.31	1.31
SEP 13	.22	.40	.56	.64	.70	.72	.84	.86	.90	.90	.95	.98
INDIANAPOLIS												
JUN 13	.30	.60	.66	.96	1.04	1.14	1.17	1.19	1.24	1.27	1.31	1.31
JUN 28	.26	.47	.56	.67	.72	.78	.82	.90	.92	.93	.93	.93
JUL 24	.20	.40	.54	.62	.76	.79	.85	.91	1.01	1.05	1.06	1.07
AUG 3	.22	.44	.52	.66	.80	.80	.80	.80	.80	.80	.80	.80
AUG 6	.16	.26	.33	.44	.53	.60	.69	.76	.79	.80	.80	.80
SOUTH BEND												
JUN 12	.20	.38	.39	.40	.48	.49	.52	.59	.65	.68	.86	.94
JUL 15	.20	.38	.46	.48	.51	.55	.72	.90	.99	.99	1.02	1.08
JUL 19	.26	.43	.49	.53	.53	.53	.53	.53	.53	.53	.53	.53
JUL 21	.29	.58	.67	.78	.86	.88	.99	1.10	1.15	1.17	1.17	1.17
AUG 14	.36	.58	.63	.75	.78	.79	.80	.82	.82	.82	.97	.97
AUG 19	.28	.43	.44	.45	.48	.49	.51	.51	.51	.52	.52	.52
AUG 23	.25	.42	.45	.50	.50	.51	.51	.52	.55	.61	.68	.70
SEP 11	.15	.24	.35	.40	.60	.68	1.03	1.16	1.27	1.29	1.30	1.30
SEP 18	.14	.27	.32	.43	.52	.60	.75	.76	.83	.84	.84	.85
SEP 28	.29	.52	.58	.70	.79	.85	.93	.95	1.01	1.08	1.16	1.23
IOWA												
DES MOINES												
MAY 28	.23	.29	.41	.44	.45	.45	.47	.48	.49	.49	.49	.49
JUN 7	.24	.32	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUN 13	.26	.30	.31	.33	.48	.49	.50	.50	.50	.72	.94	.96
JUN 13	.26	.26	.26	.26	.27	.27	.27	.28	.30	.35	.38	.38
JUL 17	.34	.39	.49	.60	.69	.76	.84	.91	1.06	1.13	1.25	1.34
AUG 1	.58	1.12	1.27	1.54	1.74	1.80	1.82	1.90	1.91	1.91	1.91	1.91
AUG 5	.36	.46	.50	.58	.91	1.07	1.33	1.49	1.89	2.07	2.20	2.50
SEP 10	.52	.90	1.00	1.10	1.20	1.48	1.70	1.92	2.00	2.02	2.06	2.27
DUBUQUE												
JUN 9	.25	.33	.33	.34	.36	.36	.36	.36	.36	.36	.36	.36
JUL 12	.25	.44	.45	.47	.55	.59	.60	.61	.61	.61	.61	.61
AUG 8	.26	.31	.31	.37	.47	.50	.50	.52	.53	.54	.55	.55
SEP 12	.25	.46	.51	.66	.73	.80	.88	1.17	1.30	1.40	1.47	1.48
SEP 28	.45	.82	.90	.97	1.17	1.41	1.69	1.70	1.72	1.73	1.74	1.74
SIOUX CITY												
JUN 12	.40	.53	.58	.60	.60	.60	.60	.60	.60	.60	.60	.60
JUN 17	.14	.28	.29	.38	.56	.62	.73	.78	.78	.78	.78	.78
JUN 19	.25	.45	.53	.59	.60	.65	.78	.78	.78	.78	.78	.78
JUL 6	.31	.59	.61	.63	.65	.67	.69	.72	.79	.84	.91	.93
JUL 12	.34	.47	.47	.48	.48	.48	.48	.48	.48	.48	.48	.48
JUL 17	.56	.74	.78	.92	1.10	1.33	1.57	2.23	2.60	2.97	3.89	*4.44
JUL 26	.22	.38	.42	.59	.80	.88	.95	1.04	1.47	1.56	1.60	1.63
AUG 7	.34	.50	.53	.59	.59	.88	.93	.93	.93	.92	.93	.93
WATERLOO												
JUL 1	.18	.30	.42	.43	.44	.47	.49	.54	.60	.65	.68	.68
JUL 11 T	M	M	M	M	M	M	M	M	M	M	M	M
SEP 12	.36	.71	.91	1.17	1.39	1.65	1.88	2.21	2.24	2.24	2.28	2.28
SEP 20	.30	.32	.32	.33	.33	.34	.34	.36	.36	.38	.38	.38
KANSAS												
CONCORDIA												
APR 30	.22	.30	.34	.42	.52	[illegible]	.84	.94	1.06	1.10	1.12	1.12
MAY 22	.23	.31	.32	.34	.42	.47	.50	.53	.62	.66	.70	.71
JUN 13	.28	.36	.40	.48	.50	.56	.74	.83	.88	.96	1.01	1.08
JUL 17	.56	1.10	1.19	1.38	1.70	1.75	1.75	1.87	2.50	2.83	3.34	3.36
JUL 28	.58	1.10	1.21	1.26	1.28	1.29	1.29	1.66	1.70	1.72	1.74	1.76
AUG 2	.22	.37	.44	.50	.56	.67	.83	1.00	1.19	1.25	1.31	1.43
AUG 24	.28	.45	.61	.71	.80	.95	1.13	1.30	1.47	1.60	1.69	1.80
DODGE CITY												
APR 26	.18	.34	.38	.52	.75	.81	1.06	1.10	1.12	1.12	1.12	1.12
MAY 28	.32	.62	.72	.75	.75	.75	.75	.75	.75	.77	.94	.98
JUN 13	.25	.42	.67	.80	1.16	1.46	1.67	1.98	2.14	2.37	2.51	2.62
JUN 19	.26	.35	.38	.48	.62	.71	.75	.77	.77	.77	.77	.98
JUL 16	.23	.38	.55	.72	1.10	1.44	1.65	1.96	2.60	2.84	3.10	3.14
AUG 24	.30	.59	.70	.94	1.10	1.39	1.46	1.49	1.52	1.54	1.55	1.55
SEP 8	.28	.54	.60	.79	1.12	1.32	1.36	1.36	1.37	1.39	1.41	1.41
GOODLAND												
MAY 22	.25	.30	.40	.55	.60	.64	.66	.67	.68	.69	.69	.69
MAY 27	.56	1.10	*1.43	1.70	*2.20	2.41	*2.51	2.56	2.61	*2.73	2.76	*2.81
JUN 16	.21	.30	.37	.43	.51	.59	.96	1.03	1.26	1.43	1.50	1.54
JUN 27	.25	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
JUL 25	.26	.30	.33	.40	.45	.50	.53	.53	.53	.54	.54	.54
AUG 2	.15	.26	.40	.44	.52	.68	.70	.76	1.02	1.10	1.14	1.14
TOPEKA												
APR 30	.34	.42	.52	.54	.60	.68	.72	.83	.87	.90	.90	.90
JUL 24	.17	.32	.36	.41	.55	.62	.62	.62	.63	.63	.65	.69
AUG 2	.26	.40	.44	.54	.87	.91	.95	1.00	1.03	1.03	1.08	1.14
AUG 24	.30	.38	.41	.43	.48	.55	.59	.63	.64	.65	.65	.78
SEP 7	.19	.33	.50	.54	.70	.98	1.02	1.16	1.25	1.42	1.62	1.78
SEP 20	.20	.31	.37	.39	.40	.40	.42	.46	.48	.48	.48	.48
DEC 29	.28	.31	.33	.34	.38	.42	.48	.56	.61	.63	.63	.70
WICHITA												
APR 30	.11	.21	.32	.40	.48	.49	.51	.52	.52	.52	.52	.52
MAY 6	.23	.36	.43	.44	.45	.45	.45	.45	.45	.45	.45	.45
MAY 27	.24	.42	.47	.50	.53	.54	.54	.57	.58	.58	.58	.58
JUN 14	.22	.38	.49	.58	.67	.70	.72	.72	.72	.74	.74	.74
JUN 19	.23	.42	.51	.53	.53	.54	.55	.60	.62	.64	.65	.71
JUL 1	.17	.28	.37	.39	.39	.40	.40	.40	.40	.40	.40	.40
JUL 28	.35	.51	.52	.53	.53	.57	.57	.57	.57	.57	.58	.58
AUG 23	.30	.47	.77	.86	.88	.89	.89	.89	.89	.89	.89	.89
AUG 24	.30	.51	.63	.73	.84	.88	.95	1.00	1.12	1.17	1.27	1.28

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
KENTUCKY												
COVINGTON												
MAY 29	.40	.57	.59	.68	.80	.85	1.02	1.26	1.32	1.32	1.32	1.33
JUN 15	.18	.36	.43	.57	.69	.71	.73	.83	.84	.85	.95	1.20
AUG 3	.22	.36	.43	.58	.71	.74	.76	.77	.78	.81	.87	.90
AUG 19	.30	.50	.55	.56	.57	.57	.57	.57	.57	.57	.57	.57
SEP 1	.15	.25	.34	.37	.51	.55	.55	.55	.55	.55	.55	.55
SEP 24	.37	.60	.71	.91	.97	.98	1.00	1.02	1.04	1.05	1.05	1.08
SEP 29	.20	.40	.46	.56	.64	.81	.82	.82	.83	.85	.91	.92
LEXINGTON												
APR 21	.38	.45	.56	.66	.75	.86	1.08	1.23	1.32	1.36	1.51	1.52
MAY 7	.37	.42	.43	.44	.48	.50	.50	.50	.51	.51	.51	.52
JUN 6	.21	.31	.33	.34	.38	.41	.42	.43	.43	.43	.43	.43
JUN 28	.29	.43	.50	.53	.56	.59	.60	.60	.60	.61	.63	.63
JUN 29	.28	.36	.46	.55	.58	.59	.59	.59	.59	.59	.59	.59
JUL 11	.18	.27	.40	.48	.64	.75	.81	.83	.84	.84	.84	.84
JUL 22	.24	.36	.42	.47	.51	.53	.53	.53	.53	.53	.53	.53
JUL 24	.30	.55	.85	.91	.93	1.07	1.26	1.27	1.27	1.28	1.39	1.47
AUG 19	.33	.42	.43	.43	.44	.45	.46	.46	.73	.75	.75	.75
AUG 25	.28	.41	.50	.54	.58	.60	.69	.69	.69	.69	.69	.78
SEP 23	.35	.40	.47	.56	.72	.75	.75	.75	.75	.75	.75	.75
SEP 24	.27	.45	.58	.60	.62	.65	.69	.74	.74	.75	.75	.77
SEP 29	.25	.40	.45	.55	.71	.74	.76	.84	.92	1.02	1.05	1.06
LOUISVILLE												
APR 15	.22	.33	.36	.38	.40	.43	.43	.46	.46	.46	.46	.55
APR 16	.17	.26	.42	.52	.70	.73	.74	.75	.76	.79	1.06	1.16
JUL 2	.25	.50	.64	.65	.68	.71	.72	.73	.73	.73	.73	.73
AUG 3	.22	.40	.42	.51	.77	.79	.79	.81	.84	.99	1.04	1.15
SEP 8	.21	.40	.55	.73	.85	.87	.99	1.01	1.01	1.01	1.01	1.01
LOUISIANA												
ALEXANDRIA												
JAN 1	.20	.36	.37	.40	.44	.49	.54	.56	.64	.65	.65	.66
JAN 9	.29	.36	.42	.45	.54	.82	.98	1.00	1.00	1.00	1.02	1.20
MAR 1	.29	.47	.50	.66	.87	1.17	1.41	1.53	1.58	1.63	1.70	1.77
MAR 15	.35	.44	.45	.50	.52	.54	.55	.56	.56	.56	.56	.56
MAR 24	.25	.38	.40	.42	.46	.46	.46	.47	.47	.47	.47	.47
MAR 28	.27	.41	.49	.53	.60	[illegible]	.86	.97	.98	.98	.98	.98
APR 15	.27	.44	.49	.58	.63	.74	.76	.77	.77	.77	.78	.78
MAY 2	.26	.49	.56	.77	1.07	1.31	1.61	1.89	2.06	2.12	2.15	2.22
MAY 12	.35	.45	.46	.55	.80	.90	1.00	1.12	1.13	1.21	1.42	1.43
JUN 8	.27	.31	.33	.38	.40	.42	.42	.42	.42	.42	.42	.42
JUL 4	.23	.37	.39	.44	.49	.53	.60	.64	.69	.75	.75	.75
JUL 12	.23	.34	.35	.37	.54	.71	.81	.81	.81	.81	.81	.81
JUL 17	.31	.54	.60	.69	.81	.91	.91	.91	.91	.91	.91	.91
SEP 16	.26	.38	.45	.48	.53	.55	.82	.88	.95	1.18	1.21	1.21
SEP 19	.42	.67	.90	1.11	1.19	1.37	1.47	1.50	1.50	1.50	1.50	1.50
SEP 27	.45	.60	.62	.64	.66	.67	.68	.69	.70	.70	.70	.70
OCT 22	.31	.50	.70	.80	1.10	1.38	1.95	2.48	2.90	*3.15	3.30	*3.54
NOV 7	.20	.39	.50	.59	.65	.75	.82	.85	.86	.89	.90	.90
DEC 20	.18	.28	.38	.49	.53	.73	.90	1.04	1.09	1.10	1.19	1.49
DEC 20	.18	.32	.32	.45	.48	.48	.49	.49	.49	.49	.51	.69
BATON ROUGE												
JAN 4	.30	.55	.63	.72	.91	1.01	1.12	1.21	1.25	1.30	1.38	1.40
MAR 2	.22	.24	.29	.37	.50	.72	.87	1.00	1.12	1.17	1.23	1.29
MAR 8	.28	.53	.65	.72	.78	.80	.82	.96	.98	1.00	1.04	1.10
MAR 21	.30	.41	.48	.50	.54	.72	.86	.99	1.08	1.17	1.25	1.30
MAY 7	.50	.83	1.07	1.20	1.80	2.20	2.45	2.57	2.65	2.90	3.02	3.12
MAY 7	.20	.34	.40	.41	.45	.52	.57	.63	.65	.69	.71	.72
MAY 11	.15	.28	.35	.44	.64	.85	1.03	1.29	1.45	1.55	1.70	1.77
MAY 12	.19	.30	.35	.42	.55	.68	.85	.92	.96	1.05	1.15	1.21
JUN 9	.36	.58	.65	.80	.93	1.02	1.03	1.04	1.05	1.07	1.07	1.07
JUL 16	.35	.68	.88	.96	1.17	1.60	1.68	1.69	2.05	2.67	2.69	2.69
JUL 25	.22	.35	.45	.50	.54	.57	.75	.80	.81	.81	.82	.83
JUL 29	.38	.65	.75	.85	1.25	1.26	1.26	1.29	1.29	1.30	1.30	1.30
AUG 14	.18	.29	.39	.44	.46	.47	.47	.48	.48	.71	.77	.78
AUG 18	.22	.41	.53	.61	.68	.68	.68	.68	.68	.69	.69	.69
SEP 1	.14	.26	.39	.50	.69	.86	1.00	1.07	1.20	1.25	1.25	1.27
SEP 25	.20	.31	.32	.33	.34	.34	.34	.34	.34	.34	.57	.65
OCT 22	.22	.38	.50	.60	.66	.77	.80	.87	1.06	1.07	1.07	1.07
NOV 18	.16	.24	.29	.42	.53	.58	.69	.83	1.00	1.04	1.10	1.18
DEC 4	.25	.36	.47	.52	.56	.64	.69	.79	.87	.90	.90	.90
DEC 5	.33	.55	.63	.68	.75	1.00	1.18	1.30	1.35	1.41	1.49	1.61
DEC 12	.30	.45	.46	.47	.49	.51	.56	.59	.60	.61	.62	.62
DEC 20	.21	.33	.42	.53	.76	.81	.94	.98	1.04	1.09	1.14	1.16
BOOTHVILLE												
FEB 6	.29	.40	.50	.67	.82	.84	.94	.96	.96	.96	.96	.96
MAR 2	.25	.41	.46	.52	.67	.72	.83	1.07	1.12	1.15	1.15	1.15
MAR 16	.27	.54	.63	.67	.86	.98	1.12	1.13	1.15	1.17	1.18	1.18
MAR 18	.28	.56	.66	.90	1.27	1.46	1.77	1.80	1.80	1.80	1.80	1.80
MAR 29	.19	.35	.37	.41	.43	.45	.45	.45	.45	.50	.50	.50
MAR 30	.48	.62	.66	.69	.70	.70	.70	.70	.73	.77	.77	.77
MAR 30	.23	.38	.39	.41	.42	.43	.43	.52	.55	.56	.56	.57
APR 22	.17	.26	.35	.38	.40	.41	.41	.41	.41	.41	.41	.41
MAY 12	.25	.44	.63	.82	1.22	1.50	1.77	2.02	2.35	2.51	2.81	2.97
MAY 12	.52	*1.03	*1.15	1.25	1.40	1.51	1.63	1.76	1.88	1.97	2.05	2.08
MAY 14	.33	.47	.48	.60	.81	.85	.92	.96	.99	1.01	1.04	1.05
JUN 22	.21	.27	.31	.46	.55	.55	.55	.55	.55	.55	.55	.55
JUL 25	.16	.27	.30	.36	.52	.55	.60	.60	.60	.60	.60	.60
AUG 21	.25	.41	.44	.52	.70	.70	.70	.70	.70	.70	.70	.70
AUG 22	.30	.57	.62	.77	.92	.94	.97	.98	1.00	1.00	1.00	1.00
AUG 27	.26	.34	.36	.38	.40	.40	.40	.40	.40	.40	.40	.40
SEP 5	.38	.75	.85	1.10	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.19
SEP 26	.25	.40	.50	.52	.52	.52	.52	.52	.52	.52	.52	.52
OCT 27	.42	.78	.82	.85	.89	.93	1.00	1.03	1.08	[illegible]	1.14	1.19
NOV 3	* .55	.85	.95	1.01	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
NOV 3	.37	.65	.71	.98	1.28	1.75	1.97	2.15	2.35	2.42	2.42	2.42
NOV 13	.25	.45	.52	.60	.88	.94	.99	1.04	1.09	1.12	1.20	1.23
NOV 18	.30	.45	.59	.70	[illegible]	1.55	[illegible]	1.74	1.76	1.88	2.05	2.08
DEC 21	.23	.36	.39	.42	.75	.82	[illegible]	1.04	1.15	1.22	1.33	1.34
LAKE CHARLES												
JAN 20	.14	.28	.30	.35	.55	.70	.99	1.10	1.20	1.29	1.39	1.46
FEB 15	.45	.48	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51
MAR 2	.15	.30	.42	.52	.60	.71	.85	1.03	1.15	1.16	1.18	1.18
MAY 2	.18	.30	.35	.50	.60	.66	.68	.73	.74	.76	.77	.78
MAY 12	.30	.45	.50	.64	.66	.67	.69	.69	.71	.72	.74	.80
MAY 12	.20	.34	.38	.41	.44	.47	.54	.54	.54	.57	.58	.60
MAY 29	.27	.52	.55	.58	.63	.65	.65	.65	.65	.65	.65	.65
JUL 4	.27	.32	.37	.39	.42	.42	.62	.71	.87	.91	1.05	1.17
JUL 7	.33	.59	.62	.65	.85	1.20	1.34	1.36	1.36	1.36	1.35	1.35

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
LOUISIANA												
LAKE CHARLES												
JUL 17	.25	.35	[illegible]	[illegible]	[illegible]	.41	.42	.42	[illegible]	[illegible]	[illegible]	[illegible]
JUL 19	.48	[illegible]	[illegible]	[illegible]	1.03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUL 30	.27	.43	[illegible]	[illegible]	.55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG 11	.30	.43	.55	[illegible]	.54	.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG 27	.37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 9	.15	.25	[illegible]	.35	.52	.61	[illegible]	.52	.68	.68	.84	[illegible]
SEP 24	.33	.52	.62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCT 22	.45	.55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCT 26	.19	[illegible]	[illegible]	.55	.56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV 18	.21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC 4	.31	.55	.54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC 5	.34	[illegible]	.54	[illegible]	[illegible]	[illegible]	[illegible]	.74	[illegible]	[illegible]	[illegible]	[illegible]
NEW ORLEANS												
JAN 20	.24	.47	.53	.62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.14	[illegible]	[illegible]
FEB 6	.25	.41	.42	.43	.51	[illegible]	.72	.72	.98	[illegible]	[illegible]	[illegible]
FEB 16	.14	.27	.32	[illegible]	.59	[illegible]	[illegible]	.77	[illegible]	.78	[illegible]	[illegible]
FEB 29	.20	.36	.40	.50	.51	[illegible]	.52	.52	.53	.54	.55	.55
MAR 8	.15	.29	.32	.41	.60	.71	[illegible]	[illegible]	.85	[illegible]	[illegible]	[illegible]
MAR 15	.40	.51	.57	[illegible]	[illegible]	.75	[illegible]	[illegible]	1.05	[illegible]	1.14	1.16
MAR 21	.17	.33	.35	.41	.45	.51	.52	.55	.57	.67	.73	.73
APR 16	.23	.37	.40	.44	.54	.55	.55	.55	.55	.55	.55	.55
MAY 11	.33	.39	.41	.45	.45	.53	.54	.55	.55	.55	.55	.55
MAY 12	.31	.55	.82	[illegible]	1.51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN 9	.52	.75	[illegible]	1.35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUL 14	.28	.51	.53	.75	.80	.81	.81	[illegible]	[illegible]	[illegible]	[illegible]	.92
JUL 16	.37	.58	.65	.73	[illegible]	[illegible]	.82	.83	.83	.84	.84	.84
AUG 9	.29	.44	.45	.47	.48	.49	.49	.49	.49	.49	.49	.49
AUG 14	.17	.32	.42	.46	.55	.81	.95	1.13	[illegible]	1.15	1.15	1.15
AUG 23	.32	.52	.55	.59	.67	.91	.92	.92	.92	.92	.92	.92
AUG 25	.33	.63	.74	.83	.87	.92	.93	.93	.93	.93	.93	.93
AUG 26	.25	.48	.55	.66	[illegible]	.74	[illegible]	.77	.77	.77	.77	.77
SEP 11	.38	.65	.75	.78	.79	.95	[illegible]	1.18	[illegible]	[illegible]	[illegible]	[illegible]
SEP 30	.23	.44	.47	.50	.69	.73	[illegible]	.88	.91	.92	.92	.92
OCT 22	.30	.60	.65	.70	.72	.73	.75	.76	.76	.76	.76	.76
OCT 26	.28	.47	.54	.61	.84	1.04	1.24	1.75	1.99	2.04	2.37	2.41
NOV 4	.22	.35	.41	.43	.53	.65	.74	.76	.80	.82	.89	.91
NOV 13	.40	.71	.77	[illegible]	1.04	1.29	1.33	1.38	1.45	1.49	1.61	1.71
NOV 18 -	M	M	M	M	M	M	M	M	M	M	M	M
DEC 10	.28	.56	.65	.80	1.01	1.17	1.42	1.47	1.51	1.51	1.52	1.52
DEC 20	.23	.35	.50	.53	.72	.87	.94	[illegible]	[illegible]	1.43	1.54	[illegible]
DEC 30	.27	.53	.55	.59	.84	.97	1.12	1.15	1.18	1.20	1.24	1.32
NEW ORLEANS												
JAN 4	.24	.32	.33	.36	.51	.54	.55	.57	.64	.65	.65	.66
FEB 6	.20	.25	.35	.40	.50	.75	.85	.90	1.00	1.20	[illegible]	[illegible]
JAN 1[illegible]	.26	.28	.28	.29	[illegible]	[illegible]	.29	.29	.29	.31	.37	[illegible]
FEB 26	.22	.37	.47	.52	[illegible]	.65	.68	.68	.68	.86	.88	[illegible]
MAR 2	.35	.51	.70	.90	1.10	1.33	1.40	[illegible]	[illegible]	1.63	1.77	[illegible]
MAR 18	.26	.31	.41	.45	.51	.65	.57	[illegible]	.65	.65	.67	[illegible]
MAR 21	.30	.40	.45	.48	.53	[illegible]	.57	.58	.63	.71	.75	.84
APR 16	.15	.22	.32	.40	.40	.44	.45	.48	.44	.45	.47	.48
MAY 12	.32	.52	.69	.93	1.32	1.62	1.78	1.86	[illegible]	[illegible]	2.13	[illegible]
JUN 9	.50	.79	1.00	1.20	1.55	1.75	1.77	1.77	1.77	1.77	1.77	1.77
JUL 5	.26	.46	.55	.64	.70	.71	.73	.75	.80	.81	.83	[illegible]
JUL 12	.25	.36	.46	.56	.85	1.17	1.21	1.50	1.67	1.67	1.67	1.70
JUL 20	.45	.52	.52	.52	.52	.52	.80	1.01	[illegible]	[illegible]	[illegible]	[illegible]
JUL 26	.20	.36	.50	.55	.65	.68	.77	.92	.95	.97	.97	.97
AUG 18	.30	.40	.53	.58	1.05	[illegible]	1.22	1.22	1.22	1.22	1.22	1.22
AUG 26	.40	.58	.68	.83	.95	.99	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 1	.27	.41	.60	.73	.99	1.11	1.14	1.20	[illegible]	[illegible]	1.20	[illegible]
SEP 11	.20	.30	.39	.40	.40	.40	.40	.40	.40	.41	.54	.54
SEP 19	.25	.35	.50	.59	.73	.81	.85	.85	.85	.85	.85	.85
SEP 30	.30	.52	.65	.75	.85	.91	1.12	1.15	1.15	1.15	1.15	1.15
OCT 22 T	M	M	M	M	M	M	M	M	M	M	M	M
OCT 26	.30	.55	.75	.80	.83	.95	1.00	1.10	1.27	1.38	1.59	1.66
NOV 4 -	M	M	M	M	M	M	M	M	M	M	M	M
NOV 7	.24	.35	.35	.35	.35	.36	.40	.40	.40	.40	.40	.40
NOV 13	.57	.86	1.11	1.36	1.65	2.05	2.27	2.35	2.47	2.49	2.57	2.71
DEC 5	.30	.45	.60	.68	.80	.93	1.02	1.07	[illegible]	1.20	1.23	1.26
DEC 21	.35	.41	.75	.91	1.25	1.63	1.70	1.97	2.13	2.27	2.37	2.75
DEC 30	.20	.35	.45	.52	.58	.67	.73	.78	.79	.84	.91	.98
SHREVEPORT												
JAN 3	.25	.40	.58	.67	.73	.78	.82	.93	[illegible]	1.17	1.27	1.34
APR 15	.31	.46	.47	.48	.50	.50	.51	[illegible]	[illegible]	[illegible]	.51	[illegible]
APR 21	.15	.30	.37	.39	.41	.42	.45	.46	.50	.52	.52	.52
MAY 1	.31	.59	.60	.74	1.05	1.33	1.57	1.76	[illegible]	1.78	[illegible]	[illegible]
MAY 12	.30	.58	.68	.70	.73	.75	.77	.80	.87	.92	1.03	1.08
MAY 28	.18	.28	.34	.43	.45	.45	.45	.45	.45	.45	.45	.45
JUN 14	.33	.39	.39	.39	.39	.39	.39	.39	.39	.45	.45	.45
JUN 30	.30	.59	.70	.79	.82	.82	.82	.82	.82	.82	.82	.82
JUL 3	.32	.45	.57	.58	.67	.75	1.03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUL 21	.31	.57	.75	[illegible]	1.27	1.47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUL 29	.22	.43	.52	.64	.82	1.00	[illegible]	1.17	[illegible]	[illegible]	[illegible]	[illegible]
SEP 29	.15	.28	.34	.48	.51	[illegible]	[illegible]	.55	.58	[illegible]	[illegible]	[illegible]
OCT 22	.29	.45	.57	.65	.95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCT 26	.20	.33	.42	.50	.62	.71	.99	1.12	1.21	1.27	[illegible]	[illegible]
NOV 7	.41	.55	.71	.72	.74	.77	[illegible]	.81	.81	[illegible]	[illegible]	[illegible]
NOV 13	.25	.45	.51	.58	.83	[illegible]	[illegible]	1.01	1.25	[illegible]	1.37	1.39
MAINE												
CARIBOU												
MAY 18	.35	.36	.37	.37	.37	.37	.37	.38	.38	.38	.53	[illegible]
MAY 21	.28	.35	.39	[illegible]	.42	.43	.43	.44	.44	.44	.49	[illegible]
JUL 21	.25	.44	.48	.49	.49	.49	.49	.49	.49	.49	.49	.49
AUG 23	.35	.50	.57	.72	.78	.84	.88	.92	.95	.99	[illegible]	[illegible]
AUG 25	* .47*	.73	.75	.77	.86	.88	.88	.88	.88	[illegible]	1.28	[illegible]
PORTLAND												
JUL 14	.22	.41	.41	.43	.43	.43	.43	.43	.43	.43	.43	.43
MARYLAND												
BALTIMORE												
JUN 22	.20	.37	.43	.52	.73	.90	1.13	1.34	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	.55	[illegible]	1.23	1.24	[illegible]	[illegible]	1.25	1.27	[illegible]	1.31	1.31	1.31
JUL 3	.20	.30	.34	.42	.67	[illegible]	[illegible]	[illegible]	[illegible]	.69	.69	.69
JUL 16	.25	.34	.37	.42	.50	.73	.79	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	.27	.40	.42	.42	.42	.42	.42	.42	.42	.51	.51	.51
SEP 14	.21	.35	.35	.35	.36	.38	[illegible]	.41	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	.22	.32	.37	.45	.51	[illegible]	[illegible]	.82	[illegible]	.96	[illegible]	[illegible]

EXCESSIVE SHORT DURATION RAINFALL

YEAR 1972

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
MARYLAND												
BALTIMORE U												
JUN 22	.17	.30	.35	.42	.60	.78	1.02	1.33	1.44	1.48	1.67	1.80
JUN 29	.35	.63	.70	.79	.87	.91	.91	.93	.98	1.01	1.02	1.02
JUL 16	.20	.33	.39	.47	.48	.48	.49	.50	.50	.50	.50	.71
AUG 17	.25	.30	.32	.34	.36	.39	.48	.49	.56	.60	.65	.70
MASSACHUSETTS												
BLUE HILL R												
JUL 29	.30	.55	.74	.83	.83	.83	.83	.83	.83	.83	.83	.83
BOSTON												
JUN 1	.20	.36	.39	.50	.59	.66	.79	.84	.85	.86	.86	.87
JUL 23	.40	.77	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85
MICHIGAN												
ALPENA												
JUL 20	.26	.45	.60	.70	.71	.75	.75	.75	.75	.75	.75	.75
DETROIT												
JUL 12	.35	.60	.65	.65	.65	.65	.65	.65	.65	.65	.65	.65
JUL 18	.40	.62	.75	.90	1.10	1.13	1.15	1.15	1.15	1.15	1.15	1.15
AUG 17	.50	.80	.85	1.10	1.28	1.30	1.35	1.35	1.35	1.55	1.65	1.65
DETROIT M WAYNE CO												
MAY 14	.28	.31	.32	.32	.34	.35	.36	.36	.36	.36	.36	.36
JUN 20	.44	.60	.71	.81	1.08	1.47	1.52	1.55	1.57	1.59	1.67	1.70
JUL 18	*.72	*.91	.92	.94	.96	.97	.97	.97	.97	.97	.97	.97
AUG 14	.32	.50	.59	.59	.59	.59	.59	.59	.59	.59	.59	.60
SEP 17	.21	.40	.41	.43	.44	.45	.50	.52	.53	.53	.57	.64
FLINT												
APR 13	.35	.58	.64	.66	.68	.80	.86	.90	.92	.92	.92	.92
MAY 1	.28	.37	.38	.39	.43	.44	.44	.49	.50	.53	.55	.55
JUN 14	.32	.52	.60	.64	.76	.78	.81	.84	.84	.84	.84	.84
JUN 15	.23	.35	.36	.38	.39	.40	.42	.44	.47	.49	.52	.55
JUL 15	.20	.38	.48	.55	.85	1.20	1.34	1.40	1.44	1.61	1.95	2.02
AUG 22	.28	.46	.51	.54	.55	.55	.56	.56	.56	.56	.57	.57
AUG 23	.28	.33	.34	.35	.35	.35	.35	.45	.55	.55	.55	.55
AUG 24	.52	.65	.66	.68	.68	.76	.79	.79	.79	.79	.79	.79
SEP 13	.27	.45	.48	.52	.73	.81	.90	.94	.99	1.04	1.11	1.13
SEP 17	.41	.43	.44	.46	.54	.57	.58	.64	.69	.73	.79	.80
GRAND RAPIDS												
JUN 4	.21	.30	.35	.37	.38	.38	.38	.38	.38	.38	.38	.38
JUN 14	.43	.62	.66	.86	1.01	1.12	1.38	1.68	1.71	1.75	1.79	1.81
JUL 15	.31	.38	.39	.51	.69	.83	1.03	1.36	1.58	1.70	1.82	1.85
AUG 16	.22	.32	.34	.38	.38	.41	.42	.42	.42	.42	.42	.42
SEP 17	.32	.38	.52	.75	.80	.83	.90	.95	.95	.95	.95	.95
SEP 18	.22	.42	.44	.50	.54	.57	.61	.66	.71	.75	.76	.76
HOUGHTON LAKE												
JUL 31	.13	.25	.37	.38	.38	.38	.38	.38	.38	.38	.38	.38
LANSING												
APR 13	.25	.36	.36	.37	.38	.50	.55	.85	1.02	1.04	1.06	1.06
MAY 15	.40	.63	.70	.82	.89	.93	.97	1.03	1.06	1.07	1.12	1.13
JUN 15	.35	.53	.57	.71	.75	.78	.95	1.16	1.18	1.20	1.20	1.20
JUL 14	.27	.29	.29	.30	.39	.49	.67	.68	.68	.68	.68	.68
JUL 15	.23	.35	.40	.48	.78	.90	1.08	1.12	1.15	1.20	1.25	1.32
AUG 1	.25	.35	.40	.47	.54	.60	.64	.65	.66	.66	.67	.67
AUG 19	.27	.49	.53	.58	.66	.67	.70	.75	.77	.78	.79	.79
AUG 22	.25	.37	.38	.40	.42	.43	.45	.59	.62	.64	.64	.64
AUG 23	.33	.36	.37	.43	.70	.71	.73	.75	.75	.75	.75	.75
MARQUETTE U												
JUL 16	.20	.33	.42	.46	.47	.48	.49	.51	.53	.54	.54	.54
AUG 5	.26	.39	.40	.41	.43	.46	.49	.51	.51	.51	.52	.52
AUG 22	.27	.37	.39	.40	.40	.41	.44	.44	.44	.44	.44	.44
SEP 13	.10	.20	.27	.32	.47	.65	.89	1.09	1.28	1.30	1.45	1.56
MUSKEGON												
JUN 14	.15	.26	.37	.42	.53	.58	.60	.63	.73	.87	.94	1.02
JUL 14	.33	.51	.58	.68	.84	.90	.95	1.01	1.07	1.11	1.16	1.21
AUG 18	.22	.38	.50	.53	.57	.58	.61	.61	.63	.63	.63	.63
AUG 26	.25	.48	.58	.65	.90	.96	1.06	1.35	1.38	1.55	2.00	2.29
SAULT STE MARIE												
JUL 20	.21	.30	.32	.46	.60	.61	.64	.72	.72	.73	.74	.74
JUL 30	.25	.32	.32	.32	.32	.33	.33	.33	.33	.33	.33	.33
JUL 31	.26	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUL 31	.19	.26	.36	.42	.44	.46	.65	.71	.73	.74	.88	.89
MINNESOTA												
DULUTH												
JUN 12	.22	.37	.39	.42	.48	.49	.54	.74	.74	.74	.74	.74
JUN 13	.27	.36	.37	.40	.42	.43	.45	.48	.52	.57	.63	.63
JUN 19	.18	.34	.38	.48	.52	.62	.77	.86	.88	.89	.89	.91
JUL 11	.42	.65	.67	.76	.80	.81	.89	.91	.95	.99	1.02	1.02
JUL 11	.30	.51	.53	.57	.61	.61	.61	.61	.61	.61	.61	.61
JUL 16	.35	.35	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUL 22	.25	.30	.39	.47	.72	.81	.85	.88	.90	.92	.93	.93
JUL 30	.25	.25	.25	.26	.32	.32	.32	.34	.36	.36	.36	.36
AUG 15	*.62	.73	.83	.86	.88	.90	.98	.98	.98	.98	.98	.98
AUG 16	.26	.46	.47	.48	.64	.68	.70	.78	.78	.78	.78	.78
AUG 20	.46	.62	.72	1.00	1.11	1.30	1.46	1.71	1.71	*2.70	2.93	*2.95
SEP 20	.37	.49	.49	.51	.54	.70	.78	.87	.87	1.22	1.46	1.70
INTERNATIONAL FALLS												
MAY 28	.36	.68	.75	.88	1.06	1.08	1.19	1.29	1.32	1.35	1.39	1.42
JUL 14	.26	.30	.33	.42	.50	.51	.54	.54	.55	.55	.55	.55
JUL 19	.23	.43	.48	.55	.57	.60	.64	.67	.70	.73	.82	.88
JUL 19	.24	.48	.56	.72	.78	.83	.83	.91	1.44	1.61	1.64	1.81
MINNEAPOLIS												
MAY 23	.28	.45	.47	.48	.48	.48	.48	.49	.49	.49	.49	.49
JUN 13	.19	.31	.32	.33	.33	.39	.43	.43	.44	.55	.75	.76
JUN 27	.24	.36	.41	.42	.43	.45	.46	.46	.46	.46	.46	.46
JUL 17	.20	.30	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36
JUL 20	.24	.40	.43	.43	.43	.44	.46	.49	.51	.51	.51	.52
JUL 22	.20	.37	.39	.49	.61	.65	.78	.90	1.20	1.28	1.45	1.49

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
MINNESOTA												
ROCHESTER												
SEP 12	.30	.49	.66	.84	1.10	1.20	1.23	1.95	1.99	2.06	2.06	2.06
SEP 20	.24	.38	.50	.56	.62	.67	.71	.72	.75	.79	.86	.87
ST CLOUD												
MAY 23	.36	.46	.54	.66	.72	.73	.81	.84	.84	.84	.84	.84
MAY 28	.23	.38	.42	.45	.46	.48	.48	.48	.48	.48	.48	.49
JUL 22	.38	.44	.51	.57	.79	.82	.83	.84	1.11	1.12	1.14	1.65
AUG 21	.29	.57	.64	.86	1.25	1.45	1.61	1.63	1.63	1.63	1.63	1.63
SEP 10	.30	.38	.40	.46	.57	.62	.64	.64	.64	.64	.64	.64
MISSISSIPPI												
JACKSON												
JAN 4	.15	.26	.28	.33	.52	.53	.54	.54	.54	.54	.55	.56
MAR 2	.22	.36	.42	.53	.64	.74	.97	1.12	1.19	1.24	1.34	1.47
MAY 2	.20	.40	.57	.67	.77	.80	.83	.85	.87	.88	.88	.88
MAY 14	.33	.39	.40	.41	.42	.43	.43	.43	.43	.43	.56	.56
JUN 15	.19	.32	.42	.54	.57	.62	.68	.80	.91	.94	.98	.98
JUL 13	.18	.34	.40	.43	.45	.46	.46	.46	.46	.46	.46	.46
JUL 19	.18	.27	.44	.51	.54	.54	.54	.54	.56	.58	.58	.58
JUL 29	.16	.29	.35	.40	.50	.58	.67	.75	.80	.87	.90	.97
AUG 13	.45	.75	.76	.77	.77	.77	.77	.77	.77	.77	.77	.77
AUG 26	.22	.40	.44	.64	.83	.85	.86	.86	.86	.86	.90	.91
SEP 21	.20	.38	.55	.60	.83	.95	.98	.98	.99	1.01	1.02	1.02
SEP 26	.45	.61	.73	.88	.99	1.02	1.02	1.02	1.03	1.03	1.03	1.04
SEP 27	.30	.32	.34	.35	.36	.37	.37	.38	.38	.39	.40	.41
SEP 29	.22	.34	.37	.42	.45	.49	.57	.60	.66	.66	.66	.66
OCT 22	.25	.45	.51	.55	.70	.75	.92	1.06	1.15	1.21	1.29	1.35
NOV 13	.13	.23	.27	.39	.51	.53	.60	.62	.70	.81	.87	.97
DEC 15	.25	.42	.50	.65	.75	.82	.96	1.07	1.13	1.32	1.35	1.42
DEC 30	.22	.34	.39	.42	.67	.73	.79	.91	1.10	1.12	1.14	1.25
MERIDIAN												
JAN 9	.31	.40	.57	.76	1.03	1.07	1.19	1.32	1.41	1.47	2.34	2.43
JAN 10	.29	.52	.54	.55	.75	.84	.87	.88	.89	.90	.90	.90
MAR 1	.27	.29	.30	.30	.33	.38	.40	.43	.43	.43	.43	.43
MAR 2	.18	.27	.36	.48	.63	.83	.96	1.02	1.05	1.07	1.15	1.36
MAY 13	.33	.54	.60	.78	1.15	1.50	1.72	2.15	2.48	2.65	2.97	3.02
MAY 24	.25	.33	.45	.50	.59	.65	.83	.88	.88	.88	.88	.88
JUN 10	.27	.37	.42	.52	.65	.80	.83	.94	.96	1.05	1.07	1.10
JUN 15	.25	.50	.63	.81	1.05	1.08	1.09	1.15	1.21	1.26	1.41	1.50
JUN 29	.25	.35	.52	.60	.70	.76	.76	.76	.76	.76	.76	.76
JUL 12	.45	.74	.83	1.03	1.65	2.23	2.39	2.39	2.39	2.40	2.42	2.43
JUL 14	.60	.85	.92	1.05	1.48	1.55	1.60	1.60	1.64	1.67	1.74	1.74
JUL 29	.27	.33	.40	.45	.52	.55	.76	.81	.84	.86	.90	.90
AUG 11	.25	.43	.44	.50	.58	.67	.75	.77	.90	1.19	1.36	1.41
SEP 21	.18	.33	.35	.47	.68	.70	.70	.70	.70	.70	.70	.70
SEP 30	.17	.29	.34	.40	.55	.57	.70	.76	.77	.78	.78	.78
OCT 22	.30	.36	.42	.60	.81	.93	1.01	1.08	1.10	1.15	1.29	1.33
OCT 27	.20	.30	.40	.45	.50	.68	.70	.72	.90	.97	1.02	1.07
NOV 2	.35	.39	.47	.49	.53	.54	.55	.55	.55	.55	.55	.55
NOV 7	.32	.48	.49	.52	.56	.58	.69	.73	.73	.73	.73	.73
NOV 19	.27	.29	.30	.30	.31	.34	.40	.44	.47	.47	.50	.51
DEC 14	.26	.33	.36	.38	.40	.42	.43	.51	.55	.55	.55	.56
DEC 15	.22	.33	.38	.45	.54	.60	.67	.69	.79	1.15	1.30	1.35
DEC 30	.26	.50	.60	.70	1.10	1.30	1.45	1.45	1.55	1.60	1.70	1.70
MISSOURI												
COLUMBIA												
APR 19	.21	.32	.51	.61	.65	.76	.84	1.15	1.36	1.46	1.61	1.62
JUL 15	.29	.42	.44	.49	.59	.72	.72	.72	.89	1.20	1.20	1.20
JUL 18	.36	.56	.58	.59	.64	.75	.79	.81	.82	.82	.82	.82
JUL 24	.30	.37	.42	.44	.45	.45	.45	.45	.45	.45	.45	.45
SEP 1	.28	.34	.38	.44	.49	.60	.62	.64	.64	.64	.64	.64
SEP 7	.40	.65	.69	.85	.93	.95	1.05	1.17	1.29	1.42	1.44	1.72
SEP 14	.30	.52	.55	.61	.70	.72	.74	.75	.76	.77	.86	.88
KANSAS CITY												
APR 19	.18	.35	.42	.46	.53	.53	.53	.53	.53	.53	.53	.53
MAY 12	.30	.35	.36	.38	.44	.49	.52	.60	.64	.64	.65	.65
ST LOUIS												
JUL 2	.27	.50	.68	.84	.96	1.03	1.17	1.17	1.17	1.17	1.17	1.17
AUG 2	.15	.28	.40	.44	.47	.70	.72	.72	.72	.73	.73	.73
AUG 3	.25	.32	.40	.44	.54	.62	.62	.62	.62	.62	.62	.62
AUG 6	.26	.34	.44	.50	.62	.68	.72	.74	.78	.78	.81	.81
SEP 7	.36	.56	.76	.90	1.20	1.36	1.76	2.16	2.34	2.42	2.52	2.52
SPRINGFIELD												
APR 19	.16	.30	.41	.53	.57	.60	.65	.66	.68	.69	.70	.70
JUN 26	.32	.50	.65	.75	.85	.90	.93	.97	1.01	1.02	1.04	1.04
AUG 21	.19	.34	.34	.42	.64	.80	.90	1.18	1.37	1.40	1.43	1.48
SEP 7	.40	.60	.64	.75	.93	.94	.96	.98	.98	.98	.98	.98
SEP 15	.28	.51	.54	.55	.56	.59	.60	.65	.80	.90	.98	1.00
MONTANA												
BILLINGS												
MAY 20	.27	.38	.38	.39	.41	.42	.43	.46	.57	.58	.88	.89
JUL 18	.17	.24	.38	.39	.39	.39	.40	.40	.40	.40	.40	.40
GLASGOW												
JUN 3	.25	.32	.41	.61	.72	.73	.73	.74	.74	.75	.75	.81
JUN 9	.30	.50	.65	.79	*1.00	1.16	*1.28	1.36	1.44	*1.50	1.53	*1.53
AUG 13	*.70	*.85	*.89	.94	.96	.98	1.02	1.02	1.02	1.02	1.02	1.02
GREAT FALLS												
JUN 9	.26	.31	.37	.40	.43	.58	.59	.77	.78	.79	.79	.79
HAVRE												
AUG 23	.23	.44	.50	.54	.65	.70	.70	.70	.70	.70	.70	.70
HELENA												
JUN 8	.22	.33	.36	.38	.42	.44	.56	.56	.56	.56	.56	.56
KALISPELL												

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
MONTANA												
MISSOULA												
JUN 16	.28	.33	.35	.50	.53	.53	.53	.53	.53	.53	.53	.53
NEBRASKA												
GRAND ISLAND												
JUN 16	.23	.30	.33	.43	.47	.49	.50	.50	.50	.50	.50	.50
JUL 10	.19	.33	.43	.50	.56	.60	.71	.77	.84	.85	.90	.93
JUL 28	.22	.43	.55	.58	.65	.66	.66	.66	.66	.66	.69	.70
AUG 20	.13	.25	.31	.41	.43	.44	.44	.44	.44	.45	.59	.59
LINCOLN U												
AUG 8	.19	.30	.37	.46	.55	.56	.56	.57	.57	.57	.57	.57
SEP 20	.23	.38	.52	.73	.90	.95	.97	1.05	1.16	1.18	1.20	1.23
NORFOLK												
JUN 18	.52	.89	.90	1.00	1.36	1.70	1.95	2.00	2.05	2.12	2.12	2.12
JUN 27	.20	.32	.40	.42	.43	.45	.45	.45	.45	.45	.45	.46
JUL 17	.15	.26	.28	.42	.52	.68	.87	.99	1.01	1.02	1.08	1.14
JUL 20	.25	.36	.40	.53	.62	.63	.64	.65	.65	.75	.80	1.15
NORTH PLATTE												
JUL 25	.23	.28	.35	.39	.42	.49	.49	.49	.49	.49	.49	.49
JUL 27	.25	.43	.51	.57	.63	.66	.68	.68	.68	.68	.68	.68
OMAHA												
MAY 12	.24	.36	.44	.47	.51	.52	.55	.57	.60	.62	.62	.62
JUL 6	.22	.39	.40	.41	.42	.42	.52	.54	.55	.55	.55	.56
JUL 10	.45	.55	.60	1.03	1.15	1.27	1.32	1.42	1.57	1.60	1.60	1.60
JUL 11	.30	.50	.58	.64	.95	1.24	1.35	1.36	1.37	1.38	1.38	1.38
JUL 26	.25	.41	.48	.69	.85	.89	.95	.98	1.03	1.04	1.13	1.27
SEP 11	.25	.35	.37	.38	.38	.39	.39	.39	.39	.39	.39	.39
SEP 12	.21	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
SCOTTSBLUFF												
JUN 3	* .72	.75	.76	.76	.76	.77	.77	.77	.84	.84	.84	.86
JUN 3	.20	.33	.38	.46	.51	.56	.56	M	M	M	M	M
JUN 9	.35	.38	.38	.38	.42	.44	.45	.46	.54	.82	.87	.88
JUN 15	.22	.42	.48	.62	.80	.82	.83	.83	.83	.83	.83	.83
JUL 19	.26	.31	.31	.31	.32	.32	.32	.32	.32	.32	.32	.32
JUL 24	.39	.56	.72	.86	1.19	1.49	1.58	1.58	1.58	1.58	1.58	1.58
VALENTINE												
MAY 23	.70	.80	.85	.95	1.02	1.03	1.03	1.04	1.04	1.04	1.04	1.04
JUL 24	.25	.35	.40	.45	.47	.50	.52	.54	.56	.56	.58	.58
JUL 27	.30	.50	.65	.90	.97	.97	.97	.97	.97	.97	.97	.97
NEVADA												
ELKO						NONE						
ELY												
SEP 1	.26	.31	.38	.41	.52	.64	.83	.83	.83	.83	.83	.83
LAS VEGAS						NONE						
RENO						NONE						
WINNEMUCCA						NONE						
NEW HAMPSHIRE												
CONCORD												
JUL 16	.26	.39	.49	.59	.66	.67	.71	.73	.73	.76	.80	.80
JUL 19	.19	.31	.43	.47	.54	.62	.75	.82	1.12	1.12	1.12	1.12
JUL 21	.26	.50	.55	.63	.67	.74	.74	.74	.74	.74	.74	.74
AUG 27	.22	.31	.40	.42	.59	.62	.73	.78	.82	.86	.90	.94
NEW JERSEY												
ATLANTIC CITY												
JUN 22	.13	.22	.28	.38	.50	.72	.88	1.02	1.05	1.10	1.32	1.57
JUL 13	.28	.52	.56	.64	.94	1.26	1.31	1.33	1.38	1.38	1.38	1.38
SEP 19	.40	.56	.62	.63	.65	.71	.85	.89	.92	.93	.93	.93
NEWARK												
JUL 13	.26	.37	.48	.57	.74	.86	1.06	1.48	1.65	1.80	2.10	2.37
JUL 17	.31	.48	.49	.52	.61	.70	.74	.74	.74	.74	.74	.74
AUG 26	.64	1.08	*1.54	1.68	*1.80	1.87	*1.93	1.98	2.02	2.03	2.05	2.06
TRENTON U												
MAR 3	.18	.35	.38	.42	.56	.65	.69	.75	.80	.84	.92	.97
MAY 31	.22	.33	.35	.36	.38	.38	.38	.38	.38	.38	.38	.39
JUL 13	.18	.26	.29	.33	.52	.62	.73	1.01	1.10	1.17	1.42	1.55
JUL 16	.29	.35	.35	.35	.36	.36	.37	.38	.38	.38	.38	.38
SEP 18	.18	.32	.33	.33	.33	.33	.34	.36	.42	.42	.42	.42
DEC 6	.35	.48	.50	.53	.56	.59	.60	.61	.61	.61	.62	.74
NEW MEXICO												
ALBUQUERQUE												
JUL 4	.32	.41	.41	.41	.42	.42	.43	.43	.43	.43	.43	.43
JUL 21	.16	.30	.35	.42	.43	.43	.43	.43	.43	.44	.44	.44
AUG 18	.34	.51	.61	.72	.85	.86	.89	.93	.95	.95	.95	.95
AUG 29	.27	.52	.62	.70	.72	.72	.72	.73	.73	.73	.73	.73
CLAYTON												
MAY 10	.38	.62	.75	.80	1.08	1.15	1.19	1.20	1.20	1.20	1.20	1.21
JUN 13	.40	.75	.85	1.00	1.50	1.55	1.58	1.59	1.61	1.63	1.63	1.63
JUL 18	.30	.55	.66	.70	.71	.81	.84	.86	.86	.86	.96	1.10
AUG 22	.38	.59	.62	.63	.64	.64	.64	.64	.64	.64	.64	.64
AUG 23	.30	.57	.64	.69	.70	.70	.70	.70	.70	.70	.70	.70
SEP 8	.18	.30	.39	.54	.70	.80	.84	.90	.95	1.02	1.10	1.11
ROSWELL												
JUL 20 T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 8	.18	.34	.38	.39	.40	.42	.80	.90	.92	.92	.92	.92
NEW YORK												
ALBANY												
MAY 16	[illegible]	.33	.44	.46	.51	[illegible]	.76	.79	[illegible]	[illegible]	[illegible]	[illegible]
JUL 16	.16	.26	.32	.41	.52	.75	.97	1.12	1.23	1.29	1.31	1.32
SEP 21	.19	.27	.34	.41	.54	.64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.75
BINGHAMTON												
[illegible] 15	.21	[illegible]	.33	.34	.58	.61	.64	.69	[illegible]	.74	.81	[illegible]
JUN 16	.23	[illegible]	.34	.41	.55	.65	.65	.69	.71	.74	.81	[illegible]
JUL 8	.22	.34	.36	.41	.53	.65	[illegible]	[illegible]	.71	.73	.75	.76
AUG 3	.24	.36	.41	.46	.52	.57	.57	.57	.57	.61	.67	[illegible]
AUG 7	.25	.44	[illegible]	[illegible]	.57	.64	[illegible]	.75	[illegible]	.81	.83	[illegible]
SEP 17	.24	.33	.42	.48	.52	.54	.55	.56	.56	.56	.56	.56
BUFFALO												
JUN 21	.47	[illegible]	.55	[illegible]	.69	.74	.97	[illegible]	1.09	1.19	1.32	1.43
AUG 15	.22	[illegible]	.41	.55	.69	.71	[illegible]	.71	.71	.71	.71	.71
AUG 24	.24	.35	.44	.48	.49	.51	.54	.54	.54	.54	.54	.54
NEW YORK CENT PK												
MAY 31	[illegible]	.50	.55	.65	.68	.71	.71	.81	.93	[illegible]	[illegible]	[illegible]
JUN 16	[illegible]	[illegible]	.25	.41	.46	.62	.64	.76	[illegible]	[illegible]	1.25	[illegible]
JUN 19	.29	[illegible]	[illegible]	.34	.37	.39	.39	.39	.39	[illegible]	[illegible]	[illegible]
JUL 13	.27	.34	.48	[illegible]	.65	.78	[illegible]	1.19	1.50	[illegible]	1.93	2.15
JUL 21	[illegible]	.35	.43	.44	.51	.52	.52	.52	.52	.52	.52	.52
AUG 15	.25	.33	.33	.34	.48	.63	.77	.80	.82	.82	.82	.82
AUG 16	.32	.49	.53	.65	.79	.82	.87	.90	.91	.92	.93	.93
OCT 7	[illegible]	.21	.30	.35	.45	.65	.83	1.00	1.12	1.21	1.47	1.64
NOV 8	[illegible]	.26	.30	[illegible]	.55	.73	.95	1.34	1.53	1.65	2.15	2.54
DEC 6	[illegible]	.27	.29	.45	.53	.54	.65	.70	.77	.82	.84	.84
NEW YORK (JFK)												
JUN 17	.25	.35	.46	[illegible]	.85	.98	1.29	1.32	1.37	[illegible]	[illegible]	[illegible]
JUL 13	.20	.30	.40	.44	[illegible]	.55	.57	.59	.61	.64	.75	.84
JUL 21	.28	.50	.64	.66	.69	[illegible]	.70	.70	[illegible]	.70	.70	.70
NEW YORK LA GUARDIA												
MAY 7	.25	.40	.41	.41	.41	.42	.44	.57	.78	.87	.91	.95
[illegible] 15	[illegible]	.21	.32	.41	.49	.60	[illegible]	.86	[illegible]	[illegible]	.93	[illegible]
JUN 30	.35	.66	.80	[illegible]	[illegible]	[illegible]	1.24	1.25	1.27	1.31	1.31	1.31
JUL 13	[illegible]	.26	.34	.38	.45	.70	.84	.99	1.12	1.25	1.39	1.51
JUL 21	.29	.56	.83	.89	.91	.92	.92	.92	.92	.92	.92	.92
SEP 18	.27	.44	.58	.59	.62	.67	.67	.68	.71	.71	.71	.71
OCT 7	.11	.20	.27	.33	.48	.48	.83	.97	[illegible]	1.21	[illegible]	1.54
NOV 8	[illegible]	.25	.41	.51	.75	[illegible]	[illegible]	1.43	1.59	1.71	1.96	[illegible]
ROCHESTER												
MAY 30	.45	.50	.52	.53	.55	.59	.62	.68	.75	.83	.85	[illegible]
JUN 15	.30	.46	.53	.55	.58	.59	.60	.61	.64	[illegible]	.65	.66
JUL 25	.23	.30	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
AUG 24	.13	.24	.32	.37	.52	.52	.55	.56	.56	.56	.56	.56
SYRACUSE												
MAY 2	.27	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
MAY 15	.21	.34	.42	.45	.47	.49	.52	.55	.63	.71	.72	.72
JUN 15	.23	.44	.59	.73	.96	1.06	1.15	1.20	1.34	1.64	1.71	[illegible]
JUL 25	.34	.50	.55	.56	.57	.57	.58	.58	.60	.65	.65	.65
AUG 2	.30	.50	.59	.59	.60	.63	.63	.63	.63	.63	.63	.64
AUG 27	.20	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
NORTH CAROLINA												
ASHEVILLE												
MAY 2	.15	.30	.35	.45	.53	.54	.66	.73	.95	1.03	1.15	1.22
JUN 6	.27	.49	.56	.57	.57	.57	.58	.60	.60	.72	.78	.79
JUL 16	.26	.40	.40	.41	.50	.76	.76	1.04	1.05	1.07	1.13	1.13
JUL 22	.30	.51	.52	.54	.55	.55	.55	.55	.55	.55	.55	.55
AUG 14	.28	.50	.57	.65	.80	.92	1.01	1.04	1.04	1.04	1.04	1.04
SEP 27	.24	.32	.36	[illegible]	.62	.79	.82	.90	[illegible]	1.29	1.35	1.55
CAPE HATTERAS R												
JAN 3	.30	.32	.39	.46	.55	.57	.59	.60	.61	.61	.62	.63
JAN 14	.25	.41	.43	.47	.48	.49	.51	.51	.51	.51	.51	.51
JAN 14	.12	.31	.45	.58	.60	.80	[illegible]	1.27	1.37	1.42	1.47	1.50
FEB 2	.17	.29	.36	.45	.70	.88	1.09	1.21	1.31	1.42	1.55	1.65
MAY 3	.35	.50	.60	.75	.87	.88	1.20	1.25	1.27	1.28	1.32	1.36
MAY 31	.25	.40	.55	.61	.72	.90	1.00	1.18	1.20	1.25	1.33	1.40
JUN 1	.23	.36	.39	.42	.44	.50	.53	.53	.53	.53	.53	.53
JUL 12	.30	.50	.58	.73	.85	.89	.89	.92	.92	.92	[illegible]	[illegible]
JUL 27	.40	.75	1.15	1.35	1.53	1.85	[illegible]	2.50	2.55	2.92	2.98	[illegible]
SEP 1	.25	.35	.40	.47	.57	.65	.71	.77	.87	.93	[illegible]	[illegible]
OCT 6	.20	.40	.47	.56	.61	.67	.69	.79	.83	.86	.91	[illegible]
OCT 19	.30	.45	.55	.75	.90	.95	1.25	1.35	1.43	1.45	1.54	1.62
DEC 6	.25	.45	.52	.56	.63	.63	.65	.67	.67	.67	.67	.67
DEC 21	.27	.45	.70	.85	.95	1.10	1.20	1.27	1.35	1.40	1.49	1.49
CHARLOTTE												
JAN 13	.34	.36	.36	.36	.36	.37	.40	.44	.50	.51	.51	.52
MAY 20	.33	.42	.44	.50	.65	.75	.80	.85	[illegible]	.94	.98	[illegible]
MAY 22	.28	.28	.28	.28	.33	.37	.37	.37	.41	.41	.42	.42
JUL 3	.17	.32	.36	.40	.41	.41	.41	.41	.41	.41	.41	.41
JUL 5	.26	.44	.45	.47	.48	.49	.50	.50	.53	.53	.54	.54
JUL 11	.20	.40	.53	.61	.98	1.10	1.12	1.14	1.14	1.14	1.14	1.14
JUL 26	* [illegible]	* [illegible]	* [illegible]	[illegible]	*2.35	[illegible]	2.64	[illegible]	[illegible]	2.75	2.82	2.92
SEP 17	.18	.32	.37	.39	.43	.49	.57	.61	.64	.69	.72	.72
SEP 27	.27	.40	.41	.42	.47	.48	.49	.49	.49	.52	.54	.57
SEP 28	.42	.51	.51	.53	.53	.53	.53	.53	.53	.53	.53	.53
DEC 15	.15	.25	.27	[illegible]	.53	.75	[illegible]	[illegible]	[illegible]	1.10	[illegible]	[illegible]
GREENSBORO												
APR 7	[illegible]	.35	.43	.49	.53	[illegible]	.63	.68	[illegible]	.73	.74	.74
JUN 20	[illegible]	.35	.45	.54	[illegible]	.68	[illegible]	.78	[illegible]	[illegible]	.93	[illegible]
[illegible] 28	.25	.34	.37	.39	.40	.52	.54	.59	.60	.60	[illegible]	[illegible]
SEP 30	.27	.38	.39	[illegible]	.41	.45	.45	.48	.49	.53	[illegible]	[illegible]
RALEIGH												
MAR 22	.47	.51	.57	[illegible]	.63	.64	.66	.69	.70	.70	[illegible]	.75
APR 7	.20	.30	.40	.44	.49	.50	.52	.54	.57	.58	[illegible]	[illegible]
MAY 3	.20	.35	.42	.47	.62	.65	.69	.78	.83	[illegible]	[illegible]	[illegible]
JUN 21	.26	.35	.40	[illegible]	.55	.56	.59	.60	.69	.69	[illegible]	.74
JUN 18	[illegible]	[illegible]	.30	.42	.55	[illegible]	.63	.63	.63	.63	.63	.63
JUN 29	.35	.52	.53	.54	.54	.54	.55	.55	.57	[illegible]	.57	[illegible]
JUL 4	.44	.54	.54	.54	.54	.54	.54	.54	.54	.54	.55	.55
JUL 12	[illegible]	.94	.98	[illegible]	[illegible]	1.15	1.16	1.16	1.16	1.16	[illegible]	1.17
JUL 17	.20	.45	.46	.48	.60	.62	.66	.70	.70	.70	.70	[illegible]
JUL 19	.37	.45	.48	[illegible]	.75	.81	.94	[illegible]	1.15	1.15	1.17	1.20

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
NORTH CAROLINA												
RALEIGH												
AUG 4	.26	.30	.30	.30	.31	.31	.47	.47	.51	.54	.58	.63
AUG 6	.33	.45	.48	.53	.56	.56	.56	.56	.56	.56	.56	.56
AUG 1[illegible]	.21	.23	.27	.30	.50	.54	.56	.56	.56	.56	.56	.56
AUG 18	.25	.28	.29	.29	.30	.33	.45	.50	.57	.57	.57	.57
AUG 19	.50	.78	.87	.99	1.06	1.08	1.09	1.10	1.10	1.10	1.10	1.10
SEP 29	.25	.49	.60	.70	.93	1.03	1.08	1.11	1.12	1.14	1.18	1.22
SEP 19	.50	.90	1.00	1.02	1.03	1.04	1.04	1.04	M	M	M	M
OCT 28	.17	.34	.37	.44	.47	.49	.57	.60	.62	.62	.62	.62
NOV 19	.22	.33	.37	.39	.44	.45	.47	.49	.51	.52	.57	.63
WILMINGTON												
JUN 10	.23	.39	.39	.39	.39	.40	.40	.40	.40	.40	.40	.40
JUL 11	.27	.37	.38	.41	.42	.42	.42	.50	.50	.52	.53	.56
JUL 11	.22	.33	.43	.49	.57	.62	.82	1.01	1.10	1.21	1.42	1.57
AUG 5	.40	.75	1.10	1.26	1.63	1.74	1.75	1.75	1.75	1.75	1.75	1.75
AUG 6	.28	.42	.47	.50	.65	.72	.74	.74	.74	.74	.74	.74
SEP [illegible]	.35	.70	1.02	1.18	1.42	1.53	1.63	1.65	1.69	1.69	1.70	1.78
SEP 18	.25	.40	.42	.50	.76	.81	.82	.85	.85	.90	.95	.97
SEP 26	.28	.35	.39	.42	.47	.50	.50	.50	.50	.50	.50	.50
NOV 14	.38	.50	.58	.76	.87	.94	.95	.98	1.00	1.02	1.10	1.20
NOV 15	.16	.25	.32	.45	.60	.77	.96	1.05	1.25	1.37	1.48	1.53
DEC 2[illegible]	.20	.31	.33	.43	.48	.48	.58	.64	.81	.90	.96	1.04
NORTH DAKOTA												
BISMARCK												
MAY 26	.31	.34	.45	.51	.60	.78	.79	.82	.87	.96	1.14	1.23
AUG 17	.17	.31	.46	.57	.71	.82	.85	.87	.93	.99	1.01	1.04
FARGO												
MAY 22	.16	.30	.37	.43	.45	.46	.47	.49	.52	.53	.54	.54
JUN 22	.29	.58	.70	.76	.84	.88	.90	.92	.92	.93	.93	.93
AUG 21	.36	.50	.56	.62	.66	.78	.86	.88	.91	.92	.92	.92
SEP 12	.16	.28	.36	.39	.48	.75	.80	.80	.81	.82	.83	.83
WILLISTON												
MAY 21	.32	.63	.66	.69	.69	.69	.69	.69	.69	.69	.69	.69
AUG 14	.46	.87	1.00	1.20	1.60	1.93	2.17	2.24	2.25	2.29	2.39	2.43
OHIO												
AKRON												
JUL 13	.18	.35	.37	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUL 16	.42	.60	.66	.74	1.06	1.24	1.54	1.70	2.00	2.13	2.20	2.31
JUL 23	.26	.36	.40	.41	.42	.42	.44	.44	.44	.44	.44	.44
AUG 17	.28	.44	.47	.49	.56	.60	.64	.65	.65	.65	.65	.66
AUG 19	.16	.31	.33	.34	.36	.38	.42	.44	.44	.44	.44	.44
SEP 13	.19	.33	.41	.44	.45	.45	.62	.64	.65	.65	.65	.72
CINCINNATI OBS												
MAY 29	.37	.42	.42	.42	.58	.60	.65	.71	.73	.75	.76	.76
MAY 30	.29	.38	.41	.41	.41	.42	.42	.42	.42	.42	.42	.44
JUN 15	.20	.40	.46	.48	.50	.53	.55	.60	.64	.64	.67	.68
JUN 29	.34	.49	.49	.49	.50	.50	.50	.50	.50	.50	.50	.50
JUL 24	.27	.44	.57	.66	.74	.76	.81	.88	.96	1.01	1.04	1.04
AUG 3	.33	.54	.55	.55	.56	.57	.58	.60	.60	.60	.60	.64
AUG 26	.31	.48	.51	.52	.52	.52	.52	.52	.52	.52	.52	.52
CLEVELAND												
MAY 1	.28	.38	.39	.60	.66	.66	.66	.66	.66	.66	.66	.66
MAY 15	.13	.26	.36	.42	.45	.53	.58	.60	.60	.62	.62	.62
JUN 29	.30	.59	.66	.76	.94	1.00	1.17	1.24	1.33	1.39	1.45	1.47
JUL 9	.27	.49	.52	.54	.55	.55	.55	.55	.55	.55	.55	.55
JUL 18	.28	.55	.60	.63	.81	.85	.85	.87	.87	.89	1.27	1.48
JUL 18	.20	.38	.41	.43	.43	.45	.47	.48	.48	.48	.49	.50
JUL 23	.30	.52	.54	.55	.59	.60	.60	.60	.60	.60	.60	.60
AUG 14	.17	.33	.44	.57	.86	1.01	1.13	1.14	1.33	1.33	1.33	1.33
AUG 17	.17	.33	.39	.40	.41	.42	.42	.43	.43	.44	.45	.55
AUG 26	.18	.30	.35	.42	.46	.46	.47	.47	.47	.47	.47	.47
AUG 26	.36	.53	.54	.68	.74	.75	.75	.75	.75	.75	.75	.75
COLUMBUS												
MAY 15	.30	.54	.57	.58	.59	.60	.60	.60	.60	.60	.60	.60
MAY 30	.26	.32	.42	.54	.59	.63	.66	.69	.75	.79	1.20	1.26
JUN 9	.51	.86	.94	1.14	1.38	1.54	1.85	1.91	1.95	1.95	1.96	1.96
JUN 28	.32	.41	.44	.45	.46	.46	.46	.46	.46	.46	.46	.46
JUN 29	.18	.31	.31	.42	.44	.45	.45	.45	.45	.45	.45	.45
AUG 17	.22	.32	.50	.55	.62	.80	1.20	1.33	1.39	1.68	1.74	2.03
AUG 18	.28	.36	.47	.56	.78	.84	.88	.95	.97	.97	.97	.97
AUG 18	.22	.32	.47	.41	.43	.46	.47	.47	.47	.47	.47	.47
AUG 23	.25	.46	.52	.66	.82	.91	1.09	1.12	1.15	1.22	1.29	1.31
SEP 25	.26	.36	.37	.40	.42	.54	.56	.57	.59	.65	.68	.68
DAYTON												
JUN 13	.20	.33	.35	.45	.55	.63	.67	.72	.82	1.04	1.08	1.16
AUG 22	.32	.50	.55	.59	.61	.66	.66	.66	.67	.86	.90	.90
SEP 18	.38	.51	.51	.52	.53	.53	.53	.53	.54	.54	.54	.55
MANSFIELD												
JUN 3	.33	.58	.63	.75	1.10	1.25	1.25	1.25	1.25	1.25	1.25	1.25
JUN 13	.25	.45	.50	.60	.87	1.00	1.15	1.22	1.22	1.29	1.30	1.45
JUL 18	.15	.23	.28	.35	.53	.56	.57	.57	.57	.57	.57	.57
JUL 24	.20	.40	.45	.48	.51	.51	.51	.51	.51	.51	.51	.51
AUG 17	.48	.66	.70	.92	1.22	1.30	1.44	1.44	2.00	2.10	2.16	2.92
AUG 22	.26	.32	.40	.50	.75	.76	.77	.78	.78	.78	.78	.78
TOLEDO												
JUN 20	.27	.36	.37	.37	.37	.38	.38	.38	.38	.38	.38	.38
JUN 30	.25	.50	.61	.82	1.18	1.43	1.52	1.56	1.56	1.56	1.56	1.56
JUL 15	.16	.30	.32	.35	.36	.38	.39	.39	.39	.39	.39	.39
JUL 18	.25	.44	.45	.46	.51	.51	.51	.51	.51	.53	.53	.53
AUG 7	.25	.27	.27	.27	.29	.31	.40	.44	.46	.46	.46	.46
AUG 14	.33	.65	.77	.95	1.28	1.50	1.50	1.52	1.91	2.23	2.40	2.41
AUG 24	.30	.41	.41	.43	.43	.43	.43	.43	.43	.43	.43	.43
SEP 14	.27	.44	.53	.61	.68	.72	.81	.83	1.06	1.09	1.20	1.25
SEP 17	.33	.53	.56	.76	1.08	1.23	1.49	2.23	2.51	2.96	3.32	3.37
YOUNGSTOWN												
APR 15	.26	.41	.49	.55	.63	.68	.74	.79	.89	.95	1.07	1.12
JUL 16	.22	.36	.38	.40	.52	.56	.60	.65	.69	.75	.81	.87
OKLAHOMA												
OKLAHOMA CITY												
MAR 20	.36	.52	.55	.59	.68	.68	.69	.69	.69	.69	.69	.69
APR 29	.25	.39	.49	.57	.69	.75	.76	.78	.80	.83	.90	.94
MAY 12	.21	.35	.50	.65	.86	1.00	1.17	1.29	1.37	1.41	1.55	1.69
JUL 2	.29	.57	.86	1.05	1.45	1.61	1.61	1.61	1.61	1.61	1.61	1.61
JUL 3	.18	.34	.42	.55	.83	1.05	1.20	1.26	1.27	1.27	1.27	1.27
AUG 24	.27	.54	.59	.66	.75	.75	.75	.75	.75	.75	.75	.75
SEP 1	.23	.39	.41	.45	.56	.70	.83	.94	1.00	1.04	1.07	1.10
OCT 21	.11	.20	.25	.28	.48	.67	.83	.92	1.05	1.15	1.25	1.35
NOV 12	.17	.32	.35	.38	.47	.49	.52	.52	.52	.52	.52	.52
TULSA												
JUN 19 T	M	M	M	M	M	M	.82	.82	.82	.82	.82	.82
JUN 27	.30	.48	.52	.56	.56	.56	.57	.58	.70	.70	.70	.70
JUL 2	.21	.32	.40	.54	.78	.90	1.02	1.08	1.16	1.22	1.27	1.34
JUL 3	.24	.33	.36	.37	.38	.46	.50	.52	.55	.57	.59	.59
AUG 24	.26	.47	.65	.75	1.00	1.07	1.50	2.06	2.08	2.14	2.19	2.20
SEP 29	.44	.58	.60	.60	.60	.60	.63	.75	.90	1.00	1.00	1.00
OCT 21	.23	.46	.47	.51	.63	.65	.70	.77	.83	.86	.94	1.03
OREGON												
ASTORIA						NONE						
BURNS U						NONE						
EUGENE												
AUG 16	.32	.54	.70	.76	.80	.84	.94	1.06	1.16	*1.21	1.23	*1.25
SEP 19	.20	.32	.36	.37	.37	.37	.37	.37	.37	.37	.37	.37
MEACHAM						NONE						
MEDFORD						NONE						
PENDLETON						NONE						
PORTLAND												
SEP 9	.28	.41	.44	.44	.44	.44	.44	.44	.46	.47	.48	.56
SALEM						NONE						
SEXTON SUMMIT R						NONE						
PACIFIC AREA												
GUAM												
JAN 5	.27	.35	.44	.61	.86	.92	1.00	1.09	1.12	1.12	1.15	1.15
FEB 29	.31	.50	.64	.75	.92	1.44	1.78	2.24	2.27	2.27	2.27	2.27
MAR 18	.35	.53	.65	.76	.93	1.42	1.72	1.99	2.12	2.15	2.18	2.18
MAR 19	.23	.35	.50	.60	.71	.83	.99	1.06	1.06	1.07	1.18	1.32
APR 13	.24	.37	.41	.43	.68	.72	.74	.82	.84	.89	.94	.95
MAY 24	.20	.31	.39	.43	.44	.44	.44	.44	.45	.46	.59	.70
JUN 22	.39	.53	.63	.66	.73	.74	.74	.74	.94	1.14	1.18	1.21
JUN 22	.19	.33	.42	.43	.55	.92	.98	1.07	1.17	1.19	1.20	1.33
JUL 8	.34	.47	.54	.65	.75	.82	.88	.97	1.17	1.65	1.78	1.92
JUL 13	.30	.47	.71	.89	.99	1.05	1.05	1.05	1.05	1.05	1.05	1.05
JUL 23	.39	.55	.67	.75	.86	1.29	1.43	1.45	1.52	1.53	1.56	1.72
JUL 23	.17	.31	.39	.47	.55	.57	.63	.80	.86	.88	.90	.91
JUL 25	.15	.25	.35	.41	.48	.53	.57	.79	.92	.98	1.07	1.12
JUL 28	.19	.33	.41	.46	.53	.62	.68	.76	.83	.88	.92	1.01
JUL 29	.32	.42	.52	.64	.78	.93	1.00	1.27	1.69	1.89	2.00	2.00
AUG 2	.29	.44	.56	.60	.62	.81	1.01	1.29	1.31	1.31	1.34	1.42
AUG 3	.29	.41	.45	.49	.58	.69	.81	1.00	1.15	1.26	1.45	1.64
AUG 3	.27	.50	.65	.76	.97	1.09	1.16	1.19	1.19	1.23	1.24	1.27
AUG 4	.22	.36	.38	.39	.45	.49	.53	.53	.53	.53	.53	.53
AUG 12	.18	.27	.32	.40	.61	.69	.71	.76	.79	.81	.85	.87
SEP 2	.31	.48	.64	.70	.72	.86	.93	.93	.93	.93	.93	.93
SEP 9	*.50	*.88	*1.18	1.28	*1.51	1.66	1.77	1.77	1.77	1.77	1.77	1.79
SEP 17	*.53	.78	.91	1.09	1.36	1.76	*2.24	2.98	3.38	*3.40	4.25	*4.84
SEP 24	.41	.54	.61	.69	.95	1.23	1.40	1.49	1.57	1.62	1.65	1.71
OCT 2	*.58	.81	1.07	1.38	1.41	1.53	1.56	1.56	1.56	1.56	1.56	1.56
OCT 14	.14	.26	.34	.39	.47	.69	.76	.77	.77	.77	.77	.77
DEC 9	.36	.50	.56	.61	.64	.77	.81	.82	.86	.90	1.06	1.10
DEC 22	.28	.45	.53	.56	.57	.58	.58	.58	.58	.58	.58	.58
JOHNSTON ISLAND												
MAR 1	.30	.41	.47	.48	.52	.52	.52	.52	.52	.52	.52	.52
APR 1	.19	.31	.45	.57	.72	.96	1.10	1.14	1.20	1.27	1.33	1.55
MAY 10	.15	.21	.29	.35	.44	.71	.82	.88	.92	.99	.99	.99
OCT 27	.27	.40	.50	.66	.77	.80	.80	.81	.84	.84	.85	1.14
KOROR												
JAN 3	.25	.34	.48	.65	.81	.94	.99	1.22	1.28	1.33	1.47	1.48
JAN 14	.34	.43	.44	.44	.47	.56	.62	.66	.66	.67	.67	.67
JAN 30	.23	.37	.46	.51	.54	.72	.87	.97	1.09	1.19	1.30	1.41
FEB 13	.21	.31	.38	.41	.48	.52	.54	.56	.56	.56	.56	.62
FEB 13	.23	.02	.37	.42	.44	.44	.44	.44	.44	.44	M	M
FEB 18	.31	.55	.76	.91	1.03	1.07	1.11	1.15	1.20	1.40	1.54	1.60
FEB 28	.15	.28	.37	.43	.48	.52	.53	.53	.56	.58	.59	.59
MAR 15	.42	.76	1.13	1.39	1.83	2.04	2.09	2.11	2.15	2.18	2.22	2.22
MAR 15	.28	.48	.55	.61	.86	1.07	1.15	1.18	1.19	1.19	1.19	M
MAR 16	.49	.79	1.13	1.20	1.40	1.65	1.71	1.79	1.95	2.03	2.12	2.21
MAR 23	.41	.75	1.01	1.24	1.62	1.97	1.99	2.01	2.19	2.27	2.43	2.59
MAR 25	.34	.40	.56	.59	.59	.62	.62	.64	.64	.64	.64	.64
MAR 25	.22	.34	.43	.45	.49	.73	.82	.84	.84	.84	.86	.86
MAR 27	.31	.47	.59	.78	.85	.87	.99	1.25	1.39	1.62	1.70	1.92
APR 15	.30	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
APR 15	.26	.32	.33	.34	.34	.34	.34	.34	.34	.37	.40	.40
MAY 26	.42	.67	.90	1.07	1.26	1.29	1.31	1.31	1.31	1.31	1.37	1.39
MAY 30	.35	.49	.50	.51	.64	.66	.67	.68	.68	.72	.72	.81
MAY 30	.21	.33	.43	.46	.53	.59	.64	.72	.78	.83	.92	.98
MAY 31	.39	.55	.58	.59	.66	.82	.94	1.23	1.37	1.54	1.59	1.72
JUN 5	.20	.32	.43	.53	.57	.57	.57	.58	.59	.59	.77	M
JUN 5	.22	.35	.48	.61	.80	.90	.91	.91	.93	.94	1.00	1.08
JUN 6	.19	.28	.34	.43	.53	.55	.66	.84	1.11	1.17	1.24	1.31
JUN 7	.34	.55	.69	.74	.82	.87	.87	.87	.87	.87	.88	.88
JUN 7	.27	.31	.32	.36	.40	.40	.40	.42	.42	.42	.42	.42
JUN 24	.46	.88	1.24	1.59	*2.33	3.10	*3.66	4.31	4.83	*5.07	5.31	*5.43
JUN 25	.19	.32	.41	.48	.55	.71	.80	.82	.83	.83	.86	.91
JUN 27	.31	.56	.76	.91	1.11	1.65	1.83	1.97	2.51	2.58	3.01	3.37
JUL 1	.18	.31	.42	.48	.53	.57	.60	.65	.72	.76	.80	.84

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
KOROR												
JUL 2	.41	.66	.80	.91	1.02	1.08	1.25	1.63	1.85	2.05	2.52	2.61
JUL 2	.31	.37	.41	.45	.48	.49	.51	.51	.51	.51	.51	.51
JUL 3	.25	.35	.39	.42	.51	.54	.59	.60	.62	.63	.63	.63
JUL 3	.30	.49	.53	.54	.56	.67	.68	.69	.69	.69	.69	.69
JUL 9	.20	.38	.50	.61	.80	1.07	1.19	1.47	1.69	1.84	1.94	1.96
JUL 29	.19	.25	.39	.48	.60	.91	1.02	1.10	1.15	1.18	1.24	1.31
AUG 6	.17	.26	.33	.43	.54	.64	.72	.75	.84	1.04	1.27	1.37
AUG 6	.16	.24	.35	.45	.54	.64	.69	.72	.78	.79	.81	.95
AUG 7	.29	.37	.38	.40	.42	.42	.42	.42	.42	.42	.42	.42
AUG 17	.25	.40	.54	.65	.80	.86	.94	1.07	1.07	1.07	1.07	1.07
AUG 28	.20	.31	.37	.40	.43	.48	.50	.73	.77	.78	.90	.93
AUG 30	.42	.56	.60	.64	.66	1.14	1.24	1.29	1.32	1.34	1.37	1.38
AUG 31	.32	.39	.39	.40	.40	.41	.47	.66	.68	.68	.68	.68
SEP 3	.18	.29	.43	.51	.54	.55	.55	.55	.55	.55	.55	.55
SEP 3	.24	.45	.67	.82	.88	1.00	1.06	1.29	1.38	1.42	1.44	1.44
SEP 15	.26	.37	.40	.42	.47	.48	.48	.48	.48	.48	.48	.48
SEP 28	.21	.28	.36	.39	.44	.55	.85	.94	1.03	1.05	1.05	1.05
SEP 29	.46	.70	.83	.88	1.16	1.42	1.58	1.72	1.95	2.56	3.03	3.59
OCT 2	.23	.31	.33	.37	.62	.66	.85	.86	.86	.86	.86	.86
OCT 6	.21	.34	.47	.57	.80	.87	.93	.97	1.02	1.05	1.07	1.17
OCT 12	.29	.45	.60	.71	.77	.77	.94	1.05	1.22	1.22	1.26	1.52
OCT 12	.25	.47	.61	.66	.82	.99	1.11	1.43	1.73	1.79	1.85	1.93
OCT 31	.19	.33	.38	.48	.55	.59	.65	.65	.65	.65	.68	.68
NOV 2	.22	.36	.48	.51	.52	.54	.54	.54	.54	.54	.54	.54
NOV 11	.20	.30	.40	.48	.69	.69	.75	.75	.75	.75	.75	.75
NOV 13	.39	.60	.69	.83	.93	.98	1.08	1.12	1.24	1.24	1.24	1.24
NOV 21	.29	.46	.47	.67	.79	.79	.82	.93	1.03	1.04	1.04	1.04
NOV 21	.25	.35	.45	.46	.46	.46	.46	.46	.46	.46	.46	.46
DEC 2	.21	.33	.38	.46	.58	.80	.90	1.12	1.24	1.40	1.63	1.78
DEC 5	.27	.35	.46	.51	.62	.78	.79	.80	.84	1.13	1.47	1.59
MAJURO												
JAN 8	.12	.20	.29	.38	.54	.68	.76	.91	1.15	1.24	1.48	1.67
JAN 9	* .31	.56	.74	.93	1.35	1.73	1.94	2.12	2.26	2.33	2.36	2.37
JAN 19	* .37	.48	.58	.66	.69	.75	.76	.76	.76	.76	.76	.76
MAR 5	.23	.27	.33	.46	.65	.91	1.08	1.09	1.09	1.09	1.09	1.09
MAR 6	* .40	.66	.98	1.30	1.79	2.34	2.57	2.60	2.70	2.80	2.85	3.14
MAR 6	.25	.44	.64	.81	1.00	1.02	1.07	1.17	1.22	1.68	1.79	1.84
MAR 6	.12	.23	.34	.42	.61	.83	1.07	1.41	1.74	1.87	2.00	2.16
MAR 13	.22	.40	.42	.42	.42	.42	.49	.49	.58	.58	.58	.58
MAR 15	.26	.46	.53	.60	.62	.62	.62	.62	.62	.62	.62	.62
MAR 27	.27	.39	.45	.52	.64	.64	.69	.70	.70	.70	.70	.71
APR 11	.21	.30	.34	.35	.35	.39	.42	.43	.47	.52	.58	.59
APR 17	.22	.31	.34	.34	.34	.34	.34	.34	.34	.52	.69	.76
APR 18	* .52	.80	.96	1.14	1.31	1.46	1.50	1.51	1.52	1.52	1.53	1.55
MAY 1	.26	.46	.57	.68	.80	.86	.91	.94	.94	.94	.94	.94
MAY 14	.25	.39	.51	.59	.78	1.02	1.11	1.16	1.18	1.18	1.27	1.39
MAY 18	.33	.45	.52	.53	.55	.55	.79	1.07	1.10	1.13	1.17	1.18
MAY 23	.51	.83	.91	1.13	1.38	1.56	1.65	1.67	1.70	2.34	2.56	2.56
MAY 24	.18	.32	.40	.49	.61	.67	.71	.74	.78	.90	1.06	1.13
MAY 27	.31	.53	.69	.77	.83	.85	.88	.88	.89	.89	.89	.90
JUN 10	.24	.42	.55	.66	.76	.82	.84	.86	.90	.94	1.00	1.10
JUN 13	.18	.31	.38	.41	.41	.41	.41	.41	.49	.50	.50	.50
JUN 17	.21	.34	.44	.48	.53	.54	.54	.57	.57	.57	.57	.57
JUN 25	.24	.36	.51	.61	.65	.65	.66	.70	.70	.73	.73	.73
JUN 25	.26	.49	.52	.65	.69	.70	.84	1.10	1.11	1.12	1.29	1.41
JUN 25	.32	.56	.79	.99	1.33	1.71	1.99	2.05	2.07	2.10	2.13	2.29
JUN 26	.16	.29	.40	.46	.66	.76	.83	.98	1.09	1.42	1.69	1.78
JUL 1	.43	.70	.76	.77	.78	.89	.92	.93	.93	.93	.98	1.01
JUL 2	.34	.61	.76	.83	.87	.90	.94	1.00	1.04	1.09	1.13	1.16
JUL 7	.31	.42	.54	.69	.03	1.21	1.44	1.61	1.76	1.78	1.78	1.79
JUL 22	.22	.33	.35	.37	.49	.50	.50	.62	.62	.62	.62	.62
JUL 27	.23	.39	.43	.47	.50	.55	.55	.55	.55	.55	.55	.57
AUG 3	.31	.43	.51	.55	.56	.56	.57	.59	.61	.61	.61	.61
AUG 6	.22	.31	.31	.37	.51	.77	.81	.81	.81	.81	.82	.95
AUG 18	.29	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42	.42
AUG 21	.20	.30	.33	.35	.40	.45	.47	.50	.53	.55	.57	.57
AUG 30	.17	.32	.46	.56	.79	1.07	1.21	1.24	1.24	1.24	1.24	1.24
SEP 2	.29	.49	.66	.67	.69	.69	.69	.69	.69	.69	.69	.69
SEP 3	.32	.44	.44	.44	.44	.45	.45	.47	.48	.48	.48	.51
SEP 15	.32	.48	.69	.85	1.19	1.59	2.15	2.22	2.28	2.36	2.41	2.44
SEP 20	.24	.40	.51	.54	.59	.61	.62	.62	.64	.64	.64	.64
SEP 24	.46	.84	1.23	1.56	2.10	2.58	*3.00	3.39	3.99	*4.51	5.00	*5.05
SEP 28	.16	.30	.42	.50	.55	.63	.67	.70	.78	1.11	1.35	1.40
SEP 28	.20	.32	.43	.52	.68	.73	.74	.74	.74	.78	.78	.81
SEP 30	.28	.48	.68	.82	1.02	1.23	1.34	1.36	1.36	1.36	1.36	1.37
SEP 30	.25	.34	.38	.45	.53	.57	.80	.85	.88	.90	.91	.93
OCT 1	.19	.25	.30	.39	.59	.74	.90	.97	.98	.99	1.09	1.37
OCT 2	.21	.34	.40	.45	.56	.70	.80	.90	.98	1.03	1.10	1.27
OCT 2	.19	.31	.40	.47	.55	.60	.66	.71	.77	.83	.93	.98
OCT 4	.23	.36	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
OCT 10	.19	.25	.29	.42	.49	.62	.69	.70	.70	.72	.78	.85
OCT 15	.22	.31	.36	.37	.37	.37	.37	.37	.37	.37	.37	.37
OCT 27	.27	.46	.54	.57	.58	.58	.58	.58	.58	.61	.61	.61
NOV 10	.15	.26	.35	.39	.40	.40	.40	.40	.40	.40	.40	.40
DEC 12	.25	.35	.46	.66	.87	1.24	1.53	1.82	2.04	2.43	3.10	3.87
DEC 12	.46	.73	.88	.97	1.60	1.81	1.92	2.17	2.54	2.75	3.71	4.46
DEC 13	* .56	1.02	1.36	1.67	*2.39	3.35	*4.27	4.50	5.49	*5.60	5.69	*5.76
PAGO PAGO, A.S.												
JAN 4	.20	.32	.38	.43	.44	.44	.44	.44	.44	.44	.44	.45
JAN 5	.19	.34	.47	.49	.51	.57	.57	.58	.58	.58	.62	.67
JAN 10	.21	.38	.52	.63	.82	.84	.85	.94	.97	.97	.97	.97
JAN 18	.23	.34	.42	.47	.59	.71	.79	.87	.91	.99	1.13	1.13
JAN 23	.20	.38	.48	.54	.65	.89	1.00	1.07	1.09	1.14	1.17	1.17
JAN 26	.20	.26	.40	.41	.42	.48	.52	.52	.53	.60	.60	.60
FEB 7	.23	.35	.50	.64	.77	.77	.77	.77	.77	.77	.78	.78
FEB 10	.37	.60	.81	.85	.89	.93	1.03	1.08	1.09	1.15	1.17	1.18
FEB 11	.19	.27	.33	.42	.46	.53	.55	.55	.57	.61	.66	.67
FEB 14	.27	.46	.63	.76	1.05	1.23	1.28	1.30	1.30	1.57	1.65	1.69
FEB 15	.16	.30	.41	.52	.73	.88	.92	.94	.95	.96	.96	.96
FEB 18	.22	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
FEB 21	.25	.29	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
MAR 12	.13	.25	.37	.45	.60	.85	1.03	1.05	1.05	1.05	1.06	1.08
MAR 23	.28	.39	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42
MAR 25	.26	.45	.52	.55	.56	.58	.58	.58	.58	.58	.58	.58
APR 11	.15	.28	.37	.45	.52	.54	.67	.67	.67	.67	.67	.68
APR 12	.24	.35	.36	.41	.50	.51	.52	.53	.53	.53	.53	.53
MAY 8	.18	.32	.41	.49	.61	.73	.85	.90	.93	.94	.94	.94
MAY 9	.30	.51	.68	.77	.92	1.10	1.16	1.28	1.30	1.33	1.40	1.48
JUN 6	.27	.30	.30	.30	.30	.30	.42	.49	.54	.57	.57	.57
JUL 6	.14	.26	.33	.43	.57	.64	.68	.71	.77	.85	.87	.95
JUL 29	.34	.53	.60	.62	.65	.85	.92	1.03	1.08	1.09	1.10	1.12
AUG 9	.25	.40	.50	.54	.59	.60	.62	.68	.77	.80	1.01	1.08
SEP 6	.32	.53	.93	1.08	1.28	1.49	1.74	2.00	2.14	2.14	2.15	2.15

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
PAGO PAGO, A.S.												
SEP 7	.27	.40	[illegible]	[illegible]	.78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 7	.31	.50	.60	.90	[illegible]	1.25	[illegible]	1.76	[illegible]	[illegible]	[illegible]	[illegible]
SEP 8	.18	.30	.39	.49	.67	.97	[illegible]	1.37	[illegible]	[illegible]	[illegible]	[illegible]
SEP 15	.24	.46	.63	.75	.95	[illegible]	1.53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP [illegible]	.20	.30	.37	.40	.44	.47	.49	.52	.53	.55	.57	[illegible]
SEP [illegible]	.17	.24	.30	.43	.54	.60	[illegible]	.73	.73	[illegible]	[illegible]	[illegible]
OCT 1	[illegible]	.15	.24	.31	.45	[illegible]	[illegible]	.82	.84	[illegible]	[illegible]	[illegible]
OCT [illegible]	.22	.37	.50	.51	.54	.58	.61	.62	.65	.66	[illegible]	.75
[illegible]	.20	.35	.49	[illegible]	.58	[illegible]	.61	.61	.61	[illegible]	.64	.65
OCT 6	.21	.35	.44	.49	.54	[illegible]	.53	.54	.59	.74	.78	[illegible]
OCT 31	.20	.33	.44	.50	.57	.61	.62	.62	.62	.62	.68	[illegible]
NOV 1	.28	.46	.70	.84	.90	.95	1.02	1.07	[illegible]	[illegible]	1.27	1.34
NOV 13	.21	.35	.42	.45	.51	.58	[illegible]	.61	.63	.64	.65	[illegible]
DEC [illegible]	.34	.55	.65	.76	.94	1.45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC 16	.20	.35	.53	.58	.68	.99	[illegible]	[illegible]	1.43	1.43	1.44	1.44
DEC 24	.30	.49	.59	.65	.95	1.15	1.26	1.50	1.58	[illegible]	2.29	2.87
DEC 26	.34	.54	.60	.70	1.20	1.45	[illegible]	1.92	2.25	2.34	2.43	[illegible]
DEC 26	.36	.57	.74	[illegible]	1.58	1.82	1.94	2.12	2.37	2.55	2.67	2.76
DEC 30	.19	.38	.47	.49	.50	.55	.67	.70	.71	.72	.72	[illegible]
PONAPE												
JAN [illegible]	.25	.36	.48	.55	[illegible]	[illegible]	1.32	1.59	1.66	[illegible]	1.91	1.93
JAN 1	.18	.25	.37	.41	.45	.47	.49	.53	.56	[illegible]	[illegible]	[illegible]
JAN 29	.25	.42	.51	.52	.60	.63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.25
FEB 9	.31	[illegible]	.53	.56	.75	[illegible]	[illegible]	1.17	1.19	[illegible]	[illegible]	[illegible]
FEB 24	.27	.33	.44	.55	.63	[illegible]	.65	.65	.67	[illegible]	[illegible]	[illegible]
MAR 1	.23	.33	.35	.38	.39	.43	.52	.53	.55	[illegible]	[illegible]	[illegible]
MAR 1	.25	.39	.44	.45	.60	.64	.65	.66	.69	.75	[illegible]	.92
MAR 1	.21	.30	.35	.40	.45	.46	.64	.74	.74	.74	.75	[illegible]
MAR 8	[illegible]	.34	.46	[illegible]	.59	[illegible]	[illegible]	[illegible]	[illegible]	.88	.92	[illegible]
MAR 13	.25	.32	.33	.35	.40	.40	.42	.43	.44	.44	.44	.44
MAR 14	.30	.40	.53	[illegible]	.57	.68	.68	.68	.68	.68	[illegible]	[illegible]
MAR [illegible]	.25	.36	.44	.50	.61	.74	.91	1.03	[illegible]	[illegible]	1.41	[illegible]
APR 3	.39	.59	.75	.94	1.21	1.59	[illegible]	2.39	[illegible]	2.72	2.79	2.81
APR 15	.34	.58	.77	.91	1.15	1.35	1.45	1.54	[illegible]	1.54	1.62	1.62
APR [illegible]	.34	.63	.90	1.23	1.50	[illegible]	2.51	2.59	3.03	3.17	3.33	3.42
APR 27	.23	.34	.37	.43	.47	.53	.62	.68	.76	[illegible]	.91	.93
APR 30	.38	.57	.76	.91	1.01	1.03	1.03	1.03	1.04	1.15	1.18	1.18
MAY 4	.49	.73	.98	1.15	1.36	1.48	1.55	1.60	1.68	1.75	1.84	[illegible]
MAY 7	.19	.29	.41	.51	[illegible]	[illegible]	[illegible]	1.47	1.50	1.54	1.59	[illegible]
MAY 11	.20	.30	.35	.37	.40	.47	.49	.50	.50	[illegible]	.53	.53
MAY 15	.40	.73	.89	[illegible]	1.26	[illegible]	1.72	1.94	[illegible]	[illegible]	2.34	2.65
MAY 16	.30	.42	.50	.56	.71	.85	[illegible]	1.53	[illegible]	[illegible]	[illegible]	1.78
MAY 18	.30	.54	.77	.98	1.27	[illegible]	[illegible]	2.49	2.71	2.84	2.95	3.01
MAY 29	.33	.44	.67	.83	1.19	[illegible]	1.23	1.24	1.25	1.33	1.40	1.42
MAY 29	.25	.31	.42	.46	.52	.74	.81	.88	1.01	1.15	1.29	1.36
MAY 30	.33	.41	.55	.65	.76	.88	1.00	1.07	1.15	1.28	1.34	1.37
MAY 30	.16	.30	.36	.45	.53	[illegible]	[illegible]	1.02	1.15	1.26	1.39	[illegible]
MAY 31	.35	.57	.67	.72	.74	.96	[illegible]	1.15	1.20	1.30	1.37	1.43
JUN 11	.31	.39	.55	.59	.69	[illegible]	.82	.83	.83	.85	.85	.88
JUN 19	.22	.38	.50	[illegible]	.80	.86	[illegible]	.86	.86	.86	1.20	[illegible]
JUN 20	.27	.41	.48	.51	.55	.65	[illegible]	.72	[illegible]	.83	1.15	1.22
JUN 27	.29	.43	.43	.43	.43	.43	.44	.44	.44	.47	.47	.52
JUL 1	.43	.76	1.06	1.14	1.16	1.16	1.16	1.16	1.16	1.16	1.42	[illegible]
JUL 11	.19	.29	.37	.43	.52	[illegible]	.62	.62	.62	.84	.97	.97
JUL 11	.32	.49	.58	.68	.96	1.33	1.68	1.95	1.98	[illegible]	[illegible]	2.26
JUL 12	.31	.51	.65	.79	.98	1.10	1.44	1.67	1.71	1.75	[illegible]	[illegible]
JUL 13	[illegible]	.31	.40	.44	.48	.49	.49	.50	.50	.50	.50	.50
JUL 25	.22	.35	.42	.45	.50	.54	[illegible]	.72	.73	.76	[illegible]	[illegible]
JUL 28	.28	.41	.52	.58	.72	.86	.93	1.21	1.32	1.38	1.46	1.58
JUL 28	.31	.51	.72	.88	1.10	1.22	1.44	1.59	1.75	[illegible]	2.25	2.58
JUL 31	.28	.39	.48	.56	.58	.94	1.06	1.29	1.41	1.50	1.65	[illegible]
JUL 31	.30	.51	.64	.68	.85	.90	.92	.95	.97	1.00	1.07	1.38
AUG 5	.24	.36	.50	[illegible]	.62	.62	.62	.67	.72	.72	.72	[illegible]
AUG 7	.16	.27	.35	.35	.36	.37	.37	.38	.38	.38	.38	.38
AUG 7	.17	.27	.37	.42	.50	[illegible]	.79	.94	.97	1.03	[illegible]	1.06
AUG 8	.21	.32	.37	.38	.40	.41	.46	.54	.64	.66	.75	.81
AUG 12	.38	.59	.66	.73	.95	1.18	1.34	1.39	1.43	1.46	1.46	1.47
AUG 17	.25	.39	.46	.52	.61	.66	[illegible]	1.05	1.22	1.40	1.40	1.40
SEP 1	.23	.31	.39	.45	.65	[illegible]	.87	.87	.87	.87	.87	.87
SEP 1	.21	.35	.44	.50	.57	.64	.66	.67	.67	.70	.79	.81
SEP 5	.43	.61	.81	1.04	1.42	1.87	2.34	2.42	2.47	2.48	2.49	2.49
SEP 10	.31	.49	.67	.82	1.05	[illegible]	1.49	1.54	1.65	1.75	1.88	1.95
SEP 13	.21	.40	.52	.60	.67	.74	.77	.81	.84	.86	.91	.96
SEP 13	.37	.52	.61	.65	.78	.82	.84	.84	.84	.84	.84	[illegible]
SEP 13	.21	.35	.43	.44	.50	.63	[illegible]	.78	.80	[illegible]	.81	.81
SEP 14	.28	.40	.52	.63	.90	1.16	1.26	1.34	1.43	1.52	1.65	1.79
SEP 14	.21	.35	.44	.45	.56	.62	.72	.77	.82	[illegible]	1.43	1.54
SEP 25	[illegible]	.27	.36	.39	.41	.41	.41	.41	.41	.41	.41	.41
SEP 25	.19	.31	.36	.42	.49	.54	.55	.55	.55	.55	.55	.55
SEP 28	.23	.34	.39	.44	.64	.71	.92	.93	1.00	1.27	1.30	1.33
SEP 30	.26	.45	.59	.67	.91	1.13	1.29	1.40	1.44	1.52	1.65	1.73
OCT 7	.26	.29	.32	.38	.44	.57	.59	.60	.64	.64	.69	.69
OCT 29	.24	.41	.44	.44	.44	.45	.50	.59	.62	.65	[illegible]	.69
NOV 27	.29	.56	.79	.94	1.01	1.04	1.04	1.04	1.04	1.04	1.57	[illegible]
NOV [illegible]	[illegible]	.30	.37	.38	.42	.42	.42	.44	.55	.56	.62	[illegible]
DEC 1	.29	.48	.57	.57	.57	.59	.62	.62	[illegible]	.74	[illegible]	1.16
TRUK												
JAN 2	[illegible]	.29	.37	[illegible]	.45	.45	.49	[illegible]	.59	[illegible]	.61	[illegible]
JAN 2	.22	.40	.53	[illegible]	.65	[illegible]	.67	[illegible]	.75	.78	.80	.85
JAN 24	.25	.39	.48	[illegible]	.56	.58	.65	.72	.77	.80	.98	1.02
JAN 24	.24	.39	.50	.58	.72	[illegible]	1.38	1.49	1.59	1.65	1.83	[illegible]
JAN 27	.29	.33	.37	.42	.57	[illegible]	.81	.90	.94	1.17	1.20	1.54
FEB 20	.44	.77	.83	1.18	1.42	[illegible]	[illegible]	2.09	[illegible]	[illegible]	[illegible]	2.24
FEB 22	.25	.32	.38	[illegible]	[illegible]	[illegible]	.41	.45	.45	.45	.45	.45
FEB [illegible]	.33	.56	[illegible]	.75	.95	[illegible]	[illegible]	1.30	1.52	1.55	[illegible]	[illegible]
MAR 1	.39	.56	.67	[illegible]	[illegible]	[illegible]	1.54	1.76	[illegible]	[illegible]	2.59	[illegible]
MAR [illegible]	.53	.92	1.09	[illegible]	1.59	1.83	[illegible]	2.24	2.35	[illegible]	2.55	2.56
MAR 14	.42	.58	.75	.94	1.27	[illegible]	[illegible]	2.40	2.47	[illegible]	[illegible]	[illegible]
MAR 17	.37	.55	.72	[illegible]	[illegible]	1.18	1.43	1.55	1.60	[illegible]	1.65	[illegible]
MAR 18	.25	.30	.34	.42	.43	.43	.49	.51	.51	.51	.51	.51
MAR 19	.23	.31	.33	.39	.45	.45	.45	.47	.50	.53	.54	[illegible]
MAR [illegible]	.19	.31	.41	.42	.44	.44	.44	.44	.44	.44	.44	.44
APR 1	.20	.33	.36	.44	.47	.49	.49	.49	.49	.49	.51	.53
APR 15	.39	.56	.73	.83	.89	[illegible]	1.21	1.27	1.31	1.32	1.37	[illegible]
APR 15	[illegible]	.24	[illegible]	.43	.54	[illegible]	.54	.72	.73	.73	.75	[illegible]
APR 17	.23	.35	.45	.51	.55	.65	[illegible]	.77	.94	1.11	1.29	[illegible]
APR 20	.49	.80	1.07	1.48	2.01	[illegible]	[illegible]	3.44	3.69	3.73	3.85	*[illegible]
APR 21	.19	.30	.30	.30	.30	[illegible]	.30	.30	.30	.30	.37	[illegible]
MAY 6	.22	.32	.35	.35	.39	[illegible]	[illegible]	.72	.80	.82	.84	[illegible]
MAY 12	[illegible]	.35	.45	.47	.47	.47	.47	.47	.47	.47	.47	[illegible]
MAY 15	.24	.36	.45	.48	.49	.49	.49	.49	.49	.49	.49	.49
MAY 16	.49	.70	.95	1.15	1.40	1.42	[illegible]	1.62	1.68	1.95	2.04	[illegible]
MAY 19	.23	.32	.37	.45	.55	.62	.65	[illegible]	[illegible]	.72	.75	[illegible]

EXCESSIVE SHORT DURATION RAINFALL

Station and date		Maximum precipitation in inches (5 to 180 minutes)											
		5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA													
TRUK													
MAY 18		.17	.31	.44	.57	.72	1.02	1.18	1.28	1.32	1.35	1.37	1.37
MAY 31		.30	.49	.65	.70	.98	1.09	1.33	1.34	1.34	1.35	1.61	1.62
JUN 4		.52	.83	1.01	1.30	1.65	2.39	2.63	3.22	3.73	4.23	4.54	*4.87
JUN 4		.37	.68	.91	1.02	1.13	1.81	2.05	2.22	2.42	2.53	2.54	2.71
JUN 18		.25	.42	.57	.78	1.01	1.07	1.09	1.10	1.23	1.27	1.34	1.52
JUN 19		.26	.32	.43	.48	.62	.82	.86	.88	.93	.94	.96	.96
JUN 19		.31	.42	.52	.57	.66	.77	.80	.91	.91	.95	1.10	1.10
JUL 2		.28	.41	.53	.63	.73	.92	1.08	1.18	1.20	1.21	1.22	1.22
JUL 9		.23	.39	.50	.54	.69	.72	.72	.72	.73	.73	.73	.73
JUL 13		.27	.44	.62	.81	.99	1.07	1.08	1.08	1.08	1.08	1.08	1.08
JUL 19		.40	.57	.69	.76	.87	1.03	1.34	1.51	1.55	1.64	1.68	1.69
JUL 29		.27	.37	.48	.56	.67	.85	.88	.96	.97	.98	.99	1.04
AUG 3		.25	.36	.45	.51	.59	.70	.77	.84	.88	.89	.94	.98
AUG 5		.57	.83	1.08	1.26	1.51	1.64	1.76	1.83	1.83	1.87	1.88	1.88
AUG 11		.24	.33	.41	.49	.56	.60	.63	.64	.65	.65	.65	.66
AUG 25		.18	.29	.37	.41	.44	.48	.51	.53	.54	.56	.59	.61
AUG 31		.57	.59	.59	.60	.60	.66	.84	.95	.95	.96	.96	.96
SEP 8		.22	.32	.38	.41	.45	.46	.46	.46	.46	.46	.46	.50
SEP 11		.18	.30	.38	.44	.48	.50	.50	.50	.52	.55	.57	.59
SEP 11		.28	.44	.54	.67	.83	.96	1.12	1.21	1.28	1.36	1.37	1.38
SEP 12		.26	.45	.60	.69	.77	.82	.83	1.08	1.32	1.33	1.47	1.52
SEP 12		.23	.38	.49	.61	.84	.96	1.10	1.21	1.22	1.22	1.22	1.22
SEP 26		.22	.35	.46	.49	.54	.69	.72	.73	.73	.73	.73	.73
SEP 30		.44	.61	.80	.93	.94	.99	1.11	1.21	1.33	1.38	1.40	1.42
NOV 26		.29	.43	.53	.53	.65	.81	.81	.81	.81	.82	.82	.83
NOV 29		.42	.55	.67	.72	.73	.73	.73	.73	.74	.74	.74	.74
DEC 8		.37	.50	.54	.55	.57	.64	.67	.75	.78	.87	1.01	1.10
DEC 29		.31	.61	.82	.88	1.05	1.11	1.13	1.41	1.69	1.96	2.35	2.59
DEC 29		.26	.31	.38	.43	.48	.50	.50	.50	.50	.60	.73	.88
WAKE													
JUL 30		.37	.53	.67	.71	.74	.77	.78	.79	.81	.83	.86	.90
SEP 5		.41	.76	1.03	1.26	1.75	2.20	2.52	2.60	2.61	2.61	2.61	2.61
SEP 30		.29	.47	.51	.53	.56	.60	.63	.66	.72	.76	.82	.91
YAP R													
JAN 4		.37	.53	.57	.58	.58	.58	.61	.65	.68	.83	.83	.86
JAN 5		.25	.27	.31	.42	.57	.60	.63	.69	.72	.72	.73	.85
JAN 18		.23	.37	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
FEB 22		.19	.32	.40	.48	.56	.65	.65	.78	.95	.96	.96	1.15
FEB 27		.22	.33	.43	.49	.53	.56	.59	.63	.66	.69	.77	.82
FEB 27		.37	.53	.60	.65	.71	.84	.91	.97	1.03	1.07	1.14	1.12
MAR 6		.34	.46	.72	.89	1.10	1.51	1.80	2.00	2.18	2.61	3.16	3.35
MAR 12		.21	.39	.49	.50	.51	.59	.68	.71	.80	.83	.83	.85
MAR 14		.29	.45	.52	.56	.68	.78	.85	.88	.88	.88	.88	.88
MAR 17		.30	.40	.44	.49	.49	.53	.54	.54	.54	.91	1.02	1.03
MAR 24		.25	.36	.46	.56	.61	.65	.65	.65	.65	.65	.65	.65
MAR 26		.16	.29	.37	.50	.61	.68	.69	.71	.78	.99	1.13	1.15
APR 17		.30	.37	.39	.42	.66	.81	.82	.85	.83	.83	.83	.95
APR 18		.34	.60	.72	.81	.89	1.06	1.08	1.11	1.22	1.30	1.35	1.47
APR 18		.35	.56	.63	.66	.66	.66	.67	.68	.68	.68	.68	.69
APR 28		.39	.59	.79	.94	1.11	1.15	1.15	1.15	1.15	1.16	1.16	1.16
APR 28		.40	.72	.90	1.04	1.19	1.24	1.31	1.57	1.79	1.92	1.95	1.97
MAY 22		.41	.66	.93	1.18	1.50	1.58	1.64	1.71	1.83	1.84	1.85	1.85
MAY 28		.15	.28	.37	.41	.51	.56	.58	.58	.58	.59	.60	.67
JUN 21		.21	.36	.41	.47	.62	.73	.81	.83	.83	.84	.85	1.01
JUN 24		.24	.35	.36	.37	.37	.54	.54	.54	.56	.56	.56	.56
JUN 24		.35	.49	.59	.62	.62	1.12	1.23	1.47	1.95	2.02	2.02	2.02
JUL 2		.40	.60	.70	.72	.75	.75	.75	.75	.75	.75	.75	.75
JUL 6		.45	.75	1.07	1.20	1.34	1.40	1.42	1.45	1.53	1.57	1.66	1.74
JUL 26		.18	.33	.36	.39	.46	.47	.47	.47	.47	.47	.48	.48
JUL 27		.19	.30	.43	.47	.49	.49	.49	.49	.49	.49	.49	.50
AUG 4		.32	.55	.78	.87	.91	.91	.93	.93	1.24	1.29	1.55	1.57
AUG 20		.32	.45	.51	.58	.65	.71	.77	.85	.90	.97	1.03	1.04
AUG 29		.18	.28	.36	.42	.47	.76	.85	.88	.89	.91	.93	.93
SEP [illegible]		.22	.28	.41	.53	.72	.80	.81	.88	1.09	1.18	1.28	1.66
SEP 12		.36	.45	.58	.73	.79	.84	.89	.95	.99	1.01	1.05	1.07
SEP 12		.26	.37	.40	.42	.43	.44	.45	.45	.45	.45	.50	.51
SEP 15		.25	.37	.56	.73	.86	.95	.98	.99	1.02	1.02	1.02	1.02
SEP 16		.49	.69	.81	.96	1.33	1.76	2.11	2.81	3.07	3.13	3.25	3.34
SEP 21		.21	.34	.41	.47	.48	.48	.48	.66	.69	.69	.69	.69
SEP 28		.26	.42	.60	.77	1.04	1.27	1.46	1.55	1.56	1.58	1.65	1.66
OCT 4		.20	.33	.39	.45	.50	.57	.59	.62	.62	.62	.62	.62
OCT 23		.26	.26	.27	.28	.28	.28	.28	.28	.28	.28	.28	.28
NOV 7		.30	.45	.48	.52	.53	.53	.61	.70	.70	.70	.71	.71
NOV 10		.33	.33	.33	.33	.35	.39	.39	.40	.40	.40	.41	.41
NOV 11		.18	.31	.40	.48	.65	.78	.80	.85	.99	1.03	1.03	1.03
NOV 27		.36	.43	.45	.45	.46	.46	.47	.48	.56	.60	.62	.63
PENNSYLVANIA													
ALLENTOWN													
MAY 31		.25	.35	.52	.65	.88	.93	1.09	1.19	1.21	1.23	1.26	1.35
JUL 16		.37	.61	.85	1.15	1.61	1.71	1.80	1.81	1.81	1.81	1.81	1.82
JUL 18		.22	.33	.51	.62	.74	.76	.83	.95	.95	.95	.95	.95
JUL 20		.13	.21	.33	.41	.55	.55	.55	.55	.55	.60	.85	.85
JUL 25		.27	.40	.43	.44	.45	.45	.45	.45	.45	.45	.45	.45
AUG 24		.28	.43	.60	.75	1.13	1.41	1.52	1.52	1.52	1.52	1.52	1.52
ERIE													
MAY 1		.29	.40	.44	.46	.48	.49	.50	.50	.50	.50	.50	.50
MAY 30		.20	.30	.41	.44	.63	.97	1.04	1.10	1.12	1.14	1.17	1.18
JUN 15		.28	.48	.60	.62	.62	.62	.62	.84	.85	.92	.93	1.00
JUL 9		.32	.46	.47	.47	.47	.72	.83	.88	1.10	1.14	1.14	1.14
AUG 2		.37	.42	.55	.76	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
AUG 26		.24	.47	.56	.78	.87	.87	.87	.87	.87	.87	.87	.87
HARRISBURG													
APR 23		.28	.44	.50	.51	.51	.51	.52	.52	.52	.52	.52	.54
JUN 4		.26	.29	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
JUN 21	T	.21	.29	.36	.41	.49	.64	.86	1.16	1.50	1.66	2.14	M
JUN 22	T	.18	.31	.42	.46	.57	.78	1.02	1.34	1.75	1.91	M	M
JUL 8		.26	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
JUL 15		.20	.31	.35	.37	.43	.48	.49	.49	.49	.49	.49	.49
AUG 27		.52	.76	.90	.98	1.16	1.20	1.26	1.26	1.26	1.26	1.26	1.26
PHILADELPHIA													
MAR 3		.28	.51	.56	.60	.60	.60	.64	.69	.74	.74	.74	.74
MAY 15		.36	.40	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42
JUL 13		.31	.51	.56	.75	.91	1.06	1.07	1.13	1.20	1.29	1.46	1.66
AUG 26		.25	.50	.74	.88	1.20	1.20	1.22	1.24	1.24	1.28	1.31	1.84
AUG 27		.24	.47	.50	.60	.85	.94	1.09	1.19	1..9	1.19	1.20	1.20

Station and date		Maximum precipitation in inches (5 to 180 minutes)											
		5	10	15	20	30	45	60	80	100	120	150	180
PENNSYLVANIA													
PITTSBURGH													
JUN 14		.25	.34	.40	.49	.59	.68	.79	.87	.87	.87	.87	.87
AUG 26		.32	.38	.39	.40	.41	.41	.42	.44	.45	.46	.47	.47
SEP 12		.18	.33	.40	.52	.72	.90	1.06	1.11	1.13	1.15	1.16	1.16
SEP 13		.24	.38	.40	.49	.63	.65	.95	1.15	1.40	1.59	1.72	1.77
PITTSBURGH U													
MAY 30		.20	.31	.33	.35	.37	.41	.42	.48	.49	.49	.49	.49
JUN 4		.20	.30	.36	.36	.36	.36	.36	.36	.36	.37	.37	.37
JUN 13		.18	.28	.34	.43	.49	.56	.61	.64	.66	.66	.69	.73
SEP 14		.25	.34	.45	.50	.59	.73	.81	.90	1.04	1.51	1.68	1.78
WILKES BARRE													
MAY 30		.20	.28	.39	.43	.51	.83	.83	.83	.83	.84	.84	.84
MAY 31		.20	.38	.49	.56	.65	.71	.75	.82	.84	.85	1.07	1.16
JUN 15		.26	.37	.38	.43	.46	.47	.48	.50	.50	.50	.50	.50
AUG 7		.19	.33	.39	.45	.48	.49	.52	.53	.53	.53	.53	.53
RHODE ISLAND													
BLOCK ISLAND													
JUL 19		.25	.42	.44	.57	.64	.67	.67	.70	.76	.84	.86	.86
SEP 21		.40	.60	.70	.89	1.05	1.05	1.14	1.14	1.14	1.15	1.15	1.15
PROVIDENCE													
MAR 3		.16	.24	.32	.37	.52	.68	.74	.76	.85	.98	1.02	1.10
JUL 25		.41	.71	.86	1.18	1.65	1.66	1.66	1.67	1.67	1.67	1.68	1.69
JUL 25	T	.41	.55	M	M	M	M	M	M	M	.83	.83	.83
AUG 4		.30	.54	.72	.75	.76	.77	.77	.79	.80	.80	.80	.80
SOUTH CAROLINA													
CHARLESTON													
FEB 3		.22	.28	.35	.46	.55	.86	1.08	1.35	1.49	1.60	1.82	1.88
MAY 22		.20	.32	.44	.56	.60	.62	.62	.62	.64	.64	.64	.64
MAY 31		.31	.51	.55	.68	.75	.79	.80	.85	.86	.87	.88	.91
JUN 25		.25	.26	.26	.27	.28	.28	.28	.29	.29	.32	.35	.35
JUN 28		.22	.30	.41	.50	.57	.58	.60	.62	.63	.63	.63	.63
JUL 5		.15	.22	.35	.40	.54	.56	.57	.59	.61	.61	.64	.66
AUG 8		.26	.31	.33	.33	.33	.33	.33	.35	.49	.54	.55	.55
AUG 20		.25	.35	.37	.38	.39	.41	.41	.41	.41	.41	.41	.41
AUG 28	T	M	M	M	M	M	M	M	M	M	M	M	M
NOV 29		.24	.47	.62	.78	.98	1.13	1.27	1.47	1.82	1.95	2.09	2.27
DEC 6		.22	.40	.45	.60	.89	.90	.93	1.12	1.25	1.28	1.30	1.31
DEC 15		.15	.28	.36	.37	.55	.67	.69	.70	.78	.81	.84	.90
CHARLESTON U													
MAY 21		.52	.82	1.12	1.23	1.28	1.32	1.32	1.33	1.34	1.34	1.35	1.36
JUN 28		.42	.73	.91	1.09	1.21	1.25	1.27	1.29	1.29	1.29	1.29	1.29
AUG 5		.13	.25	.35	.44	.57	.70	.72	.73	.75	.76	.76	.76
AUG 24		.31	.43	.53	.63	.89	.89	.89	.89	.89	.89	.89	.89
DEC 6		.35	.47	.49	.50	.51	.57	.60	1.01	1.03	1.12	1.15	1.16
COLUMBIA													
JAN 10		.33	.60	.65	.72	.73	.84	1.00	1.22	1.26	1.28	1.29	1.32
JAN 13		.23	.33	.38	.50	.59	.60	.64	.65	.69	.79	.82	.87
MAR 30		.19	.30	.33	.39	.48	.59	.69	.72	.74	.75	.77	.77
MAY 15		.20	.33	.36	.38	.50	.67	.77	.83	.86	.88	.89	.93
MAY 19		.36	.51	.55	.61	.77	.82	.83	.83	.84	.86	.90	.90
MAY 22		.39	.53	.54	.55	.56	.57	.58	.60	.62	.63	.63	.63
JUN 20		.24	.42	.46	.59	.80	.98	1.08	1.22	1.35	1.44	1.50	1.50
JUN 25		.25	.27	.27	.28	.29	.41	.53	.59	.59	.60	.60	.60
JUL 3		.27	.32	.32	.34	.36	.36	.36	.36	.36	.36	.36	.36
JUL 4		.29	.55	.66	.84	1.26	1.46	1.46	1.46	1.46	1.46	1.46	1.46
JUL 14		.34	.45	.68	.79	.82	.95	1.01	1.03	1.07	1.14	1.33	1.35
JUL 16		.43	.85	1.05	1.27	1.90	2.07	2.13	2.14	2.14	2.14	2.14	2.14
JUL 31		.35	.70	.80	1.08	1.26	1.48	1.80	1.82	1.84	1.86	1.92	1.99
AUG 7		.25	.37	.39	.40	.41	.41	.43	.43	.65	.69	.72	.72
AUG 19		.35	.44	.46	.49	.58	.58	.59	.60	.62	.63	.63	.63
AUG 28		.20	.35	.45	.53	.78	[illegible]	.99	.99	1.00	1.00	1.00	1.02
SEP 17		.40	.70	.81	.95	.99	1.02	1.02	1.02	1.02	1.02	1.02	1.02
NOV 7		.23	.38	.48	.65	.85	1.08	1.23	1.27	1.41	1.47	1.52	1.62
GNVLE SPARTANBURG													
MAR 1		.42	.43	.44	.50	.55	.55	.55	.63	.65	.65	.66	.87
MAR 21		.28	.40	.53	.57	.67	.72	.77	.83	.90	.99	1.07	1.10
MAY 14		.20	.39	.55	.67	1.03	1.40	1.65	1.80	1.90	1.99	2.25	2.44
JUN 20		.18	.27	.37	.45	.50	.63	.75	.90	1.07	1.21	1.31	1.44
JUL 4		.20	.34	.52	.62	.68	.68	.68	.75	.87	.87	.89	.90
JUL 4		.14	.27	.41	.45	.47	.47	.47	.47	.47	.47	.47	.47
JUL 29		.25	.40	.50	.54	.56	.57	.58	.61	.63	.66	.67	.67
AUG 7		.31	.57	.85	.97	1.10	1.13	1.17	1.21	1.47	1.60	1.63	1.83
SEP 4		.16	.31	.40	.45	.61	.85	.90	.92	.92	.92	.92	.92
NOV 13		.19	.28	.35	.39	.44	.60	.82	.90	.94	.96	.98	1.15
DEC 15		.13	.22	.29	.37	.51	.63	.71	.78	.88	1.01	1.14	1.32
SOUTH DAKOTA													
ABERDEEN													
MAY 15		.33	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
JUN 27		.28	.53	.56	.57	.57	.57	.57	.57	.57	.57	.57	.57
JUL 11		.41	.60	.69	.71	.91	.94	.95	.95	.95	.95	.95	.95
JUL 14		.25	.32	.33	.33	.34	.34	.34	.34	.34	.34	.34	.34
JUL 19		.40	.74	.81	1.00	1.24	1.34	1.39	1.40	1.40	1.41	1.71	*1.78
JUL 22		.30	.38	.39	.40	.41	.43	.43	.45	.47	.48	.48	.48
JUL 25		.32	.57	.62	.82	1.06	1.13	1.20	1.62	1.72	*1.72	1.72	1.72
HURON													
MAY 22		.28	.35	.39	.41	.43	.46	.48	.51	.62	.70	.76	.76
JUL 8		.25	.30	.30	.31	.32	.35	.36	.36	.36	.36	.36	.38
JUL 19		.45	.78	.87	1.14	1.69	1.70	1.73	1.73	1.73	1.73	1.73	1.73
RAPID CITY													
JUN 9		.30	.42	.57	.70	.94	1.08	1.29	1.65	1.75	1.80	1.89	2.08
AUG 2		.27	.38	.46	.58	.80	.80	.81	.81	.81	.81	.81	.81
SIOUX FALLS													
JUL 14		.22	.38	.56	.66	.78	.92	.92	.93	.93	1.02	1.03	1.03
AUG 5		.40	.70	.84	.90	.93	.94	1.00	1.00	1.00	1.00	1.00	1.00

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TENNESSEE												
BRISTOL												
MAY 22	.23	.37	.40	.48	.52	.67	.90	.90	.90	.90	.90	.98
MAY 30	.21	.32	.36	.41	.55	.63	.64	.65	.65	.65	.85	.85
JUN 6	*.62	.63	.64	.64	.65	.67	.80	.81	.85	.86	.86	.86
AUG 2	.22	.36	.38	.40	.40	.40	.40	.40	.40	.40	.58	.78
AUG 26	.26	.31	.35	.36	.37	.37	.37	.39	.54	.54	.54	.54
AUG 27	.28	.32	.35	.38	.40	.45	.45	.45	.45	.45	.45	.45
SEP 3	.25	.40	.43	.47	.53	.54	.55	.57	.60	.60	.60	.60
SEP 28	.33	.65	.72	1.02	1.41	1.76	1.98	2.01	2.02	2.05	2.07	2.10
SEP 29	.19	.34	.37	.43	.51	.57	.58	.58	M	M	M	.70
OCT 4	.20	.31	.34	.37	.47	.63	.72	.80	.89	.96	1.08	1.19
CHATTANOOGA												
MAR 29	.26	.44	.47	.49	.58	.63	.67	.72	.74	.74	.75	.76
APR 7	.14	.27	.40	.45	.47	.47	.47	.58	.58	.58	.58	.58
MAY 2	.31	.48	.50	.54	.55	.55	.55	.55	.55	.78	.80	.80
JUN 6	.24	.39	.42	.42	.42	.43	.43	.43	.43	.44	.44	.44
JUL 3	.29	.35	.38	.38	.38	.45	.47	.47	.47	.47	.78	.85
JUL 27	.18	.28	.43	.48	.59	.67	.70	.70	.72	.72	.72	.74
JUL 28	.18	.32	.48	.61	.83	1.07	1.17	1.51	1.84	1.91	1.97	1.97
JUL 28	.32	.36	.38	.39	.45	.45	.45	.45	.46	.47	.47	.47
JUL 30	.18	.34	.46	.50	.57	.59	.60	.63	.65	.66	.66	1.14
AUG 1	.29	.50	.67	.94	1.25	1.45	1.50	1.50	1.50	1.50	1.50	1.50
AUG 12	.40	.72	1.04	1.35	1.67	1.82	1.84	1.86	1.87	1.88	1.88	1.89
SEP 17	.28	.48	.58	.66	.75	.79	.82	.83	.85	.88	.89	.90
NOV 13	.18	.30	.33	.37	.41	.45	.49	.52	.55	.58	.59	.59
KNOXVILLE												
FEB 26	.31	.37	.38	.39	.39	.40	.44	.47	.49	.52	.53	.55
JUN 6	.25	.38	.40	.43	.45	.45	.45	.45	.45	.45	.45	.45
JUN 28	.35	.50	.55	.63	.68	.83	.87	.96	1.04	1.30	1.38	1.62
JUN 29	.26	.39	.41	.42	.43	.43	.44	.59	.66	.66	.66	.66
JUL 14	.20	.32	.35	.35	.35	.35	.35	.35	.35	.35	.35	.47
JUL 25	.28	.31	.33	.33	.33	.33	.33	.33	.35	.35	.35	.35
JUL 29	.21	.41	.44	.57	.57	.60	.75	.80	.80	.85	.85	.85
JUL 30	.27	.48	.59	.72	.84	.91	.93	.99	.99	.99	1.01	1.01
JUL 31	.25	.30	.45	.53	.55	.55	.55	.55	.55	.58	.61	.61
AUG 9	.23	.36	.40	.42	.44	.44	.44	.44	.44	.44	.44	.44
OCT 13	.20	.37	.45	.58	.62	.66	.66	.69	.69	.69	.69	.69
DEC 10	.25	.43	.48	.57	.60	.62	.63	.68	.70	.72	.79	.84
MEMPHIS												
FEB 26	.19	.29	.39	.42	.43	.49	.58	.60	.60	.60	.60	.60
MAR 1	.18	.35	.44	.49	.53	.65	.78	.83	.85	.87	.88	.90
MAR 15	.23	.31	.39	.45	.56	.61	.65	.76	.85	.97	1.10	1.19
APR 28	.18	.31	.47	.61	.68	.73	.79	.79	.81	.81	.91	1.05
MAY 1	.46	.75	.84	.88	.89	.90	.90	.99	1.01	1.02	1.03	1.03
MAY 16	.52	.68	.80	.98	1.03	1.19	1.20	1.21	1.22	1.23	1.23	1.23
MAY 29	.23	.43	.54	.57	.59	.61	.61	.61	.61	.61	.61	.61
JUN 25	.47	.84	.98	1.08	1.33	1.35	1.38	1.43	1.49	1.60	1.75	1.89
JUN 26	.57	.82	.98	1.11	1.17	1.19	1.20	1.20	1.21	1.21	1.21	1.21
JUN 28	.43	.70	.81	.91	1.11	1.16	1.32	1.41	1.48	1.54	1.63	1.67
JUL 1	.34	.63	.78	.81	.84	.86	.86	.87	.89	.92	.93	.93
JUL 2	.19	.32	.40	.51	.56	.60	.61	.62	.63	.65	.66	.66
JUL 3	.24	.38	.47	.67	.83	.88	.88	.88	.89	.89	1.05	1.21
JUL 28	.29	.34	.36	.37	.39	.39	.39	.44	.45	.45	.46	.46
AUG 6	.23	.43	.56	.69	.75	.81	.81	.82	.86	.92	1.03	1.03
SEP 26	.27	.46	.52	.61	.65	.73	.78	.82	.84	.84	.84	.84
SEP 29	.31	.55	.70	.82	.96	.98	.99	1.01	1.04	1.20	1.50	1.50
SEP 29	.40	.72	.87	.93	.98	1.06	1.08	1.12	1.14	1.17	1.18	1.18
NOV 13	.15	.23	.34	.44	.58	.71	.75	.76	.80	.89	.96	1.02
DEC 9	.26	.36	.39	.43	.55	.63	.67	.73	.76	.82	.94	1.02
NASHVILLE												
MAY 14	.25	.50	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58
JUN 29	.30	.36	.40	.42	.45	.47	.60	.78	.79	.86	.93	.93
JUL 27	.28	.42	.46	.55	.57	.58	.70	.86	.92	.94	.96	.99
JUL 31	.17	.30	.40	.50	.57	.60	.60	.60	.60	.60	.60	.60
AUG 6	.25	.30	.40	.42	.43	.45	.46	.48	.50	.50	.50	.50
AUG 9	.30	.39	.40	.44	.52	.60	.83	1.02	1.12	1.20	1.20	1.20
AUG 12	.33	.50	.70	.80	.91	.93	.93	1.02	1.03	1.04	1.04	1.04
AUG 24	.27	.30	.40	.41	.41	.45	.70	.70	.70	.72	.72	.72
SEP 16	.26	.30	.40	.46	.61	.78	.78	.79	.79	.80	.80	.80
SEP 26	.40	.70	.85	.88	.90	.90	.92	.92	.92	.93	1.02	1.10
TEXAS												
ABILENE												
MAY 6	.14	.22	.31	.38	.57	.68	.73	.75	.78	.78	.79	.81
JUN 11	.39	.74	.84	1.09	1.59	1.74	1.78	1.82	1.83	1.84	1.97	2.10
JUN 28	.29	.49	.56	.59	.59	.59	.62	.70	.72	.77	.79	.79
AUG 13	.40	.76	.80	.94	1.07	1.38	1.73	1.98	2.05	2.14	2.48	2.51
SEP 1	.25	.31	.36	.37	.50	.70	.73	.76	.77	.80	.90	.90
OCT 30	.37	.41	.47	.52	.56	.57	.58	.58	.60	.60	.60	.60
AMARILLO												
JUN 12	.25	.46	.65	.79	.99	1.02	1.03	1.06	1.08	1.10	1.11	1.12
JUN 21	.37	.72	.87	.92	.92	.92	.92	.92	.92	.92	.92	.92
JUN 29	.30	.54	.70	.90	.93	.97	.98	1.00	1.01	1.02	1.05	1.09
JUL 17	.15	.28	.34	.41	.47	.75	.86	.89	.91	.94	1.03	1.12
AUSTIN												
MAY 1	.59	1.05	1.32	1.43	1.72	2.15	2.18	2.22	2.26	2.33	2.39	2.44
MAY 1	.30	.51	.67	.75	.84	.85	.85	.85	.85	.85	.85	.85
MAY 13	.21	.41	.49	.53	.55	.59	.62	.69	.77	.80	.81	.81
JUN 16	.18	.34	.43	.51	.70	.92	1.16	1.26	1.29	1.34	1.35	1.35
JUL 19	.31	.52	.73	.88	.89	.89	.89	.89	.89	.89	.89	.89
AUG 22	.16	.27	.38	.50	.60	.72	.72	.73	.73	.73	.77	.78
SEP 26	.23	.39	.53	.60	.67	.68	.68	.68	.68	.68	.69	.71
OCT 21	.25	.42	.44	.46	.48	.48	.49	.49	.49	.49	.49	.50
NOV 12	.30	.50	.56	.60	.82	.84	.86	1.05	1.09	1.09	1.09	1.09
BROWNSVILLE												
FEB 29	.44	.76	1.14	1.37	1.47	1.54	1.57	1.59	1.60	1.62	1.66	1.66
MAY 3	.15	.30	.44	.55	.78	.86	.89	.90	.92	.92	.92	.95
JUN 9	.20	.34	.47	.59	.81	1.06	1.15	1.18	1.20	1.22	1.27	1.31
JUN 9	.20	.26	.42	.49	.61	.76	.94	1.13	1.29	1.35	1.56	1.71
JUN 11	.21	.30	.34	.40	.65	.72	.97	1.29	1.35	1.38	1.57	1.61
JUL 17	.18	.31	.43	.55	.61	.61	.61	.61	.61	.61	.61	.61
AUG 19	.18	.34	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
SEP 22	.29	.55	.84	1.00	1.09	1.17	1.24	1.30	1.31	1.32	1.35	1.35
SEP 24	.20	.39	.57	.71	.88	.92	.92	.92	.92	.92	.92	.92
OCT 22	.23	.32	.43	.60	.82	1.10	1.31	1.46	1.49	1.65	1.67	1.67
OCT 29	.27	.37	.38	.39	.39	.39	.39	.39	.39	.57	.62	.62

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TEXAS												
CORPUS CHRISTI												
FEB 29	.42	.74	.83	.85	.88	.94	[illegible]	1.04	[illegible]	[illegible]	[illegible]	[illegible]
MAY 2	.57	[illegible]	1.27	1.46	[illegible]	1.93	1.95	1.98	1.98	1.98	1.98	1.98
MAY 10	.36	.62	[illegible]	.91	1.07	1.12	1.12	1.18	1.20	1.28	1.33	1.33
MAY 12	.17	.28	.37	.49	.63	.70	.78	.86	.86	.86	.86	.86
JUN 1	.18	.31	.33	.37	.39	.48	.59	.80	.96	1.04	1.21	1.31
JUL 17	.28	.41	.53	.53	.54	.54	.54	.54	.54	.54	.55	.55
AUG 3	.31	.43	.57	.65	.77	.93	1.41	1.68	1.87	2.37	2.73	[illegible]
SEP 9	.30	.35	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36
SEP 21	.48	.77	1.12	1.47	1.54	[illegible]	2.45	2.47	2.47	2.47	2.47	2.47
SEP 24	.24	.36	.43	.45	.52	.64	.80	.88	[illegible]	1.29	1.29	1.34
SEP 24	.30	.48	.52	.53	.53	.53	.53	.53	.53	.53	.53	.53
SEP 26	.27	.45	.53	.59	.68	.77	.82	.85	.92	.94	1.04	1.09
DALLAS												
APR 27	.23	.42	.52	.60	.90	1.12	1.19	1.27	1.33	1.50	2.02	2.14
JUN 14	.14	.24	.30	.40	.49	.54	.55	.55	.55	.55	.55	.55
JUN 15	.21	.32	.42	.56	.64	.67	.67	.67	.67	.67	.67	.67
JUN 21	.59	.80	.91	.94	1.21	1.27	1.27	1.45	1.49	1.50	1.50	1.50
JUL 12	.25	.47	.70	.88	1.13	1.37	1.46	1.52	1.65	1.67	1.69	1.86
AUG 9	.23	.30	.31	.43	.58	.59	.60	.60	.60	.60	.60	.60
OCT 22	.18	.30	.45	.52	.64	.69	.77	.96	.98	[illegible]	1.08	[illegible]
NOV 12	.20	.38	.50	.58	.63	.65	.67	.72	.73	.74	.74	.74
DEL RIO												
APR 18	.26	.37	.50	.58	.74	.82	.82	.82	.82	.82	.82	.82
APR 19	.25	.38	.41	.41	.41	.41	.43	.44	.45	.45	.45	.45
MAY 2	.36	.63	.63	.69	.71	.76	.79	.80	.80	.80	.80	.80
MAY 30	.19	.25	.28	.31	.52	.56	.60	.61	.61	.61	.61	.61
JUN 15	.18	.32	.38	.44	.57	.68	.75	.76	.76	.77	.80	.83
JUL 18	.27	.53	.64	.73	.95	1.10	1.22	1.33	1.41	1.43	1.48	1.53
AUG 9	.26	.36	.41	.42	.42	.42	.42	.42	.42	.42	.43	.45
AUG 11	.24	.33	.35	.35	.35	.37	.38	.52	.52	.52	.53	.54
EL PASO												
AUG 26	.24	.39	.47	.52	.55	.62	.68	.76	.81	.84	.89	.94
FORT WORTH												
APR 27	.18	.36	.42	.52	.67	.74	.88	1.02	1.19	1.28	1.63	1.78
OCT 21	.27	.46	.50	.57	.64	.67	.71	.80	.90	.95	1.27	1.39
OCT 22	.27	.46	.50	.57	.64	.67	.71	.80	.90	.95	1.27	1.39
OCT 29	.13	.25	.30	.35	.55	.75	.92	.97	1.03	1.05	1.10	1.12
NOV 12	.27	.44	.53	.57	.62	.65	.66	.69	.69	.70	.70	.70
GALVESTON J												
MAR 20	.25	.38	.44	.46	.47	.67	.74	.78	.81	.81	.81	.81
MAY 12	.30	.44	.54	.77	1.01	1.17	1.22	1.22	1.22	1.22	1.22	1.24
MAY 12	.25	.46	.57	.66	.87	1.03	1.04	1.16	1.23	1.37	1.41	1.45
MAY 30	.17	.33	.43	.52	.66	.71	.73	.73	.73	.73	.73	.73
JUL 22	.23	.31	.35	.45	.49	.50	.51	.74	.76	.81	.83	.88
AUG 2	.28	.37	.57	.61	.62	.64	.65	.66	.67	.68	.69	.78
SEP 14	.25	.41	.57	.61	.67	1.03	1.06	1.07	1.08	1.08	1.08	[illegible]
SEP 24	.24	.37	.46	.62	.80	.91	.99	1.07	1.26	1.37	1.51	1.60
SEP 26	.26	.37	.40	.42	.44	.44	.44	.48	.48	.48	.48	.48
SEP 27	.23	.38	.39	.43	.58	.93	1.00	1.07	1.13	1.16	1.19	1.20
SEP 30	.27	.42	.48	.49	.49	.57	.58	.58	.60	.61	.64	.65
OCT 19	.19	.30	.36	.41	.46	.46	.46	.53	.76	.82	.85	.85
OCT 26	.28	.54	.76	.89	1.01	1.05	1.10	1.10	1.10	1.10	1.14	1.16
NOV 7	.24	.34	.45	.54	.62	.90	1.16	1.27	1.30	1.33	1.33	1.33
NOV 13	.26	.43	.57	.67	.97	1.12	1.16	1.18	1.21	1.25	1.25	1.25
NOV 18	.29	.39	.59	.62	.62	.83	1.05	1.06	1.33	1.53	1.66	2.04
DEC 5	.32	.50	.58	.68	.75	.83	.87	.89	.90	1.00	1.11	1.19
DEC 20	.30	.45	.57	.65	.71	.77	.79	.83	.83	.83	.94	1.02
HOUSTON												
MAR 15	.33	.40	.42	.65	.70	.72	.72	.72	.72	.72	.72	.72
MAR 20	*1.05	*1.48	*1.60	1.73	*2.25	2.85	*3.25	3.95	5.45	*6.25	6.88	*7.[illegible]
APR 21	.24	.33	.35	.43	.64	.65	.66	.66	.66	.66	.74	.74
MAY 2	.20	.35	.40	.45	.52	.65	.70	.77	.80	.82	.85	.94
MAY 7	.30	.43	.46	.47	.58	.72	.78	.82	.87	.89	.90	.95
MAY 12	.30	.50	.59	.69	.78	.87	.97	1.02	1.03	1.03	1.03	1.03
JUN 13	.20	.36	.37	.38	.39	.39	.39	.39	.39	.39	.39	.39
JUN 15	.30	.57	.70	.77	1.00	1.15	1.16	1.16	1.16	1.16	1.16	1.16
JUL 13	.18	.30	.38	.43	.52	.57	.60	.60	.60	.60	.60	.60
JUL 30	.32	.54	.65	.84	.86	.94	.94	.94	.94	.94	.94	.94
AUG 12 T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 13 T	M	M	M	M	M	M	M	M	M	M	M	M
SEP 15	.20	.30	.35	.45	.65	.77	.93	.95	.96	.99	.99	.99
SEP 26	.30	.50	.58	.60	.62	.65	.65	.65	.65	.65	.65	.65
SEP 26	.27	.49	.64	.68	.70	.70	.70	.70	.70	.70	.70	.71
SEP 28	.25	.30	.37	.39	.40	.42	.44	.44	.44	.44	.44	.44
OCT 22	.27	.38	.52	.62	.80	.81	.95	1.28	1.56	1.66	1.69	1.82
NOV 13	.49	.75	.87	1.07	1.28	1.37	1.39	1.46	1.47	1.51	1.54	1.55
NOV 18	.39	.52	.60	.63	.65	.80	1.14	1.19	1.22	1.28	1.60	1.85
DEC 14	.18	.31	.33	.35	.37	.61	.66	.67	.68	.68	.75	.78
HOUSTON J												
FEB 29	.22	.39	.50	.57	.61	.62	.62	.62	.62	.62	.62	.62
MAR 20	.36	.58	.75	.86	1.05	1.26	1.67	2.03	2.37	2.60	2.72	2.74
APR 21	.26	.38	.43	.45	.50	.58	.79	.88	.92	.93	.93	.93
APR 27	.22	.30	.32	.38	.50	.56	.64	.97	1.03	1.12	1.26	1.53
MAY 7	.22	.35	.47	.52	.66	.81	.92	1.24	1.42	1.42	1.74	1.89
MAY 10	.22	.35	.39	.41	.42	.43	.46	.49	.52	.57	.57	.71
MAY 12	.29	.50	.63	.71	.86	.98	1.13	1.20	1.20	1.20	1.20	1.20
JUN 10	.18	.28	.42	.55	.66	.84	.94	1.18	1.38	1.51	1.63	1.76
JUN 16	.20	.33	.49	.57	.70	.82	1.01	1.08	1.10	1.10	1.11	1.11
JUL 4	.23	.42	.62	.78	.96	1.30	1.39	1.39	1.39	1.40	1.40	1.56
JUL 30	.28	.46	.60	.65	.70	.73	.73	.73	.73	.73	.73	.73
AUG 11	.29	.37	.52	.62	.69	.89	1.10	1.10	1.10	1.10	1.10	1.10
AUG 14	.15	.29	.37	.45	.49	.51	.51	.53	.53	.53	.54	.55
AUG 23	.34	.58	.79	.97	1.21	1.37	1.43	1.49	1.51	1.51	1.51	1.51
SEP 26	.36	.54	.75	.75	.75	1.14	1.24	1.30	1.43	1.55	1.56	1.63
SEP 28	.14	.25	.35	.41	.58	.65	.65	.66	.66	.66	.66	.66
SEP 29	.22	.34	.47	.52	.71	.74	.77	.81	.88	.90	.92	.93
NOV 6	.34	.56	.63	.71	.79	.81	.81	.81	.81	.81	.81	.81
NOV 13	.39	.48	.59	.62	.67	1.03	1.22	1.22	1.23	1.28	1.29	1.29
LUBBOCK												
MAY 5	.24	.35	.47	.56	.82	.92	.93	.94	.95	.95	1.15	1.17
MAY 9	.22	.34	.43	.54	.66	.68	.71	.71	.71	.71	.71	.71
JUN 12	.20	.35	.45	.52	.56	.57	.59	.60	.72	.72	.75	.77
JUN 12	.23	.30	.31	.31	.32	.35	.37	.49	.50	.56	.61	.61
JUN 28	.33	.56	.64	.77	.94	1.02	1.11	1.13	1.13	1.13	1.13	1.13
JUL 3	.45	.75	.91	.95	.96	.96	.97	.97	.97	.98	1.00	1.15
JUL 8	.27	.35	.57	.60	.70	.74	.75	.75	.75	.76	.76	.76
JUL 20	.19	.33	.41	.51	.75	.95	1.15	1.25	1.30	1.33	1.36	1.36

EXCESSIVE SHORT DURATION RAINFALL

YEAR 1972

Station and date		Maximum precipitation in inches (5 to 180 minutes)											
		5	10	15	20	30	45	60	80	100	120	150	180
TEXAS													
LUBBOCK													
AUG 27		.28	.34	.36	.37	.41	.45	.49	.54	.69	.79	.90	1.00
AUG 27		.17	.33	.43	.51	.58	.63	.65	.70	.70	.70	1.00	1.10
MIDLAND													
AUG 26		.22	.42	.64	.68	.68	.71	.71	.72	.72	.72	.74	.74
PORT ARTHUR													
JAN 4		.31	.40	.49	.57	.67	.72	1.02	1.34	1.39	1.41	1.49	1.53
JAN 10		.37	.45	.48	.49	.65	.68	.69	.70	.70	.70	.70	.71
FEB 6		.22	.43	.53	.65	.71	.91	.91	.94	.97	.97	.98	1.00
MAR 2		.40	.60	.77	.99	1.20	1.39	1.50	1.54	1.54	1.54	1.54	1.55
MAR 20		.43	.66	.88	1.04	1.29	1.42	1.81	1.95	1.97	1.98	2.03	2.06
APR 21		.29	.49	.67	.77	.98	1.12	1.16	1.20	1.21	1.22	1.23	1.23
APR 27		.39	.62	.86	1.05	1.19	1.25	1.29	1.32	1.40	1.43	1.50	1.57
APR 28		.23	.38	.55	.74	.98	1.33	1.56	1.73	1.76	1.76	1.76	1.76
MAY 2		.34	.63	.77	.86	.97	1.02	1.05	1.44	1.55	1.62	1.73	1.81
MAY 12		.26	.45	.53	.56	.58	.59	.60	.61	.62	.63	.64	.64
JUN 15		.20	.35	.50	.55	.58	.58	.59	.61	.73	.73	.75	.76
JUN 15		.33	.57	.72	.90	1.24	1.39	1.43	1.55	1.60	1.66	1.73	1.76
JUL 4		.27	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.43
JUL 19		.30	.49	.56	.56	.56	.65	.69	.70	.70	.70	.70	.70
JUL 29		.36	.70	.93	.98	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.07
AUG 23		.51	.77	1.19	1.36	1.51	1.51	1.51	1.51	1.51	1.53	1.53	1.66
AUG 24		.29	.46	.50	.50	.52	.53	.56	.62	.65	.70	.72	.79
AUG 27		.45	.71	.85	1.16	1.29	1.60	1.69	1.71	1.71	1.71	1.73	1.73
SEP 24		.34	.39	.45	.55	.58	.61	.62	.65	.69	.69	.81	.84
SEP 27		.20	.34	.54	.66	.75	.82	.85	.89	.94	.95	.95	.95
NOV 7		.32	.57	.76	.97	1.07	1.16	1.18	1.20	1.32	1.49	1.51	1.51
NOV 13		.42	.78	1.15	1.48	1.58	1.61	1.64	1.69	1.74	1.77	1.80	1.80
DEC 20		.25	.50	.60	.68	.71	.82	.88	.96	.97	1.03	1.08	1.10
SAN ANGELO													
APR 20		.22	.34	.37	.38	.38	.38	.38	.38	.38	.38	.38	.38
MAY 10		.36	.54	.66	1.00	1.24	1.42	1.51	1.56	1.56	1.56	1.56	1.56
MAY 13		.32	.57	.65	.75	.83	1.08	1.22	1.23	1.38	1.38	1.38	1.38
JUN 11		.19	.28	.39	.41	.54	.72	.95	1.12	1.22	1.23	1.23	1.23
JUN 15		.27	.45	.57	.84	.95	.96	.98	1.02	1.10	1.15	1.21	1.22
AUG 8	T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 18		.16	.30	.32	.33	.34	.34	.40	.42	.43	.45	.45	.48
SEP 1		.34	.64	.72	.80	.83	.85	.99	1.02	1.08	1.14	1.19	1.36
SEP 20		.26	.46	.52	.58	.69	.86	.87	.88	.88	1.08	1.34	1.54
SAN ANTONIO													
APR 27		.22	.34	.43	.49	.62	.65	.68	.70	.70	.70	.70	.70
MAY 7		.74	*1.39	*1.80	1.95	2.18	2.19	2.31	2.35	2.37	2.37	2.37	2.37
MAY 7		.42	.80	.99	1.19	1.39	1.61	1.69	1.83	2.30	3.00	3.45	3.53
MAY 10		.20	.33	.38	.42	.56	.79	1.02	1.26	1.45	1.54	1.62	1.64
MAY 16		.20	.37	.49	.57	.70	.89	.92	.92	.92	.92	.92	.92
JUN 16		.29	.48	.63	.70	.75	.75	.75	.75	.75	.75	.75	.75
JUL 18		.22	.36	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53
JUL 19		.16	.31	.33	.33	.33	.33	.33	.33	.34	.34	.34	.34
JUL 22	T	.26	.44	.62	M	M	M	1.64	1.66	1.66	1.67	1.67	1.69
AUG 4		.39	.71	.81	.91	1.00	1.00	1.00	1.00	1.01	1.02	1.02	1.02
AUG 7		.18	.33	.40	.48	.52	.52	.52	.52	.52	.52	.52	.52
OCT 22		.15	.27	.38	.48	.60	.70	.77	.81	.92	.94	.95	.97
OCT 22		.13	.22	.27	.40	.50	.50	.50	.50	.50	.50	.50	.50
VICTORIA													
MAR 20		.25	.38	.43	.60	.75	.75	.75	.75	.75	.75	.75	.75
MAY 7		.30	.57	.74	.89	1.33	1.54	1.87	1.98	2.03	2.03	2.16	2.16
MAY 7		.60	.98	1.19	1.78	2.11	2.85	3.20	3.36	3.90	*4.99	5.02	5.04
MAY 10		.22	.33	.41	.45	.74	.92	1.05	1.16	1.28	1.37	1.45	1.50
MAY 14		.31	.35	.36	.37	.38	.39	.40	.40	.40	.40	.40	.40
JUN 10		.20	.37	.42	.51	.66	.83	.91	.93	.95	.95	.96	.96
JUN 13		.26	.30	.31	.32	.50	.55	.56	.57	.57	.57	.69	.70
JUL 10		.21	.36	.50	.60	.66	.67	.67	.67	.67	.67	.67	.67
JUL 12		.30	.47	.55	.58	.62	.62	.63	.63	.63	.63	.64	.65
JUL 16		.25	.39	.44	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUL 18		.23	.35	.43	.44	.55	.73	.74	.75	.75	.75	.75	.75
JUL 20		.32	.37	.40	.49	.55	.75	.86	.90	.90	1.00	1.00	1.38
AUG 2		.17	.27	.37	.41	.48	.48	.48	.48	.55	.82	.92	.93
AUG 3		.71	1.06	1.33	1.38	1.45	1.47	1.51	1.53	1.55	1.57	1.60	1.80
AUG 3		.17	.32	.46	.52	.56	.66	.80	.86	.87	.90	.91	.95
SEP 24		.28	.50	.59	.62	.74	.90	1.00	1.10	1.18	1.26	1.29	1.32
SEP 25		.27	.39	.56	.68	.83	.87	.89	.90	.90	.90	.90	.90
SEP 26		.40	.66	.82	.87	1.02	1.18	1.18	1.27	1.31	1.53	1.62	1.62
OCT 29		.25	.46	.52	.55	.60	.68	.98	1.17	1.59	1.91	2.28	2.43
NOV 13		.20	.30	.35	.40	.57	.70	.72	.73	.75	.76	.76	.76
WACO													
JAN 3		.21	.31	.33	.35	.46	.66	.78	.82	.88	.90	.90	.90
APR 27		.18	.27	.28	.40	.56	.66	.75	.78	.94	1.04	1.26	1.35
MAY 1		.26	.46	.48	.57	.81	1.00	1.15	1.15	1.15	1.15	1.15	1.15
JUN 14		.27	.38	.40	.42	.42	.42	.42	.42	.42	.42	.42	.42
JUN 17		.22	.30	.32	.35	.40	.41	.43	.44	.46	.48	.48	.48
JUN 17		.19	.30	.34	.39	.49	.60	.64	.68	.70	.70	.70	.74
JUL 4		.25	.42	.51	.60	1.01	1.25	1.62	1.70	1.78	1.79	1.88	2.05
JUL 13		.28	.55	.63	.80	1.20	1.28	1.30	1.30	1.30	1.30	1.30	1.30
AUG 9		.22	.33	.35	.40	.42	.42	.43	.43	.52	.53	.54	.54
AUG 23		.38	.51	.55	.60	.62	.64	.66	.66	.67	.67	.67	.67
SEP 4		.25	.49	.52	.56	.60	.71	.78	.80	.80	.80	.80	.80
SEP 26		.23	.45	.58	.70	.75	.75	.75	.75	.75	.75	.75	.75
SEP 29		.17	.33	.33	.33	.33	.33	.35	.35	.35	.35	.35	.35
OCT 21		.50	.90	1.37	1.57	2.22	2.63	3.08	3.33	3.47	3.56	3.67	3.68
NOV 12		.40	.50	.52	.56	.57	.58	.60	.60	.60	.60	.60	.60
WICHITA FALLS													
APR 30		.26	.40	.60	.68	.77	.81	.85	.90	.94	1.02	1.03	1.03
JUL 4		.28	.39	.44	.51	.80	.93	.98	.99	1.00	1.01	1.01	1.06
OCT 30		.27	.43	.51	.59	.73	1.01	1.14	1.34	1.40	1.50	1.66	1.82
OCT 31		.25	.32	.35	.35	.38	.38	.38	.48	.49	.49	.49	.49
NOV 12		.29	.48	.55	.55	.55	.55	.55	.55	.55	.55	.59	.55
DEC 29		.36	.41	.42	.42	.42	.42	.42	.42	.42	.42	.44	.44
UTAH													
MILFORD													
AUG 13		.26	.42	.46	.61	*.86	.89	*.89	.89	.89	*.89	.89	.89
AUG 27		.17	.32	.34	.42	.53	.58	.62	.65	.67	.67	.67	.67

Station and date		Maximum precipitation in inches (5 to 180 minutes)											
		5	10	15	20	30	45	60	80	100	120	150	180
UTAH													
SALT LAKE CITY													
WENDOVER													
AUG 13		.28	.50	.60	.62	.63	.68	.69	.69	.69	.70	.70	.71
VERMONT													
BURLINGTON													
JUN 15	T	M	M	M	M	M	M	M	M	M	M	M	M
JUL 25	T	.25	.32	.37	M	M	M	M	M	M	M	M	M
VIRGINIA													
LYNCHBURG													
MAY 3		.15	.30	.45	.55	.64	.75	.88	.97	1.03	1.10	1.19	1.34
MAY 31		.18	.34	.45	.51	.54	.56	.56	.56	.56	.56	.56	.56
JUN 21		.25	.40	.48	.60	.78	1.05	1.38	1.75	2.22	2.67	2.90	3.13
JUN 29		.22	.28	.38	.43	.55	.60	.60	.60	.60	.60	.60	.60
JUL 16		.28	.47	.58	.63	.66	.69	.69	.69	.69	.69	.69	.69
JUL 29		.17	.26	.31	.43	.53	.61	.69	.72	.74	.75	.77	.81
JUL 31		.30	.46	.58	.73	1.10	1.15	1.24	1.24	1.26	1.26	1.27	1.28
AUG 28		.26	.49	.67	.77	.82	.87	.93	.97	.97	.97	.97	.97
OCT 27		.18	.35	.40	.42	.56	.60	.62	.71	.76	.76	.76	.78
NORFOLK													
MAY 3		.23	.32	.32	.33	.33	.34	.34	.39	.52	.57	.85	.89
MAY 31		.26	.40	.41	.42	.42	.42	.42	.42	.42	.42	.42	.45
JUN 6		.12	.19	.26	.32	.48	.73	.85	.96	1.12	1.32	1.42	1.61
JUN 17		.36	.61	.73	.79	.92	.92	.92	.92	.92	.92	.99	.99
JUN 28		.15	.26	.34	.40	.44	.50	.56	.60	.63	.65	.69	.72
JUL 5		.34	.43	.51	.53	.69	.74	.75	.76	.76	.80	.82	.82
AUG 8		.34	.47	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48
SEP 21		.23	.41	.55	.74	.94	1.01	1.21	1.44	1.54	1.76	1.99	2.11
NOV 4		.37	.52	.66	.77	.98	1.15	1.24	1.27	1.28	1.29	1.29	1.29
NOV 8		.25	.33	.38	.41	.48	.56	.64	.70	.78	.87	.94	.98
DEC 15		.23	.35	.55	.68	.80	.99	1.09	1.19	1.28	1.37	1.50	1.55
RICHMOND													
APR 15		.42	.60	.63	.65	.65	.65	.65	.65	.65	.65	.65	.65
MAY 3		.27	.43	.51	.53	.55	.58	.60	.60	.67	.71	.72	.75
MAY 17		.19	.35	.54	.67	.80	1.01	1.03	1.03	1.08	1.21	1.21	1.21
MAY 30		.35	.40	.42	.43	.52	.57	.58	.61	.61	.61	.61	.61
MAY 31		.25	.36	.48	.60	.69	.86	.97	1.02	1.49	1.68	1.73	1.73
JUN 18		.46	.72	.90	1.15	1.56	2.27	2.43	2.60	2.70	2.73	2.80	2.87
JUN 21		.20	.38	.50	.59	.77	.82	1.00	1.13	1.20	1.25	1.44	1.60
AUG 2		.39	.58	.75	.90	1.05	1.67	1.96	2.12	2.12	2.12	2.12	2.12
SEP 18		.23	.32	.37	.38	.38	.39	.39	.39	.39	.39	.39	.39
SEP 30		.20	.33	.40	.43	.47	.51	.69	.76	.83	.89	.95	.97
OCT 6		.17	.31	.45	.57	.77	.95	1.02	1.17	1.25	1.25	1.25	1.26
OCT 28		.26	.37	.47	.48	.50	.57	.64	.68	.79	.84	.85	.90
NOV 8		.25	.39	.49	.55	.62	.75	.86	.94	1.04	1.10	1.22	1.28
ROANOKE													
JUN 14		.26	.52	.72	.78	.79	.80	.80	.81	.81	.81	.81	.81
JUL 4		.14	.28	.34	.44	.57	.60	.67	.85	.93	1.00	1.13	1.24
AUG 15		.20	.30	.40	.60	.72	.73	.74	.74	.74	.74	.81	.81
AUG 19		.30	.40	.42	.43	.44	.48	.48	.48	.48	.48	.48	.48
AUG 27		.22	.36	.39	.60	.69	.70	.70	.70	.70	.70	.70	.70
SEP 27		.26	.40	.46	.47	.50	.51	.53	.54	.60	.68	.72	.72
SEP 29		.30	.38	.38	.40	.41	.52	.62	.77	.78	.79	.84	.85
WALLOPS ISLAND													
APR 15		.20	.40	.44	.47	.50	.50	.50	.50	.50	.50	.50	.50
MAY 8		.20	.25	.31	.35	.48	.76	.96	1.07	1.38	1.48	1.75	1.97
JUN 28		.16	.25	.31	.36	.55	.76	.96	1.17	1.35	1.37	1.37	1.37
JUN 29		.33	.56	.69	.82	1.30	1.36	1.50	1.69	1.75	1.79	1.87	1.91
SEP 27		.17	.29	.33	.42	.44	.45	.46	.46	.46	.46	.46	.47
OCT 6		.23	.37	.43	.49	.63	.67	.74	.76	.79	.83	.87	.94
NOV 8		.32	.47	.51	.60	.67	.93	1.01	1.11	1.15	1.18	1.30	1.45
WASHINGTON													
OLYMPIA							NONE						
QUILLAYUTE							NONE						
SEATTLE TACOMA							NONE						
SPOKANE							NONE						
STAMPEDE PASS							NONE						
WALLA WALLA U							NONE						
YAKIMA													
JUN 8		.17	.30	.34	.35	.35	.36	.36	.36	.36	.36	.36	.36
AUG 15		.26	.43	.48	.51	.51	.52	.52	.52	.52	.52	.52	.52
WEST INDIES													
SAN JUAN P.R.													
MAR 20		.15	.23	.30	.37	.44	.65	.83	1.04	1.14	*1.19	1.21	*1.22
MAR 29		.18	.33	.38	.41	.66	.79	.79	.79	.79	.79	.79	.79
AUG 26		.19	.33	.38	.41	.41	.42	.42	.42	.42	.42	.42	.42
SEP 29		*.38	*.71	*.99	1.00	*1.25	1.64	*1.73	1.79	1.79	*1.79	1.79	*1.79
OCT 28		.22	.38	.46	.49	.56	.57	.58	.58	.58	.59	.62	.62
NOV 10		.27	.39	.48	.54	.69	.74	.74	.74	.74	.74	.74	.74
DEC 10		.34	.54	.71	.91	1.20	1.41	1.42	1.43	1.45	1.45	1.48	1.48
DEC 11		.18	.32	.44	.51	.57	.58	.58	.73	.75	.76	.77	.77
DEC 29		.22	.37	.48	.55	.58	.59	.60	.61	.62	.62	.62	.62
WEST VIRGINIA													
BECKLEY													
JUN 17		.17	.27	.40	.43	.47	.49	.55	.68	.70	.73	.77	.77
JUL 27		.25	.43	.45	.47	.48	.48	.48	.48	.48	.48	.49	.70
JUL 28		.16	.31	.35	.35	.36	.37	.39	.39	.39	.39	.39	.40
AUG 4		.18	.31	.38	.43	.52	.58	.68	.69	.75	.88	.93	.93
SEP 14		.18	.32	.33	.34	.35	.35	.36	.36	.36	.36	.36	.36

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes) 5	10	15	20	30	45	60	80	100	120	150	180
WEST VIRGINIA												
CHARLESTON												
JUN 29	.25	.38	.40	.42	.43	.43	.43	.43	.43	.43	.43	.43
JUL 31	.25	.43	.46	.71	.85	.99	1.01	1.02	1.21	1.30	1.63	1.67
AUG 1	.28	.53	.56	.58	.64	.65	.65	.65	.65	.65	.65	.65
AUG 17	.30	.48	.50	.53	.72	.75	.79	.82	.82	.82	.82	.82
SEP 3	.25	.39	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42
SEP 29	.27	.52	.54	.61	.78	.81	.85	.91	.92	.92	.93	.96
ELKINS												
APR 13	.24	.44	.48	.52	.65	.78	.87	.88	.88	.88	.88	.88
HUNTINGTON												
MAY 30	.18	.31	.34	.41	.48	.49	.50	.50	.50	.50	.50	.50
JUN 4	.30	.60	.79	.89	.91	.91	.91	.91	.91	.91	.91	.91
JUN 13	.27	.48	.49	.51	.56	.56	.59	.59	.59	.59	.59	.59
AUG 19	.28	.47	.49	.49	.52	.55	.56	.56	.56	.56	.56	.56
AUG 27	.24	.35	.36	.36	.36	.40	.55	.71	.71	.74	.74	.75
SEP 23	.24	.29	.38	.43	.57	.82	.82	.83	.83	.83	1.02	1.09
PARKERSBURG U												
MAR 29	.28	.42	.44	.46	.46	.46	.46	.46	.46	.46	.46	.46
APR 13	.28	.51	.59	.64	.76	.83	.84	.84	.85	.85	.85	.85
JUN 4	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUN 29	.25	.45	.50	.57	.68	.69	.71	.71	.71	.87	1.04	1.30
JUL 15	.27	.31	.34	.35	.35	.35	.35	.35	.37	.41	.42	.43
JUL 22	.31	.36	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
AUG 3	.53	.63	.70	.74	.77	.77	.77	.79	.81	.81	.81	.81
AUG 4	.16	.25	.35	.40	.47	.52	.53	.63	.67	.70	.71	.75
AUG 17	.22	.29	.32	.32	.51	.65	.66	.66	.66	.66	.66	.66
AUG 18	.52	.95	1.00	1.25	1.62	1.78	1.78	1.82	1.83	1.84	1.84	1.84
AUG 19	.24	.32	.33	.34	.35	.35	.35	.35	.35	.35	.35	.35
AUG 27	.25	.31	.43	.58	.65	.78	.90	.92	.92	.92	.92	1.03
SEP 3	.17	.34	.40	.45	.53	.56	.56	.57	.58	.81	.84	.88
SEP 12	.42	.65	.88	1.07	1.20	1.32	1.37	1.39	1.39	1.39	1.39	1.39
WISCONSIN												
GREEN BAY												
JUN 14	.29	.52	.54	.55	.55	.55	.55	.55	.55	.55	.55	.55
JUL 20	.48	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
AUG 31	.25	.30	.30	.30	.32	.33	.33	.47	.49	.50	.55	.56
SEP 1	.25	.32	.32	.46	.54	.66	.72	.74	.74	.74	.74	.74
SEP 25	.30	.41	.43	.50	.61	.62	.65	.65	.71	.73	.73	.76

Station and date	Maximum precipitation in inches (5 to 180 minutes) 5	10	15	20	30	45	60	80	100	120	150	180
[illegible]												
MADISON												
MAY 14	.18	[illegible]	.39	.47	.51	.54	.56	.58	.62	.64	.66	.66
JUN 12	.25	.31	.44	.51	.55	.56	.59	.59	.59	.59	.59	[illegible]
JUN 14	.28	.32	.33	.33	.33	.47	.48	.48	.48	.48	.48	.48
JUL 14	.32	.34	.35	.36	.41	.45	.46	.46	.46	.46	.46	.46
AUG 6	.24	.37	.50	.53	[illegible]	[illegible]	.62	.63	.63	.63	.63	.63
AUG 19	.14	.22	.30	.34	.46	.76	.90	.95	1.00	1.04	1.08	1.11
AUG 23	.16	.25	.35	.44	[illegible]	[illegible]	.91	.96	.98	.99	.99	.99
AUG 25	.22	.39	.47	.49	.50	.50	.51	.54	[illegible]	.64	.70	.77
SEP 20	[illegible]	.49	.57	.58	[illegible]	[illegible]	.60	[illegible]	[illegible]	1.19	1.22	1.22
SEP 25	.18	.26	.36	.42	[illegible]	.72	.78	.80	.85	.88	.95	.97
MILWAUKEE												
JUL 2	.20	.34	.39	.53	.68	.76	.86	[illegible]	1.05	1.13	[illegible]	1.30
JUL 12	[illegible]	.45	.47	.48	.50	.51	.51	.52	.53	.53	.53	.53
JUL 14	.52	.88	.90	.90	.90	.90	[illegible]	[illegible]	[illegible]	[illegible]	.93	1.01
AUG 25	.27	.35	.37	[illegible]	.41	.47	.55	.68	.74	.77	[illegible]	1.12
SEP 13	.30	.56	.60	.61	.63	.64	.71	1.12	1.27	1.28	1.30	1.34
SEP 18	.24	.36	.46	.62	[illegible]	1.14	1.42	1.52	1.61	1.65	1.66	1.66
SEP 20	.32	.33	.34	.34	.36	.38	.39	.48	[illegible]	.52	.52	.56
SEP 28	.30	.45	.62	.66	.73	.78	.82	.87	.90	.93	.99	1.01
WYOMING												
CASPER												
JUL 20	.23	.38	.47	.52	.54	.54	.54	.54	.54	.54	.54	.54
AUG 23	.28	.32	.36	.38	.39	.39	.45	.47	.48	[illegible]	.58	.58
CHEYENNE						NONE						
LANDER						NONE						
SHERIDAN						NONE						

Data from airport unless otherwise specified.
U Indicates Urban sites.
R Indicates Rural sites
M No record
T Clock malfunction
* Maximum of record for this duration [illegible] plus 1962 and 1963 data. New records are denoted only for 5, 10, 15, 30, 60, 120, and 180 minutes. The continuity of record at stations that have changed location is described on page 2 of the above reference.
District of Columbia - See Virginia.

SUNSHINE, AMOUNT AND PERCENT

YEAR 1972

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
ALABAMA																										
BIRMINGHAM	140	44	137	43	253	68	319	82	303	70	300	70	275	63	305	74	234	63	192	55	119	38	104	34	2682	60
MONTGOMERY	151	47	151	47	231	62	266	68	228	53	218	51	296	68	270	65	238	64	205	58	80	25	97	31	2430	55
ALASKA																										
ANCHORAGE	113	56	191	72	256	70	301	68	256	47	253	44	240	42	287	59	172	44	100	32	91	42	69	40	2328	51
JUNEAU	84	37	124	45	135	37	185	43	173	33	116	21	339	63	110	23	92	24	88	28	26	11	69	34	1541	34
NOME	75	44	182	73	261	71	238	52	220	38	213	34	288	47	153	30	151	39	82	27	40	21	58	45	1960	43
ARIZONA																										
PHOENIX	289	91	270	85	356	96	369	94	408	95	394	92	406	93	365	88	349	94	230	65	259	83	225	73	3922	88
TUCSON	289	90	267	83	352	95	349	90	375	88	349	82	387	89	349	85	320	86	232	66	275	87	230	74	3775	85
YUMA	290	91	273	85	357	96	362	93	406	95	404	94	403	93	383	93	350	94	241	68	278	88	259	83	4007	90
ARKANSAS																										
FORT SMITH	182	58	182	57	248	67	244	62	317	73	369	85	313	71	314	75	204	55	157	45	126	41	146	48	2803	63
LITTLE ROCK	152	48	176	55	254	68	271	69	365	84	379	87	374	85	358	86	266	72	227	65	186	60	153	50	3162	71
EUREKA U	154	52	121	39	176	47	296	74	202	45	250	55	176	38	253	59	199	53	162	47	143	48	163	57	2295	52
CALIFORNIA																										
FRESNO	82	26	213	68	351	95	347	88	416	95	400	91	420	94	397	95	307	82	222	64	93	30	98	33	3344	75
LOS ANGELES U			224	70	284	77	339	87	368	85	345	80	363	83	338	81	268	72	201	57	213	68	238	77	3180	-
RED BLUFF	198	66	196	63	295	79	347	88	393	88	424	94	448	98	402	94	344	92	261	76	143	48	143	49	3593	81
SACRAMENTO	146	48	201	64	332	89	332	84	402	91	406	91	440	97	415	98	331	89	232	67	128	42	137	46	3502	79
SAN DIEGO	261	82	232	72	230	62	313	80	284	66	229	54	341	78	296	72	242	65	204	58	242	77	210	68	3084	69
SAN FRANCISCO U	208	68	172	55	303	82	334	85	332	75	328	74	350	78	338	80	304	81	178	51	166	54	138	46	3150	71
COLORADO																										
DENVER	196	65	211	68	230	62	233	58	278	62	294	65	278	61	277	65	240	64	145	42	157	52	180	62	2719	61
GRAND JUNCTION	205	68	232	74	299	81	248	63	327	74	317	71	348	77	303	71	259	69	140	40	134	44	189	64	3002	67
PUEBLO	240	79	258	82	315	85	328	83	346	78	356	80	348	77	347	82	297	80	187	54	185	61	186	63	3392	76
CONNECTICUT																										
HARTFORD	183	62	171	56	178	48	246	61	269	60	183	40	258	56	256	60	192	51	217	63	122	41	85	30	2361	53
DIST/COLUMBIA																										
WASHINGTON NAT.L	124	41	167	54	191	51	220	55	248	56	190	43	240	53	277	65	152	41	184	53	142	41	96	33	2230	50
FLORIDA																										
APALACHICOLA U	245	75	244	75	330	89	356	92	379	89	370	88	400	93	358	87	350	95	310	87	228	71	235	74	3804	86
JACKSONVILLE	132	41	150	47	278	75	283	73	219	52	266	63	304	71	200	49	282	76	196	55	116	36	163	51	2589	58
KEY WEST	296	88	285	87	347	93	325	85	344	83	250	61	335	80	315	78	282	77	297	83	235	71	249	75	3560	80
LAKELAND U	172	52	183	56	295	79	298	77	256	61	286	69	300	70	210	52	254	69	230	64	124	38	218	67	2824	64
TAMPA	199	60	191	59	305	82	316	82	301	72	276	66	310	73	245	61	262	71	247	69	135	42	176	54	2963	67
GEORGIA																										
ATLANTA	141	44	142	44	248	67	296	76	254	59	310	72	289	66	279	67	239	64	205	58	143	46	118	38	2663	60
MACON	132	41	133	42	270	73	304	78	246	57	317	74	336	77	298	72	269	73	229	65	131	42	151	49	2816	63
SAVANNAH	123	39	153	48	265	71	284	73	248	58	322	75	328	76	275	67	303	82	234	66	127	40	112	36	2773	62
HAWAII																										
HILO	95	27	71	21	203	54	84	22	160	39	157	39	105	26	195	49	115	31	107	30	85	25	133	39	1509	34
HONOLULU	207	61	186	56	277	74	213	56	302	74	264	66	269	65	287	72	295	80	241	67	211	63	130	38	2880	65
KAHULUI	228	67	191	57	242	65	236	62	295	73	290	72	292	71	278	70	300	81	275	76	256	77	213	63	2880	70
LIHUE	161	47	134	40	232	62	163	43	240	59	236	59	212	51	270	68	233	63	191	53	157	47	156	46	2384	54
IDAHO																										
BOISE	104	36	128	42	260	70	259	64	363	80	359	78	417	89	372	86	295	79	239	70	80	28	105	38	2979	67
POCATELLO	109	37	135	44	255	69	261	65	354	78	316	69	380	82	323	75	249	66	198	58	73	25	76	27	2728	61
ILLINOIS																										
CAIRO U	126	41	175	55	220	59	244	62	293	67	335	76	298	67	296	71	164	44	154	44	84	28	94	31	2483	56
CHICAGO MIDWAY	162	55	148	48	210	57	216	54	317	70	365	80	379	82	314	73	224	60	161	47	62	21	82	29	2640	59
MOLINE	159	54	164	53	182	49	157	39	286	64	327	72	274	59	272	64	211	56	144	42	60	20	107	37	2341	53
PEORIA	156	52	169	55	210	57	205	51	331	74	341	76	229	50	246	58	153	41	124	36	52	17	84	29	2299	52
SPRINGFIELD	170	56	161	52	204	55	195	49	300	67	339	76	294	65	269	63	198	53	141	41	60	20	114	39	2444	55
INDIANA																										
EVANSVILLE	161	53	166	53	232	62	197	50	317	72	384	87	306	68	305	72	188	50	173	50	70	23	98	33	2595	58
FORT WAYNE	165	55	170	55	150	41	239	60	311	69	307	68	334	73	278	65	224	60	163	47	65	22	66	23	2473	55
INDIANAPOLIS	169	56	163	52	211	57	214	54	318	71	280	63	283	62	246	58	165	44	139	40	71	24	88	30	2347	53
IOWA																										
DES MOINES	158	53	175	57	171	46	163	41	286	63	324	71	255	55	262	61	198	53	174	51	84	28	122	43	2370	53
SIOUX CITY	190	65	200	65	236	64	192	48	242	53	305	67	301	65	287	67	212	57	183	53	75	26	126	44	2549	57
KANSAS																										
CONCORDIA	201	67	250	80	308	83	235	59	284	64	410	92	386	85	330	78	246	66	127	37	118	39	166	57	3061	69
DODGE CITY	237	77	205	65	280	75	258	65	308	70	376	85	326	73	299	71	243	65	138	40	146	48	178	60	2994	67
TOPEKA	188	62	191	61	229	62	188	47	242	54	316	71	232	51	286	68	194	52	136	39	96	32	140	48	2439	55
WICHITA	212	69	198	63	264	71	241	61	281	64	353	80	286	64	287	68	188	50	141	40	117	38	146	49	2714	61
KENTUCKY																										
LOUISVILLE	144	47	163	52	202	54	213	54	283	64	299	67	251	56	266	63	179	48	150	43	68	22	93	31	2310	52
LOUISIANA																										
SHREVEPORT	153	48	171	51	219	59	212	54	308	72	264	62	332	76	323	78	212	57	215	61	158	50	125	40	2693	61
MAINE																										
PORTLAND	142	49	197	65	152	41	230	57	230	50	148	32	261	56	300	69	208	55	193	56	114	39	88	31	2261	51
MARYLAND																										
BALTIMORE	156	52	172	55	204	55	232	58	236	53	194	43	241	53	286	68	182	49	186	54	125	41	106	36	2319	52
MASSACHUSETTS																										
BLUE HILL OBS R	144	50	152	51	147	41	196	50	206	47	185	42	265	60	277	67	192	53	182	55	110	39	73	27	2128	49
BOSTON	162	55	150	49	163	44	222	55	216	48	185	41	324	70	279	65	203	54	181	53	102	35	60	21	2247	50
MICHIGAN																										
ALPENA	122	43	119	39	177	48	227	56	313	68	252	54	323	68	217	50	212	56	131	39	50	17	54	20	2194	49
DETROIT METRO.	130	44	150	49	165	45	224	56	305	67	270	59	328	71	264	61	197	53	139	41	39	13	36	13	2246	50
GRAND RAPIDS	92	31	117	38	164	44	251	62	295	65	269	59	302	65	215	50	182	48	118	35	41	14	24	9	2068	53
LANSING	92	31	99	32	133	36	189	47	270	59	206	45	269	58	217	50	194	52	129	38	37	13	44	15	1878	42
MARQUETTE U	136	48	143	48	188	51	203	50	329	71	286	60	248	52	206	47	188	50	96	28	47	17	42	16	2112	47
SAULT STE MARIE	84	30	130	43	215	58	264	65	338	73	277	59	292	61	194	44	207	55	109	32	86	30	60	22	2256	51

SUNSHINE, AMOUNT AND PERCENT

YEAR 1972

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
MINNESOTA																										
DULUTH	121	43	129	43	178	48	191	47	[illegible]	62	322	68	241	50	204	47	163	43	131	39	32	11	76	28	2080	47
MINNEAPOLIS	175	61	182	63	260	70	202	50	270	[illegible]	351	75	310	66	270	62	191	51	154	45	38	[illegible]	[illegible]	29	2483	56
MISSISSIPPI																										
JACKSON	184	57	159	49	264	71	291	[illegible]	287	67	[illegible]	72	320	74	334	81	253	68	231	[illegible]	125	40	111	36	2868	65
MISSOURI																										
COLUMBIA REGIONAL	182	60	178	57	212	57	210	53	308	69	385	86	273	60	267	63	188	50	134	39	86	[illegible]	126	43	2548	57
KANSAS CITY	176	58	185	59	244	66	232	59	295	66	322	72	178	39	249	59	221	59	[illegible]	57	108	36	171	58	2576	58
ST LOUIS	192	63	186	60	247	66	201	51	305	[illegible]	355	80	267	59	261	62	197	53	[illegible]	43	73	24	86	29	2520	57
SPRINGFIELD	164	53	167	53	231	62	220	56	291	66	356	81	298	66	306	73	209	56	147	42	91	30	127	42	2604	59
MONTANA																										
BILLINGS	87	31	115	38	223	60	199	49	247	[illegible]	321	68	303	64	310	71	248	66	204	60	96	33	82	[illegible]	2434	55
GREAT FALLS	87	31	104	35	232	63	285	70	274	58	351	74	331	69	348	79	266	70	221	66	137	[illegible]	75	[illegible]	2711	61
HAVRE	113	41	191	64	277	75	323	79	338	71	397	82	380	78	366	82	255	67	230	68	97	35	[illegible]	42	3074	69
HELENA	68	24	122	41	249	67	282	69	272	58	326	69	306	64	284	65	263	70	199	59	125	44	93	35	2589	58
MISSOULA	65	23	109	36	138	37	[illegible]	51	272	58	290	61	318	66	344	78	253	67	141	42	90	32	74	28	2298	51
NEBRASKA																										
LINCOLN	183	61	179	64	215	58	199	50	239	53	332	74	232	51	262	61	221	59	147	43	77	26	121	42	2427	54
NORTH PLATTE	157	53	192	62	266	72	209	52	263	59	291	64	319	70	315	74	245	66	162	47	124	42	168	58	2712	61
OMAHA	197	66	206	67	266	72	[illegible]	54	262	58	[illegible]	68	307	67	299	70	234	63	168	49	62	21	112	39	2638	59
VALENTINE	152	52	188	61	218	59	191	48	257	56	281	61	316	68	325	76	265	71	169	49	125	43	121	43	2608	58
NEVADA																										
ELY	255	84	259	83	340	92	279	70	331	74	327	73	377	83	345	81	299	80	208	60	135	45	210	72	3363	76
LAS VEGAS	285	92	292	92	358	97	[illegible]	86	412	94	375	86	420	95	372	89	315	85	192	[illegible]	215	70	219	72	4170	85
RENO	278	92	191	61	330	89	339	85	425	96	412	92	443	98	397	93	332	89	276	80	190	63	172	59	3786	85
WINNEMUCCA	163	55	147	47	260	70	285	71	372	83	375	83	425	93	373	87	277	74	212	62	82	28	123	43	3093	69
NEW HAMPSHIRE																										
CONCORD	158	54	147	48	136	37	221	55	217	48	151	33	246	53	261	60	183	49	180	53	87	30	67	24	2055	46
MT WASHINGTON OBS	103	35	98	32	88	23	149	36	232	50	67	14	126	27	146	33	132	35	134	39	98	33	47	17	1420	[illegible]
NEW JERSEY																										
ATLANTIC CITY	125	41	131	42	150	40	214	54	232	52	211	47	271	60	272	64	159	43	169	49	112	37	69	24	2115	47
TRENTON U	166	55	172	55	197	53	223	56	221	49	178	40	279	61	291	68	183	49	197	57	115	38	63	22	2285	51
NEW MEXICO																										
ALBUQUERQUE	282	90	270	85	329	89	324	83	352	81	340	78	315	71	305	73	290	78	189	54	205	66	227	74	3427	77
NEW YORK																										
ALBANY	134	46	173	56	167	45	222	55	245	54	158	35	251	54	261	61	184	49	155	45	72	24	49	17	2070	46
BINGHAMTON	128	43	118	39	169	46	213	53	234	52	152	33	271	59	277	65	172	46	127	37	55	19	44	15	1961	922
BUFFALO	103	35	125	41	142	38	226	56	276	61	214	47	330	71	250	58	208	55	111	33	70	24	21	[illegible]		
NEW YORK U	150	50	144	46	189	51	210	52	212	47	130	29	288	63	275	65	161	43	186	54	105	35	70	24	2120	48
ROCHESTER	150	51	134	44	192	52	254	63	286	63	246	54	340	73	291	67	216	58	134	39	46	16	10	3	2298	52
SYRACUSE	132	45	114	37	174	47	230	57	280	62	134	29	251	54	245	57	197	53	119	35	67	23	25	9	1969	44
NORTH CAROLINA																										
ASHEVILLE	189	61	212	67	262	71	295	75	278	64	346	79	247	56	247	59	276	74	264	75	172	56	135	45	2816	66
CAPE HATTERAS R	96	31	162	51	217	58	227	58	174	40	276	63	279	63	283	68	193	52	181	52	149	48	113	37	2349	53
CHARLOTTE	133	43	169	53	246	66	294	75	286	66	337	77	259	59	286	69	292	78	240	68	191	62	118	39	2851	64
GREENSBORO	152	49	173	55	227	61	251	64	238	55	288	66	263	59	258	62	215	58	184	53	169	55	112	37	2531	57
RALEIGH	172	55	182	57	265	71	254	65	205	47	225	52	212	48	272	65	228	61	202	58	168	54	120	40	2505	56
WILMINGTON	124	39	165	52	232	63	267	68	231	54	322	75	262	60	222	53	228	61	198	56	166	53	122	40	2540	57
NORTH DAKOTA																										
BISMARCK	118	42	141	47	225	61	221	54	282	60	314	66	289	60	310	71	230	61	153	45	75	27	120	45	2478	55
FARGO	152	54	142	48	224	61	225	55	256	55	347	73	310	65	263	60	173	46	161	48	40	14	113	42	2406	54
WILLISTON	125	45	179	60	161	44	202	49	260	55	345	72	330	68	327	74	174	46	166	50	54	19	100	38	2423	54
OHIO																										
CINCINNATI OBS	106	35	123	40	209	56	217	55	265	60	238	53	226	50	252	59	162	43	124	36	35	12	47	16	2006	45
CLEVELAND	142	48	122	39	125	34	216	54	284	63	225	50	291	63	273	64	185	49	140	41	38	13	14	5	2055	46
COLUMBUS	117	39	110	35	123	33	214	54	258	58	233	52	207	45	238	56	156	42	144	39	50	17	35	12	1875	42
DAYTON	159	53	150	48	181	49	187	47	254	57	224	50	244	54	297	70	200	54	171	49	46	15	75	26	2188	49
TOLEDO	128	43	116	38	152	41	211	53	283	63	198	44	296	64	252	59	178	48	142	41	55	19	47	16	2057	46
OKLAHOMA																										
OKLAHOMA CITY	194	62	[illegible]	64	269	73	252	64	289	66	354	81	347	78	[illegible]	74	220	59	181	52	135	44	133	44	2886	65
TULSA	156	50	174	55	262	70	266	68	317	73	355	81	319	72	296	71	[illegible]	46	152	44	128	42	141	47	2736	61
OREGON																										
PORTLAND	68	24	80	27	167	45	224	55	322	70	310	66	381	81	346	79	206	55	173	51	70	25	71	26	2418	54
PACIFIC AREA																										
GUAM TAGUAC R	276	78	257	76	171	46	251	67	252	64	244	63	211	53	143	37	117	32	155	42	155	45	198	56	2430	55
KOROR R	140	39	189	55	197	[illegible]	219	[illegible]	252	65	180	48	219	57	[illegible]	49	212	58	244	66	206	58	208	57	2455	55
MAJURO	220	60	182	53	178	47	195	53	182	47	219	58	142	37	226	59	186	51	126	34	275	78	188	52	2318	52
PAGO PAGO	140	35	172	47	[illegible]	34	53	15	180	51	141	42	178	[illegible]	187	52	[illegible]	36	[illegible]	35	209	55	201	50	1855	42
PONAPE R	167	46	151	44	243	65	220	60	202	52	263	70	202	52	276	72	201	55	212	57	303	85	285	78	2725	62
TRUK MOEN ISLAND	253	70	219	63	264	71	237	64	274	71	262	70	261	67	249	65	197	54	217	59	180	51	170	47	2781	63
WAKE	226	66	246	74	226	61	183	49	260	64	261	65	261	64	289	73	229	62	207	57	184	56	231	68	[illegible]	63
YAP R	258	72	252	73	268	72	312	84	302	78	270	71	266	68	273	71	250	69	293	79	268	76	286	80	3298	74
PENNSYLVANIA																										
HARRISBURG	137	46	155	50	[illegible]	54	239	[illegible]	277	62	197	44	278	61	[illegible]	71	197	53	191	55	112	37	60	21	2346	53
PHILADELPHIA	164	55	165	53	182	49	224	56	238	53	199	44	267	59	291	69	164	44	188	54	124	41	68	23	2273	51
PITTSBURGH	149	50	118	38	[illegible]	41	200	50	243	54	192	43	144	31	209	49	168	45	131	38	65	22	34	12	1803	40
PITTSBURGH U	135	45	107	34	146	39	195	49	239	53	178	39	145	32	204	48	161	43	122	35	63	21	26	9	1721	39
SCRANTON	154	52	164	53	178	48	216	54	244	54	154	34	265	58	277	65	173	46	160	46	73	25	51	18	2106	47
RHODE ISLAND																										
PROVIDENCE	151	51	175	57	[illegible]	43	207	52	226	50	174	38	276	60	287	67	[illegible]	53	197	57	110	37	76	27	2238	50
SOUTH CAROLINA																										
CHARLESTON	183	58	174	54	266	71	289	74	215	50	307	72	291	67	231	56	239	64	195	55	126	40	88	28	2604	59
COLUMBIA	161	51	173	54	280	76	287	73	228	[illegible]	288	67	372	85	254	61	266	72	209	59	175	56	130	42	2822	63
GNVLE SPARTANBURG	125	40	168	53	235	63	287	73	220	51	292	67	282	64	241	58	218	59	231	66	175	56	111	36	2584	58

SUNSHINE, AMOUNT AND PERCENT

YEAR 1972

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
SOUTH DAKOTA																										
HURON	224	78	243	90	209	56	235	58	229	50	315	68	310	66	295	68	254	68	169	50	72	25	105	38	2659	60
RAPID CITY	125	43	172	56	255	69	168	42	218	48	197	43	283	60	332	77	268	71	182	53	126	43	151	54	2475	55
TENNESSEE																										
CHATTANOOGA	134	43	150	47	195	52	245	62	242	55	288	66	250	57	279	67	199	53	163	46	95	30	77	25	2317	52
KNOXVILLE	97	31	128	40	188	51	221	56	244	56	279	64	248	56	277	66	201	54	181	52	114	37	75	25	2254	51
MEMPHIS	167	53	[illegible]	64	212	57	259	66	313	72	362	83	361	82	337	81	191	51	197	56	124	40	108	35	2832	64
NASHVILLE	148	48	169	53	203	55	248	63	277	63	263	60	264	59	282	67	203	55	163	47	85	27	94	31	2397	54
TEXAS																										
ABILENE	205	64	256	80	326	88	341	88	368	86	383	90	358	82	316	77	315	85	226	64	206	65	225	72	3524	79
AMARILLO	218	70	245	77	297	80	325	83	323	74	362	83	340	77	317	76	269	72	221	63	170	55	182	60	3269	73
AUSTIN	168	52	217	67	249	67	255	66	293	69	318	75	311	72	295	72	230	62	207	58	159	50	153	48	2853	64
BROWNSVILLE	120	36	172	52	255	68	301	78	282	68	315	76	339	81	346	86	289	78	262	73	147	45	128	39	2956	67
CORPUS CHRISTI	147	45	198	61	230	62	226	59	270	64	352	85	332	78	328	81	256	69	234	66	157	49	147	46	2878	65
DALLAS	172	54	217	68	277	75	260	67	286	67	295	69	361	83	290	70	201	54	193	55	167	53	166	54	2885	65
EL PASO	283	88	279	87	356	96	358	92	338	79	375	88	363	84	312	76	304	82	272	77	274	86	272	87	3784	85
GALVESTON U	145	44	169	52	236	63	270	70	289	69	317	75	300	70	320	78	233	63	218	61	100	31	109	34	2705	61
HOUSTON INTERCON	144	44	161	50	214	57	240	62	275	65	274	65	259	60	264	65	203	55	222	63	141	44	134	42	2529	57
PORT ARTHUR	145	45	173	54	240	65	199	51	247	58	288	68	241	56	277	68	209	56	237	67	141	44	121	38	2519	57
SAN ANTONIO	160	49	221	66	229	62	227	59	217	51	266	63	277	64	273	67	208	56	188	53	157	49	143	45	2565	58
UTAH																										
SALT LAKE CITY	166	56	221	71	284	77	251	63	362	81	346	77	409	89	362	85	294	79	192	56	75	25	104	36	3065	69
VERMONT																										
BURLINGTON	130	45	164	54	174	47	238	59	259	57	180	39	240	51	225	52	202	54	133	39	44	15	63	23	2051	46
VIRGINIA																										
LYNCHBURG	146	48	156	50	230	62	241	61	247	56	236	54	241	54	248	59	190	51	175	50	143	47	120	40	2373	53
NORFOLK	170	55	194	61	231	62	261	66	251	57	329	75	288	65	294	70	212	57	184	53	156	51	131	44	2700	61
RICHMOND	141	46	181	58	238	64	220	56	222	50	290	66	278	62	304	72	189	51	171	49	160	52	117	39	2512	56
WASHINGTON																										
QUILLAYUTE	48	17	62	21	70	19	108	26	141	30	141	29	243	50	256	58	174	46	175	52	73	26	50	19	1541	34
SEATTLE TACOMA	63	23	77	26	139	38	206	50	226	48	218	46	354	74	325	74	178	47	145	43	87	31	60	23	2078	46
SPOKANE	98	35	93	31	167	45	241	59	290	62	245	51	344	71	359	81	240	64	254	76	85	31	78	30	2493	56
WALLA WALLA U	46	16	42	14	161	44	226	55	341	73	307	65	364	77	371	85	266	71	259	77	94	33	117	43	2594	58
WEST INDIES																										
SAN JUAN P.R.	245	71	239	71	252	67	254	67	246	61	189	48	237	58	187	47	217	59	121	33	154	46	90	26	2431	55
WEST VIRGINIA																										
PARKERSBURG U	139	46	107	34	166	45	265	67	280	63	219	49	258	57	267	63	206	55	145	42	91	30	46	16	2190	49
WISCONSIN																										
GREEN BAY	166	58	143	47	204	55	186	46	347	76	323	70	278	59	213	49	178	47	166	49	60	21	88	32	2351	53
MADISON	138	47	125	41	200	54	178	44	287	63	294	64	246	53	222	51	179	48	158	46	64	22	70	25	2159	48
MILWAUKEE	148	50	161	53	184	50	207	51	292	64	292	64	308	66	240	56	204	54	166	48	59	20	90	32	2349	53
WYOMING																										
CHEYENNE	172	58	198	64	260	70	234	58	233	52	284	63	261	57	254	59	245	66	147	43	129	43	182	63	2597	58
LANDER	202	69	197	64	297	80	261	65	264	58	311	68	310	67	277	64	293	78	165	48	107	37	169	60	2854	64
SHERIDAN	116	40	114	38	230	62	237	59	229	50	314	67	304	65	287	66	239	64	195	57	139	48	126	46	2532	57

Data from airport unless otherwise specified.
"U" indicates Urban, "R" indicates Rural, sites.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow †: Total	Greatest in 24 hours	Date (s)	Relative humidity: 100am EST	700am EST	100pm EST	700pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-03	Partly cloudy, 04-07	Cloudy, 08-10	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	Max temp: 32.2°C and above	0°C and below	Min temp: 0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm		%	%	%	%	Mps	Mps		M.p.s.			Tenths											
ALABAMA																																					
BIRMINGHAM	22.6	[illegible]	16.6	36.1	AUG 20	-13.9	JAN 16	1529	928	1335	[illegible]	JAN 9-10	T	T	MAR 3+	78	81	59	63	3.0		26	16.1	SW	APR 16	6.2	89	118	159	124	[illegible]	[illegible]	6	45	[illegible]	48	[illegible]
HUNTSVILLE	[illegible]	[illegible]	[illegible]	34.4	AUG 20+	[illegible]	JAN 16	1717	[illegible]	1308	[illegible]	JAN 3-4	8	8	JAN 5	81	85	[illegible]	65	3.7	.1	15	17.9	26	MAR 28	6.1	[illegible]	97	162	138	[illegible]	58	[illegible]	24	[illegible]	52	[illegible]
MOBILE	26.4	14.9	[illegible]	[illegible]	AUG [illegible]	-6.1	JAN 16	739	1636	1264	114	MAY 7-8	0	0		86	89	59	[illegible]	3.8	.4	[illegible]	17.9	33	JUN 25	6.2	84	124	158	117	0	[illegible]	43	108	[illegible]	16	[illegible]
MONTGOMERY	24.8	12.4	18.7	[illegible]	JUN 6	-10.6	JAN 16	1116	1279	1197	[illegible]	JUL 29-30	0	0		81	86	58	62	3.2	.3	32	19.7		MAR 16	5.8	101	132	133	95	[illegible]	52	[illegible]	[illegible]	[illegible]	29	[illegible]
ALASKA																																					
ANCHORAGE	[illegible]	[illegible]	[illegible]	26.7	JUL 6	-33.3	JAN 11	6675	3	372	26	OCT 10-11	1654	216	FEB 31-1	77	68	74	79	3.3	.2	2	16.5	[illegible]	FEB 24+	6.8	86	56	224	[illegible]	18	[illegible]	24	15	[illegible]	[illegible]	[illegible]
ANNETTE	[illegible]	[illegible]	6.4	29.4	JUL 20	-13.9	JAN 12	4330	9	2492	103	OCT 23-24	2812	312	JAN 3	78	71	81	84	4.2	1.2	13	17.9	12	NOV 21	[illegible]	44	74	258	[illegible]	29	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]
BARROW	[illegible]	-15.2	-11.9	[illegible]	JUL 8	-41.1	FEB 15	[illegible]	[illegible]	125	13	AUG 9-10	1041	135	OCT 11-12	76	74	77	77				17.9	25	NOV 1		[illegible]	[illegible]	168	[illegible]	13	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
BARTER ISLAND	-9.3	-16.1	[illegible]	[illegible]	JUL 18	-43.9	FEB 14	11142	0	119	[illegible]	OCT 5-6	859	109	OCT 5-6	82	80	81	83	6.9	[illegible]	29	29.9	28	JAN 12		51	[illegible]	[illegible]	[illegible]	9	[illegible]	[illegible]		264	[illegible]	[illegible]
BETHEL	[illegible]	-6.7	[illegible]	28.3	JUL [illegible]	-34.4	JAN 1	7765	[illegible]	323	19	OCT 27-28	848	109	APR 17-18	83	73	79	85	5.7	1.0	4	[illegible]	15	JAN [illegible]	6.9	87	61	218	[illegible]	8	8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BETTLES	[illegible]	-12.4	[illegible]	[illegible]	JUL 11	[illegible]	JAN [illegible]	9378	49	340	34	OCT 14-15	2385	211	JAN 26-27	69	63	68					13.4	[illegible]	DEC [illegible]					89	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BIG DELTA	[illegible]	[illegible]	-4.4	[illegible]	JUN 14	[illegible]	JAN [illegible]	[illegible]	32	241			1379			[illegible]	54	72												[illegible]	22	3	9	[illegible]	[illegible]	[illegible]	[illegible]
COLD BAY	[illegible]	-1.1	[illegible]	[illegible]	AUG 5+	[illegible]	MAR 15	[illegible]	[illegible]	964	87	NOV 26-27	1516	86	DEC 20-21	87	92	86	88	7.7	1.4	[illegible]	[illegible]	16	NOV 26	8.5	[illegible]	43	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FAIRBANKS	[illegible]	[illegible]	[illegible]	[illegible]	JUN 14	[illegible]	JAN [illegible]	8254	53	216	13	SEP 25-26	2055	249	DEC 12-13	65	53	59	69	2.7	.5	35	[illegible]	29	DEC [illegible]	6.6	[illegible]	[illegible]	[illegible]	119	[illegible]	6	14	[illegible]	[illegible]	[illegible]	[illegible]
GULKANA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 6+	[illegible]	JAN [illegible]	8623	3	[illegible]	[illegible]	JUL 27	1534	269	MAR 12-13	74	61	68					14.3	18	APR [illegible]	6.4	38	[illegible]	[illegible]	[illegible]	18	5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOMER	[illegible]	-3.1	[illegible]	[illegible]	[illegible]	[illegible]	JAN 1	6287	[illegible]	498	24	[illegible]	1725	188	APR 19-[illegible]	79	71	76					[illegible]	9	[illegible] 4	6.8	54	[illegible]	[illegible]	[illegible]	18	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUNEAU	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JAN [illegible]	5557	[illegible]	1363	58	OCT 5-6	3815	259	DEC 13-14	77	[illegible]	79	83	3.7	2.1	[illegible]	[illegible]	[illegible]	[illegible] 2	7.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KING SALMON	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 7+	-36.7	JAN 9	7114	[illegible]	419	23	NOV 16	932	84	JAN 31	81	69	76	82	5.1	.7	9	20.6	14	JAN 26	7.2	[illegible]	[illegible]	[illegible]	148	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KOTZEBUE	[illegible]	[illegible]	[illegible]	24.4	[illegible]	[illegible]	JAN 13	8877	8	173	[illegible]	SEP 3-4	1336	117	APR 9	77	72	75	79	6.0	1.1	[illegible]	[illegible]	[illegible]	DEC 11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
McGRATH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JAN [illegible]	8324	13	395	19	JUL 11	2164	[illegible]	APR 17	72	59	65	76	[illegible]	.3	[illegible]	[illegible]	18	MAR 25	6.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8	9	[illegible]	[illegible]	[illegible]	[illegible]
NOME	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-35.6	MAR 22+	7972	14	[illegible]	[illegible]	SEP 8-9	1331	193	NOV 26-27	73	69	72	74	4.5	[illegible]	7	[illegible]	6	DEC [illegible]	6.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ST. PAUL ISLAND	[illegible]	[illegible]	[illegible]	[illegible]	AUG [illegible]	[illegible]	FEB [illegible]	[illegible]	[illegible]	552	28	JUN 7-8	1676	145	FEB 8	92	89	91	[illegible]	5.4	[illegible]	5	[illegible]	16	NOV [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SHEMYA	[illegible]	[illegible]	5.8	15.6	AUG 28	-9.4	NOV 22	5278	[illegible]	682	25	JUN 6	1123	89	MAR 21	85	82	83	[illegible]	8.2	1.1	[illegible]	[illegible]	25	JAN 3	8.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SUMMIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-37.8	JAN [illegible]	8587	[illegible]	362	26	SEP 12-13	3713	371	JAN 28	75	66	71	77				15.6	[illegible]	NOV 25+	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	10	9	[illegible]	[illegible]	[illegible]	[illegible]
TALKEETNA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-44.4	JAN [illegible]	7239	[illegible]	[illegible]	48	SEP 12	3698	333	JAN 31	76	66	74					[illegible]	4	JAN 15					[illegible]	[illegible]	2	4	[illegible]	[illegible]	[illegible]	[illegible]
UNALAKLEET	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JAN 14	[illegible]	19	[illegible]	20	JUN [illegible]	584	56	DEC 28+	74	71	72					[illegible]	[illegible]	MAR 14	6.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YAKUTAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-28.9	MAR 4	5861	[illegible]	2920	121	[illegible] 11-12	6759	[illegible]	MAR 9-10	[illegible]	78	86	89	[illegible]	[illegible]	[illegible]	17.9	[illegible]	[illegible] 2+	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ARIZONA																																					
FLAGSTAFF	[illegible]	[illegible]	6.6	34.4	[illegible]	[illegible]	DEC 14	4279	56	627	69	OCT 6-7	1671	[illegible]	NOV 11-12	[illegible]	31	52	[illegible]	3.1	[illegible]	22	[illegible]	[illegible]	DEC 28	4.3	[illegible]	[illegible]	[illegible]	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PHOENIX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JAN 5	[illegible]	2274	[illegible]	58	OCT 18-19	[illegible]	0		30	[illegible]	36	48	[illegible]	.6	15	26.4	[illegible]	[illegible] 7	3.4	219	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TUCSON	[illegible]	[illegible]	19.6	[illegible]	[illegible]	[illegible]	JAN 4	983	[illegible]	[illegible]	59	[illegible] 15-16	0	0		[illegible]	[illegible]	46	54	3.6	[illegible]	18	[illegible]	N	[illegible] 1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WINSLOW	[illegible]	4.8	[illegible]	[illegible]	[illegible] 14	-15.0	FEB 4	2413	[illegible]	311	51	OCT 18-19	[illegible]	[illegible]	OCT [illegible]-31	[illegible]	[illegible]	48	59	[illegible]	1.5	22	23.2	22	APR [illegible]	[illegible]	[illegible]	99	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]
YUMA	[illegible]	[illegible]	22.9	[illegible]	AUG 1	-1.1	DEC 31+	569	2284	83	56	OCT [illegible]-6	[illegible]	0		[illegible]	22	[illegible]	52	3.4	.3	26	[illegible]	[illegible]	[illegible] 6	2.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ARKANSAS																																					
FORT SMITH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JAN 5	[illegible]	[illegible]	852	77	NOV 31-1	81	25	NOV [illegible]	[illegible]	86	56	[illegible]	3.4	[illegible]	[illegible]	18.3	[illegible]	APR [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LITTLE ROCK	[illegible]	[illegible]	16.7	[illegible]	[illegible]	[illegible]	JAN 16+	1738	[illegible]	1143	99	NOV 6-7	28	[illegible]	DEC [illegible]	78	84	56	[illegible]	3.6	[illegible]	[illegible]	[illegible]	NW	[illegible] 25+	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00am EST	7:00am EST	1:00pm EST	7:00pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
CALIFORNIA	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths											
BAKERSFIELD	24.6	12.2	18.4	45.0	JUL 15	-4.4	JAN 9	1269	1339	108	28	JUN 6-7	0	0		56	41	58	70	3.5	1.5	34	18.3	15	JUN 7	3.9	194	84	88	23	0	6	31	101	0	24	0
BISHOP	23.8	3.3	13.6	42.8	JUL 16+	-14.4	DEC 14+	2290	599	62	12	NOV 14	T	T	NOV 14 +	28														23	0			81	2	134	0
BLUE CANYON	14.4	5.6	10.1	35.0	JUL 14	-16.1	DEC 9	3243	264	1473	96	NOV 3-4	5552	673	FEB 24-25	47							14.8	3	JAN 3	4.7	167	74	125	93	32			5	18	97	0
EUREKA U	14.0	8.2	11.1	23.9	APR 4	-6.1	DEC 9	2611	1	995	66	JAN 20-21	89	48	DEC 6-7								17.9	N	APR 17	7.1	65	84	217	115	1			0	0	16	0
FRESNO	24.1	9.7	16.9	43.9	JUL 15	-5.0	DEC 9	1501	1028	190	25	NOV 10-11	T	T	DEC 7 +	60	42	66	80	3.0	1.1	30	14.3	NW	JUN 9	4.3	181	81	104	36	0	2	55	103	2	30	0
LONG BEACH	23.3	12.3	17.8	37.8	JUL 27	.0	DEC 12	771	648	153	41	NOV 16	0	0		59	52	73	78	2.8	.9	24	13.9	27	NOV 11	4.7	154	114	98	20	0	8	31	20	0	1	0
LOS ANGELES	21.4	13.4	17.4	35.0	OCT 6	2.8	DEC 11+	714	421	181	45	OCT 18-19	0	0		63	64	77	81	3.5	1.8	25	20.1		DEC 4+	4.8	151	111	104	19	0	6	29	2	0	0	0
LOS ANGELES U	24.6	13.7	19.2	38.9	AUG 22+	1.7	DEC 11	510	872	166	36	DEC 4	0	0									14.8	N	OCT 30	4.0	181	112	73	22	0			36	0	0	0
MT SHASTA R	16.3	2.8	9.6	39.4	AUG 7+	-20.6	DEC 10+	3367	210	617	50	NOV 15-16	1364	325	JAN 26-27	57	47													97	16			25	17	130	4
OAKLAND	17.6	10.7	14.1	37.2	JUL 14	-3.3	DEC 11+	1578	82	413	36	OCT 11	T	T	DEC 12	75	68	82	85	4.0	1.8	28	13.4	16	NOV 13	5.0	137	124	105	68	0	1	16	2	0	7	0
RED BLUFF	23.6	9.6	16.6	48.3	JUL 15	-6.7	DEC 10+	1682	1094	438	46	NOV 13-14	396	234	DEC 5-6	54	40	62	72	3.8	.1	28	18.8	SE	DEC 21	4.5	174	73	119	72	3	7	26	106	2	35	0
SACRAMENTO	22.7	8.7	15.7	45.6	JUL 14+	-6.7	DEC 13+	1613	701	353	30	NOV 10-11	T	T	DEC 12 +	64	46	73	82	3.4	1.5	21	16.5	NW	JAN 3	4.5	170	87	109	66	0	6	47	78	1	29	0
SANDBERG R	18.0	7.4	12.7	38.3	JUL 14	-11.7	DEC 9	2467	453	122	39	NOV 13-14	97	48	NOV 11	44	44	54	58				24.1	36	MAR 18	4.0	188	77	101	28	1			17	5	56	0
SAN DIEGO	21.2	13.9	17.6	33.3	JUL 28	2.8	JAN 5	648	418	165	43	NOV 16-17	0	0		61	61	72	74	3.4	1.7	29	13.0	SE	NOV 14	5.3	126	117	123	36	0	1	16	3	0	0	0
SAN FRANCISCO	17.9	9.2	13.6	36.7	JUL 14	-4.4	DEC 9	1763	61	431	54	OCT 10-11	T	T	DEC 12 +	71	64	82	86	4.2	2.5	28	14.3	29	APR 28	4.8	151	110	105	61	0	3	11	2	0	11	0
SAN FRANCISCO U	16.4	10.4	13.4	33.3	JUL 14	-1.1	DEC 9	1800	35	528	62	NOV 13-14	0	0		69	68	82	85				15.2	NE	JAN 3					71	0			1	0	2	0
SANTA MARIA	20.1	7.4	13.8	33.9	OCT 6+	-3.9	DEC 10	1673	46	171	30	NOV 10-11	0	0		62	62									4.1	174	118	74	28	0			2	0	26	0
STOCKTON	23.2	9.3	16.3	45.6	JUL 14	-5.0	DEC 9	1551	838	312	53	NOV 10-11	T	T	DEC 12 +	60	44	68	78	3.7	1.7	30	13.9	15	DEC 6+	4.7	165	79	122	56	0	2	61	87	0	28	0
COLORADO																																					
ALAMOSA	14.7	-4.5	5.1	32.2	JUL 30	-35.6	JAN 4	4828	31	196	17	OCT 30-31	1397	277	OCT 31	45	41	70	79							5.2	115	149	102	79	14			1	48	210	61
COLORADO SPRINGS	16.2	2.1	9.2	35.6	JUL 14	-26.7	DEC 5	3523	226	509	35	SEP 7-8	1557	368	NOV 31-1	42	42	60	64	4.5	1.1	4	19.7	15	MAY 19+	5.8	98	127	141	105	16	78	24	6	31	148	12
DENVER	17.9	1.9	9.9	37.8	JUL 30	-27.8	DEC 10	3340	312	428	77	APR 26	2113	399	APR 26	42	43	64	71	3.9	.4	21	18.8	SW	AUG 16+	6.1	91	119	156	99	21	61	9	25	27	155	20
GRAND JUNCTION	19.3	4.7	12.0	40.0	JUL 30	-22.2	JAN 4	3021	759	186	16	OCT 14-15	526	145	OCT 29-30	40	34	49	57	4.2	.8	12	20.1	SW	AUG 8	5.5	113	124	129	73	7	30	6	73	22	133	4
PUEBLO	19.8	2.4	11.1	39.4	JUL 14	-28.3	DEC 6	3138	563	303	31	SEP 31-1	1471	409	NOV 31-1	45	40	63	74	4.2	.5	2	26.4	N	AUG 2	5.7	109	121	136	82	15	38	10	68	26	145	20
CONNECTICUT																																					
BRIDGEPORT	14.8	6.3	10.6	34.4	JUL 23	-13.9	FEB 23+	3172	405	1878	175	JUN 18-19	610	132	FEB 6-7	77	76	61	68	5.9	1.4	31	24.6	26	JAN 25	6.6	78	118	170	141	7	22	36	2	22	102	0
HARTFORD	14.7	4.0	9.4	33.9	AUG 25	-18.9	FEB 23+	3593	376	1640	81	OCT 6-7	1478	279	FEB 19	79	81	58	66	3.8	1.0	29	21.9	NW	JAN 25	7.0	68	97	201	159	16	20	34	15	34	147	4
DELAWARE																																					
WILMINGTON	17.4	7.4	12.4	35.0	JUL 23+	-15.0	JAN 16	2672	591	1223	110	JUN 21-22	241	69	FEB 23 +	77	78	57	66	4.1	.8	31	18.8	29	DEC 16	6.7	81	100	185	123	5	24	48	18	12	90	0
DIST.OF COLUMBIA																																					
WASHINGTON DULLES	17.9	5.9	11.9	35.0	AUG 25+	-18.9	JAN 16	2789	505	1500	302	JUN 21-22	462	254	FEB 19	86	87	59	71	3.5	.6	28	16.1	28	FEB 4	6.7	86	84	196	134	4	26	38	18	5	114	1
WASHINGTON NATIONAL	18.4	8.9	13.7	35.0	JUL 21	-16.1	JAN 16	2287	659	1320	183	JUN 21-22	389	140	FEB 19	73	75	57	62	3.9	.6	30	19.2	NW	JUN 21	6.5	90	89	187	134	4	30	8	16	4	64	0
FLORIDA																																					
APALACHICOLA U	24.8	17.0	20.9	36.1	AUG 20	-2.8	JAN 16	584	1577	1213	79	JAN 10-11	0	0									24.6	E	JUN 19	5.6	105	146	115	105	0	55	53	35	0	3	0
DAYTONA BEACH	26.9	17.1	22.0	35.6	JUN 21	.0	FEB 21	307	1704	1370	131	NOV 6-7	0	0		82	84	60	72	3.8	.4	5	13.4	27	AUG 7	6.1	76	147	143	125	0	70	26	46	0	1	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature Averages Daily maximum	Temperature Averages Daily minimum	Temperature Averages Annual	Temperature Extremes Highest	Date	Temperature Extremes Lowest	Date	Heating degree days	Cooling degree days	Precipitation Total	Precipitation Greatest in 24 hours	Date (s)	Snow† Total	Snow† Greatest in 24 hours	Date (s)	Relative humidity 1:00am EST	Relative humidity 7:00am EST	Relative humidity 1:00pm EST	Relative humidity 7:00pm EST	Wind Average speed	Wind Resultant speed	Wind Resultant direction	Fastest mile (1.6 kilometers) Speed	Fastest mile Direction	Fastest mile Date	Average sky cover sunrise to sunset	Number of days Sunrise to sunset Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow† 25.4mm or more	Thunderstorms	Heavy fog	Max temp. 32.2°C and above	Max temp. 0°C and below	Min. temp. 0°C and below	Min. temp. -17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm.	Mm.		%	%	%	%	M.p.s	M.p.s		M.p.s			Tenths											
FLORIDA																																					
FORT MYERS	29.7	18.7	24.2	35.0	SEP 25+	2.8	DEC 28	103	2319	1440	143	AUG 26-27	0	0		88	90	56	73	3.6	.7	7	15.6	25	JUL 2	5.1	111	174	81	99	0	76	22	116	0	0	0
JACKSONVILLE	26.3	14.8	20.6	36.1	JUL 28+	- 2.2	FEB 5	558	1429	1455	131	JUN 18-19	0	0		88	90	60	77	3.4	.2	36	19.7	NW	AUG 6	6.0	82	148	136	122	0	71	55	57	0	6	0
KEY WEST	28.5	23.6	26.1	32.2	SEP 7+	12.8	DEC 28	9	2880	1176	93	JUN 17-18	0	0		76	77	67	71	4.8	2.6	10	19.2	SE	JUN 18	5.0	143	127	96	118	0	68	1	15	0	0	0
LAKELAND U	27.7	17.7	22.7	35.6	SEP 6+	1.1	DEC 17	252	1896	973	115	JUN 18-19	0	0												5.2	111	178	77	107	0			61	0	0	0
MIAMI	27.9	20.9	24.4	32.8	JUN 8	5.6	FEB 20	41	2317	1603	144	JUN 11-12	0	0		83	86	63	73	4.2	1.6	9	13.4	24	FEB 19	5.8	84	168	114	147	0	72	7	3	0	0	0
ORLANDO	28.7	18.3	23.5	36.7	AUG 3+	2.8	DEC 17+	202	2150	1304	118	JUN 18-19	0	0		83	85	54	66	3.8	.3	4	16.5	29	FEB 19	6.0	87	144	135	108	0	68	32	101	0	0	0
PENSACOLA	25.4	16.0	20.7	37.8	AUG 20	- 6.1	JAN 16	700	1634	1309	98	OCT 26-27	0	0		78	82	60	68	3.9	.4	7	15.6	21	NOV 13	6.1	80	142	144	106	0	63	31	74	0	10	0
TALLAHASSEE	26.9	13.3	20.2	37.8	AUG 20	- 6.1	FEB 5	712	1435	1678	164	JUN 18-19	0	0		88	90	57	70	3.1	.4	5	14.3	27	MAR 28	5.9	88	144	134	103	0	74	64	98	0	23	0
TAMPA	28.3	17.4	22.9	35.6	SEP 19+	1.1	DEC 17+	237	1955	1071	87	AUG 19	0	0		85	88	57	71	3.9	.5	7	15.6	31	FEB 19	5.8	97	136	133	102	0	75	24	92	0	0	0
WEST PALM BEACH	29.2	20.3	24.8	35.6	JUN 29	6.1	FEB 20	52	2471	1909	157	APR 29-30	0	0		78	80	59	70	4.2	1.4	10	17.4	14	MAY 29	6.2	70	149	147	135	0	92	11	87	0	0	0
GEORGIA																																					
ATHENS	22.4	10.6	16.5	36.1	SEP 16	- 12.2	JAN 16	1486	871	1245	110	DEC 14-15	T	T	MAR 25 +	81	86	57	65	3.2	.4	30	13.0	29	JUL 2+	5.7	113	112	141	106	0	52	48	15	1	47	0
ATLANTA	21.5	10.5	16.0	34.4	JUL 23	- 15.0	JAN 16	1606	807	1285	82	DEC 14-15	T	T	MAR 25 +	79	83	58	63	4.1	.4	33	21.0	W	AUG [illegible]	6.2	88	118	160	126	0	55	35	18	1	45	0
AUGUSTA	24.1	11.0	17.6	37.8	AUG 9	- 9.4	JAN 17	1229	1007	1035	65	JUN 19-20	0	0		84	86	54	68	3.2	.4	30	23.2	23	MAR 2	5.8	104	122	142	114	0	62	46	11	1	36	0
COLUMBUS	24.5	12.8	18.7	36.1	SEP 15+	- 10.0	JAN 16	1053	1229	1383	102	DEC 5-6	0	0		81	86	55	63	3.3	.6	1	13.9	32	FEB 19	5.9	105	121	140	126	0	41	16	15	1	28	0
MACON	24.9	11.6	18.3	37.2	SEP 16+	- 10.0	JAN 16	1091	1130	1189	114	DEC 5-6	0	0		83	88	56	63	3.4	.4	34	20.1	SW	MAR 2	6.1	87	133	146	124	0	53	55	43	[illegible]	29	0
ROME	22.2	9.2	15.7	36.1	JUL 22	- 15.6	JAN 16	1747	832	1342	84	JUN 19-20	T	T	FEB 19 +															143	0			17	1	64	0
SAVANNAH	25.4	13.6	19.5	36.7	AUG 8	- 7.2	JAN 17	799	1275	1234	112	AUG 28-29	0	0		84	87	55	69	3.8	.1	31	18.3	NW	JUN 10	6.3	81	131	154	101	0	51	50	[illegible]	0	10	0
HAWAII																																					
HILO	27.5	18.8	23.2	33.9	MAR 23	13.9	MAR 10+	0	1821	2511	154	APR 1-2	0	0		83	70	86	90	2.8	.4	15	13.0	SE	MAR 2	7.7	22	122	222	265	0	14	0	3	0	0	0
HONOLULU	28.4	20.7	24.6	32.2	AUG 15+	11.7	JAN 31	1	2328	684	121	JAN 23-24	0	0		72	57	70	76	5.9	3.9	6	14.8	NE	APR 1[illegible]	6.0	80	164	122	93	0	[illegible]	0	3	0	0	0
KAHULUI	28.9	18.5	23.7	34.4	AUG 6	10.0	JAN 31+	1	2317	399	126	FEB 24-25	0	0		77	58	76	85	5.3	3.8	5	14.3	E	JUL 3+	5.4	124	126	115	71	0	4	0	19	0	0	0
LIHUE	27.0	21.1	24.1	31.1	SEP 14	12.8	DEC 11	0	2151	1106	166	APR 15-16	0	0		79	69	79	83	4.6	3.0	5	15.2	SW	FEB 4	6.7	43	168	155	178	0	8	0	5	0	0	0
IDAHO																																					
BOISE	16.8	4.2	10.5	38.9	AUG 11	- 30.6	DEC 10	3267	454	287	19	MAR 1-2	592	107	DEC 6	50	40	58	65	3.8	.1	36	19.7	SE	MAY 2[illegible]	5.8	121	88	157	90	1	12	14	41	29	104	1
LEWISTON	17.1	5.0	11.1	41.1	AUG 8	- 23.3	DEC 9	3068	450	383	24	OCT 10-11	340	51	FEB 4-5	61	49		77				32.2		JAN 11	6.7	83	78	205	118	6			45	17	95	5
POCATELLO	14.4	.7	7.6	37.2	AUG 9	- 33.3	DEC 10	4071	189	329	29	AUG 13-14	1016	193	DEC 3-4	50	41	57	67	4.6	2.7	23	24.1		JAN 1[illegible]	6.2	100	98	168	105	15	11	13	19	42	151	21
ILLINOIS																																					
CAIRO	19.1	10.2	14.7	35.6	JUN 9	- 17.8	JAN 16	2235	947	1523	81	APR 15	130	51	JAN 27								18.3	SW	MAR 6	5.8	121	102	143	134	3			34	11	56	1
CHICAGO O HARE	13.3	3.9	8.7	33.9	AUG 18+	- 27.2	JAN 15	3951	456	1155	70	SEP 17-18	1209	168	MAR 13-14	78	80	65	67	4.7	.9	27	20.1	27	JAN 25	6.9	81	79	266	154	14	47	18	12	51	132	19
CHICAGO MIDWAY	13.7	4.7	9.2	35.6	JUL 22	- 26.1	JAN 15	3772	493	1046	93	SEP 28-29	1572	165	MAR 29	74	78	63	64	4.7	.6	24	17.9	SW	JAN 24	6.8	86	75	205	149	21	46	4	17	45	129	15
MOLINE	14.3	3.8	9.1	36.7	JUN 3	28.3	FEB 9	3882	567	1185	110	AUG 5-6	1605	279	MAR 28-29	76	79	62	64	4.4	.7	24	21.9	W	JUL 14	6.7	82	93	191	128	19	47	18	26	56	143	25
PEORIA	14.3	4.1	9.2	33.9	JUN 3	- 27.8	JAN 15	3780	501	920	67	SEP 13-14	955	130	MAR 29	78	82	65	67	4.3	.5	21	16.5		JAN 24	7.0	[illegible]	83	213	133	13	52	24	15	51	145	21
ROCKFORD	12.8	3.1	7.9	34.4	JUN 3	- 28.3	JAN 15	4145	395	1401	108	AUG 25-26	1143	264	MAR 29	81	84	66	68	4.5	.4	26	17.9	27	JAN 24	6.8	78	92	196	130	13	47	22	9	48	144	25
SPRINGFIELD	16.1	5.6	10.8	35.6	JUL 23+	- 24.4	JAN 15	3321	636	814	72	MAR 12-13	665	97	JAN 3-4	80	84	65	68	5.0	.7	22	20.1		JAN 24	6.5	95	81	190	117	14	47	17	31	36	125	7

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm		%	%	%	%	M.p.s	M.p.s		M.p.s			Tenths											
INDIANA																																					
EVANSVILLE	17.9	7.1	12.5	35.0	JUN 4	-21.7	JAN 16	2727	644	1074	68	APR 15-16	203	71	DEC 15	78	81	61	64	3.5	.4	25	21.0		JAN 24	6.5	92	91	183	128	2	31	16	25	20	105	2
FORT WAYNE	14.3	4.3	9.3	33.9	JUL 22+	-28.3	JAN 16	3640	399	1036	58	SEP 12-13	734	94	MAR 26-27	80	82	64	69	4.6	1.2	25	23.7		JAN 25	7.3	48	109	209	152	11	40	19	9	36	138	12
INDIANAPOLIS	16.2	5.6	10.9	33.9	JUL 23+	-28.9	JAN 16	3196	544	1023	56	JUN 13	460	91	JAN 13	78	82	63	66	4.3	.6	24	21.5	N	APR 7	7.1	59	100	207	143	5	45	28	15	29	122	9
SOUTH BEND	13.5	4.0	8.8	34.4	JUL 22+	-28.3	JAN 16	3774	323	1099	59	MAR 12-13	2474	140	DEC 15-16	83	86	68	72	4.6	1.2	23	16.5	25	JAN 25+	7.5	42	95	229	177	39	49	31	9	39	131	9
IOWA																																					
BURLINGTON	14.6	4.1	9.3	33.9	AUG 18	-27.2	JAN 15	3766	531	881	53	AUG 6	963	203	MAR 28-29	75	79	64	65	4.5	.5	26	15.6	29	SEP 28	6.7	77	95	194	120	15	48	15	19	51	142	22
DES MOINES	13.7	3.2	8.4	36.7	JUL 10	-27.8	FEB 9+	4069	505	915	75	SEP 10-11	932	208	NOV 13-14	80	84	65	65	4.6	.2	24	18.8	SW	MAY 1	6.7	83	93	190	131	8	52	9	20	65	151	28
DUBUQUE	11.8	2.1	6.9	33.9	AUG 17	-30.0	JAN 15	4496	383	1010	76	AUG 1-2	1483	198	NOV 13-14		77	62	65							7.0	74	93	199	128	18			7	83	152	30
SIOUX CITY	14.2	3.1	8.6	37.8	JUN 8	-27.8	JAN 15	4044	544	856	140	JUL 17	714	147	DEC 11-12	73	77	58	58	4.9	.2	5	23.2	SW	JUN 27	6.6	91	93	182	125	6	46	19	26	56	145	33
WATERLOO	11.9	1.0	6.4	34.4	AUG 17	-32.2	FEB 9	4656	369	904	61	SEP 12-13	1219	216	NOV 13	80	82	63	66	4.8	.3	27	17.9	28	JUN 12	6.9	74	91	201	120	13	42	19	15	82	165	43
KANSAS																																					
CONCORDIA	17.1	4.9	11.1	36.7	JUL 14+	-22.2	JAN 28	3273	659	631	96	AUG 24-25	541	94	DEC 11-12+	77	85	62	60	5.3	.8	17	18.8	S	APR 17	6.1	103	92	171	92	8	52	13	40	37	132	12
DODGE CITY	18.9	5.3	12.1	38.9	JUL 14	-22.2	JAN 15	2921	686	787	89	JUL 15-16	340	112	NOV 17-18	65	71	49	48	5.5	1.0	19	22.8	N	MAR 1	6.0	106	98	162	93	5	54	21	52	31	129	7
GOODLAND	17.4	2.3	9.9	35.6	JUL 22	-25.6	DEC 10	3472	438	535	89	MAY 27	1062	221	NOV 12-13	53	51	74	81	5.8	.9	22	21.5	14	APR 25	5.7	107	120	139	87	12	51	18	35	33	158	23
TOPEKA	17.6	5.7	11.7	36.7	AUG 21+	-23.3	JAN 15	3059	669	793	71	SEP 6-7	663	94	NOV 18-19	77	83	59	60	4.4	.4	18	22.8	SW	APR 30	6.4	98	82	186	102	12	47	10	37	31	122	9
WICHITA	18.8	6.4	12.6	39.4	JUL 26	-21.7	JAN 15	2903	860	592	45	AUG 23-24	424	89	NOV 17-18	74	80	58	56	5.5	.8	17	27.3	NW	JUL 1	6.2	103	91	172	88	6	58	14	64	27	122	5
KENTUCKY																																					
COVINGTON	16.4	6.1	11.3	35.6	JUL 23	-25.0	JAN 16	3041	507	1151	57	NOV 31-1	544	140	FEB 6	77	81	63	66	4.1	.9	23	14.3	36	AUG 19+	7.3	58	100	208	141	6	37	31	14	24	108	3
LEXINGTON	17.6	7.1	12.3	33.9	JUL 22+	-23.9	JAN 16	2644	500	1463	73	DEC 8-9	315	64	FEB 6	81	84	64	69	3.9	.9	21	13.0	22	MAR 7	7.0	67	94	205	159	4	51	18	7	18	94	2
LOUISVILLE	18.4	8.1	13.3	34.4	AUG 19+	-21.7	JAN 16	2500	715	1254	60	MAY 7-8	264	36	FEB 3	75	79	60	62	4.0	.6	24	20.1	SW	JAN 24	6.8	66	111	189	145	6	47	9	24	17	91	2
LOUISIANA																																					
ALEXANDRIA	24.9	12.6	18.8	36.1	SEP 15+	-6.7	DEC 18+	1110	1320	1459	137	DEC 20-21	0	0				60	69	3.0	.2	14	15.6	12	JUN 8	5.6	118	108	140	124	0	85	35	90	0	28	0
BATON ROUGE	26.5	14.9	20.7	37.2	AUG 5+	-5.6	JAN 16	742	1666	1518	123	MAY 7	T	T	JAN 6	83	87	58	64	3.6	.6	10	13.0	34	DEC 15+	5.8	100	132	134	105	0	74	32	121	0	16	0
LAKE CHARLES	25.3	14.8	20.1	35.0	JUN 30+	-4.4	DEC 17	801	1497	1414	104	OCT 22	0	0		92	93	65	75	3.8	1.0	10	17.4	12	AUG 27	6.1	95	113	158	107	0	97	42	78	0	15	0
NEW ORLEANS	25.9	14.7	20.3	35.6	AUG 5	-4.4	JAN 16	727	1512	1625	119	MAY 12	0	0		88	90	65	72	3.8	.6	8	13.4	23	MAR 16	5.8	101	133	132	116	0	66	33	79	0	13	0
SHREVEPORT	24.7	12.7	18.7	37.2	AUG 21	-8.3	JAN 16	1246	1442	1193	109	JUL 29	T	T	JAN 4	83	89	59	62	3.4	.6	16	15.6	27	JUN 30	5.9	115	89	162	91	0	63	21	104	1	34	0
MAINE																																					
CARIBOU	7.8	-3.2	2.3	30.6	JUL 13+	-35.6	JAN 1	5882	71	1102	67	SEP 3-4	4229	376	MAR 22-23		79	62	70							7.1	60	101	205	168	41			0	106	202	69
PORTLAND	11.3	1.3	6.3	30.6	JUL 16	-27.8	FEB 23	4440	109	1235	74	SEP 3	3142	389	FEB 19-20	[illegible]2	80	63	74	4.3	.9	29	18.[illegible]	SE	FEB 4+	6.7	77	101	188	148	25	14	53	0	64	165	14
MARYLAND																																					
BALTIMORE	17.7	7.6	12.7	35.0	JUL 23+	-15.0	JAN 16	2613	588	1329	133	JUN 21-22	330	102	FEB 23	75	78	60	63	3.9	1.0	29	17.0	W	DEC 16+	6.5	86	100	180	133	4	31	34	22	7	90	0
MASSACHUSETTS																																					
BLUE HILL OBS R	13.0	3.7	8.4	32.8	JUL 12	-20.6	FEB 23	3814	230	1664	97	SEP 3	1745	234	MAR 5	83	83	63	74				34.9	NW	JUL 25					157	22			1	43	143	4
BOSTON	14.3	6.1	10.2	34.4	JUL 12	-17.8	FEB 23	3284	373	1349	80	SEP 3	1034	152	MAR 5	73	73	60	67	5.1	1.3	29	21.9	W	JAN 25	6.8	75	100	191	154	14	21	28	9	24	107	1
WORCESTER	12.1	2.7	7.4	31.7	JUL 19	-22.8	FEB 23	4164	219	1820	89	OCT 6-7	2258	366	FEB 19-20	73	77	60	66	4.2	1.8	29	17.4	30	JUL 25+	6.9	73	97	196	148	27	16	102	0	57	163	4

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	100am EST	700am EST	100pm EST	700pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
MICHIGAN	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm.		%	%	%	%	Mps	Mps		M.ps			Tenths											
ALPENA	10.4	- 1.0	4.7	32.8	JUL 22+	- 26.7	MAR 3	5011	92	716	46	JUL 20	2604	213	DEC 15-16	80	83	62	68	3.0	.4	26	15.2	E	JAN 24	7.0	72	93	201	146	30	24	28	2	81	192	32
DETROIT	13.3	4.9	9.1	35.0	JUL 23+	- 22.2	JAN 16	3687	380	761	48	AUG 16-17	777			71	74	59	62	4.7	1.1	26	17.9	23	MAR 7					138	18	28	8	7	43	126	3
DETROIT METRO.	13.4	3.6	8.5	33.9	JUL 22+	- 25.6	JAN 16	3849	306	804	50	JUN 20	1062	97	DEC 4	80	83	63	68	4.4	1.0	27	22.4		DEC 6	7.1	64	87	215	153	16	30	16	6	46	146	6
FLINT	11.1	3.3	7.7	32.2	JUL 22+	- 25.6	JAN 16	4069	237	966	65	JUL 14-15	1567	122	DEC 8	77	78	63	66	4.5	1.1	26	15.6	29	JAN 25	7.2	64	86	216	163	24	34	21	3	53	145	9
GRAND RAPIDS	12.4	2.6	7.6	33.9	JUL 11	- 26.7	JAN 16	4166	279	949	83	JUN 14-15	2360	152	DEC 12 +	81	82	64	68	4.3	1.0	23	26.8	SW	JAN 24	7.5	52	81	233	163	[illegible]	36	[illegible]	5	59	[illegible]	[illegible]
HOUGHTON LAKE	10.4	- .4	5.1	31.7	JUL 22+	- 27.8	MAR 6	4945	135	664	41	AUG 26	2471	191	MAR 13-14	83	84	65	70	3.9	.8	27	17.9	26	JAN 25+	7.2	58	103	[illegible]	152	38	34	29	[illegible]	[illegible]	184	[illegible]
LANSING	12.2	1.8	7.1	33.3	JUL 22+	- 27.2	JAN 15	4284	207	949	56	JUL 14-15	1948	163	NOV 13-14	81	82	65	70	4.1	1.2	24	19.2		JAN 25	7.2	59	90	217	168	28	36	21	4	57	165	12
MARQUETTE	8.3	- .1	4.1	32.2	AUG 30	- 28.3	JAN 15	5249	105	856	47	NOV 2	3579	272	JAN 24-25								17.0	[illegible]	SEP 6+	7.1	70	82	214	152	45			1	[illegible]	[illegible]	21
MUSKEGON	12.2	3.2	7.7	31.1	JUL 22+	- 24.4	JAN 15	4080	233	874	61	AUG 26	3061	203	MAR 29-30	77	80	64	68	4.7	.9	25	17.0	27	JAN 25	7.5	62	69	235	164	47	19	22	[illegible]	54	[illegible]	6
SAULT STE MARIE	8.6	- 1.6	3.5	31.1	MAY 20	- 30.6	JAN 16	5412	44	900	31	JUL 31	4839	361	JAN 24-25	85	85	70	75	3.8	.4	32	17.4		JAN 19	7.3	62	80	224	171	97	21	[illegible]	[illegible]	[illegible]	184	35
MINNESOTA																																					
DULUTH	6.5	- 3.7	1.4	31.1	AUG 17+	- 39.4	JAN 15	6202	63	1006	96	SEP 20	2799	340	JAN 12	80	82	67	67	4.4	.8	28	25.5	NW	JAN 24	7.0	66	99	201	146	28	34	[illegible]	[illegible]	129	[illegible]	66
INTERNATIONAL FALLS	7.9	- 4.2	1.9	33.9	MAY 17	- 42.8	JAN 15	6130	146	493	68	JUL 19	1720	196	APR 12-13	71	74	58	57	4.1	.7	25	21.0	[illegible]	OCT 7	6.7	79	92	195	127	17	28	13	[illegible]	126	[illegible]	91
MINNEAPOLIS	10.2	.1	5.2	36.1	AUG 20+	- 33.9	JAN 15	5092	318	604	40	JUL 22	1387	152	JAN 24	74	78	62	62	4.3	.3	28	17.4	[illegible]	JAN 12	6.9	74	87	[illegible]	122	16	[illegible]	[illegible]	11	95	[illegible]	[illegible]
ROCHESTER	10.6	.4	5.1	33.9	AUG 17	- 34.4	JAN 15	5087	282	697	57	SEP 12-13	1120	170	DEC 4-5	82	84	68	71	5.7	.8	25	19.2	30	JAN 24	6.9	68	91	[illegible]	123	[illegible]	33	41	7	93	[illegible]	[illegible]
ST CLOUD	9.6	- 2.1	3.8	35.0	AUG 16	- 35.0	JAN 15	5505	222	706	58	JUL 22	1148	127	DEC 29		81	60	63							6.8	76	92	198	[illegible]	17			[illegible]	[illegible]	[illegible]	[illegible]
MISSISSIPPI																																					
JACKSON	[illegible]	[illegible]	[illegible]	37.2	AUG 21	- 9.4	JAN 16	1153	1452	1271	65	DEC 20-21	[illegible]	T	FEB 1	87	92	59	66	3.3	.3	15	18.3	NW	MAR 27	[illegible]	[illegible]	126	[illegible]	118	[illegible]	[illegible]	22	[illegible]	[illegible]	[illegible]	[illegible]
MERIDIAN	25.3	[illegible]	18.6	37.8	SEP 8	- 10.0	JAN 16	1142	1293	1469	115	JAN 9-10	0	0		80	83	53	61	2.8	.2	2	14.3	31	MAR 16	6.2	85	123	158	95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MISSOURI																																					
COLUMBIA REGIONAL	17.4	6.7	12.1	37.2	AUG 20+	- 23.3	JAN 15	2983	747	875	55	NOV 31-1	533	142	NOV 18-19	77	83	62	62	4.4	.6	20	15.6	SW	MAR 6+	6.7	87	76	[illegible]	111	8	46	41	[illegible]	42	[illegible]	4
KANSAS CITY	17.7	7.4	12.6	37.8	JUL 14	- 22.8	JAN 15	2929	875	705	51	JUN 14	404	64	MAR 31	71	77	58	57	4.6	.4	18	21.9	SW	DEC [illegible]	6.2	101	93	172	[illegible]	6	48	13	47	[illegible]	[illegible]	[illegible]
ST JOSEPH	17.5	5.4	11.4	37.8	JUN 9+	- 26.1	DEC 11+	3179	721	835						78	82	61	61	4.1	.3	19	15.6	13	APR 30	6.3	102	91	173	[illegible]				48	[illegible]	[illegible]	[illegible]
ST LOUIS	18.3	6.8	12.6	37.8	JUL 1	- 21.7	JAN 15	2854	787	857	73	NOV 1	318	132	NOV 19	82	88	63	65	4.2	.5	22	17.9	NW	FEB 18	[illegible]	79	99	184	119	4	47	14	[illegible]	[illegible]	[illegible]	4
SPRINGFIELD	19.6	6.9	13.2	37.8	AUG 21+	- 19.4	JAN 15	2611	792	985	87	NOV 1	414	224	NOV 18-19	76	81	57	61	4.6	1.3	17	[illegible]	NW	SEP 7	6.2	118	86	172	111	4	[illegible]	21	[illegible]	[illegible]	[illegible]	[illegible]
MONTANA																																					
BILLINGS	[illegible]	[illegible]	6.8	35.6	JUL 9	- 32.8	JAN 27+	4418	252	462	36	JAN 1-2	1816	422	JAN 1-2	52	46	60	67	[illegible]	1.9	[illegible]	22.4		FEB 16	6.6	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	61	[illegible]	[illegible]
GLASGOW	10.8	1.8	4.5	[illegible]	AUG [illegible]	- 38.3	DEC 8	5221	[illegible]	387	63	JUN 8-9	1115	178	DEC 1	57	52	69	74	4.9	[illegible]	5	[illegible]	29	SEP [illegible]	6.5	72	133	161	[illegible]	18	[illegible]	17	[illegible]	95	[illegible]	[illegible]
GREAT FALLS	12.8	.2	6.3	36.7	JUL 29	- 37.8	DEC 8	4566	219	332	27	JUL 18-19	1732	188	DEC 1-2	53	47	62	69	5.9	3.4	24	22.4	SW	DEC 26	6.7	[illegible]	[illegible]	194	[illegible]	[illegible]	19	[illegible]	[illegible]	56	[illegible]	[illegible]
HAVRE	12.1	- 1.9	5.1	37.8	AUG 9	- 37.8	JAN 28+	5061	272	251	22	MAR 25-26	1453	211	MAR 25-26	52	48	64	72	4.7	1.4	25	23.2	SW	FEB 16	6.7	[illegible]	129	174	[illegible]	[illegible]	[illegible]	14	11	79	[illegible]	[illegible]
HELENA	11.8	[illegible]	[illegible]	33.9	AUG 9+	- 37.2	DEC 8	[illegible]	91	209	16	AUG 22	1016	150	DEC 2-3	52	45	61	70	3.7	2.1	28	22.4	NW	JAN 11	6.8	64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	51	[illegible]	[illegible]
KALISPELL	11.9	- .9	5.5	[illegible]	AUG 29+	- 32.2	JAN 14	4759	[illegible]	372	23	DEC 20-21	1933	142	FEB 21-22+	59	53	73	78	[illegible]	.5	18	23.2	[illegible]	DEC 2+	7.4	61	67	237	149	[illegible]	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MILES CITY	[illegible]	.1	6.3	[illegible]	AUG 12+	[illegible]	DEC 6+	4673	329	446			1123			57	52	69	77	4.9	1.0	32								[illegible]	14	26	[illegible]	21	71	[illegible]	[illegible]
MISSOULA	13.2	- .1	6.6	35.6	AUG 8+	[illegible]	DEC 9	4377	127	348	29	SEP 11-12	1661	119	DEC 2	63	53	72	82	3.0	.7	[illegible]	22.4	SW	MAR 6	7.1	69	79	218	[illegible]	[illegible]	18	[illegible]	[illegible]	48	[illegible]	[illegible]
NEBRASKA																																					
GRAND ISLAND	[illegible]	[illegible]	[illegible]	37.8	SEP 18	- 25.6	JAN 28	3727	547	654	44	MAY 5-6	925	267	DEC [illegible]	70	75	55	59	[illegible]	.3	24	25.5	19	JUL [illegible]	6.2	97	95	171	[illegible]	[illegible]	38	[illegible]	[illegible]	46	[illegible]	[illegible]
LINCOLN	15.8	[illegible]	9.4	36.7	JUL [illegible]	- 26.1	JAN 28	3711	520	756	52	AUG 24-25	622	196	NOV 13-14								24.1	N	MAR 6	6.4	93	96	[illegible]	[illegible]	[illegible]	[illegible]	14	31	44	148	[illegible]

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm		%	%	%	%	Mps	Mps		Mps			Tenths											
NEBRASKA																																					
NORFOLK	14.4	2.3	8.4	37.2	JUN 8	-30.0	JAN 28	4086	501	657	63	AUG 31-1	724	180	DEC 11-12		82	59	60							6.4	95	86	185	87	9			32	50	153	32
NORTH PLATTE	15.7	.6	8.2	36.7	SEP 18	-27.2	JAN 14	4032	358	416	42	MAY 10-11	564	130	DEC 29-30+	75	81	54	52	4.3	.3	5	25.0	NW	MAY 1	6.4	88	111	167	80	7	41	25	32	43	181	25
OMAHA	15.7	3.7	9.7	37.2	AUG 20	-26.1	JAN 15	3688	581	903	80	SEP 10-11	688	201	NOV 13	79	84	62	62	4.4	.1	10	21.0	NW	JAN 24	6.4	89	96	181	121	7	46	11	34	44	144	25
SCOTTSBLUFF	16.5	.9	8.7	37.2	AUG 12	-28.9	DEC 10	3793	324	523	40	JUL 24	1095	193	NOV 12-13	48	45	67	75	4.4	.9	33	21.5	29	JAN 9	6.4	88	109	169	94	15	52	15	26	39	171	25
VALENTINE	14.6	.3	7.4	37.8	AUG 13	-30.6	DEC 6+	4311	380	452	36	JUL 27	780	213	NOV 1-2								28.6	NW	JAN 12	6.2	96	112	158	91	10			34	54	175	32
NEVADA																																					
ELKO	15.5	-.7	7.4	35.6	AUG 9	-33.3	DEC 11	4077	134	215	21	JUN 7-8	795	157	FEB 24-25	44	34	54	65	2.2	.8	26	14.3	25	JAN 23	5.6	125	94	147	72	12	26	4	25	38	190	19
ELY	16.2	-2.3	7.0	35.6	AUG 9+	-33.3	DEC 10	4205	106	167	23	SEP 1-2	513	137	DEC 6-7	42	36	56	67	4.4	1.9	21	18.3	SE	AUG 18	5.4	122	122	122	66	10	29	0	25	24	207	21
LAS VEGAS	26.2	11.7	19.0	46.7	JUL 14+	-7.8	JAN 5	1407	1706	123	26	NOV 16	10	10	DEC 4-5	27	20	31	37	4.2	1.7	23	20.6	NE	JUL 16+	3.6	209	88	69	28	0	22	0	123	1	47	0
RENO	18.9	-.1	9.4	39.4	AUG 8+	-26.7	DEC 9	3423	214	140	26	MAY 18-19	417	122	DEC 3-4	43	32	52	66	2.9	.8	26	21.5	SE	APR 12	4.8	157	88	121	54	3	23	17	43	25	181	13
WINNEMUCCA	18.8	.1	9.5	41.1	AUG 9	-36.7	DEC 9	3593	406	168	21	OCT 4	683	145	FEB 24-25	46	35	57	67	3.6	.6	27	15.2	SE	JUN 22	5.3	140	93	133	67	9	16	6	69	24	186	17
NEW HAMPSHIRE																																					
CONCORD	12.3	.1	6.2	33.3	JUL 15	-28.3	JAN 6	4536	167	1069	50	JUN 31-1	2548	361	FEB 19-20	87	86	61	74	3.2	1.0	30	19.7	NW	JAN 19	6.9	69	98	199	151	28	16	55	3	67	188	29
MT WASHINGTON OBS	.5	-7.4	-3.4	18.9	JUL 18+	-37.8	FEB 23+	7911	0	3089	100	FEB 13	11412	569	NOV 28-29	85	83	83	87	15.2			74.2	E	FEB 4	8.1	35	72	259	232	99	15	329	0	183	248	75
NEW JERSEY																																					
ATLANTIC CITY	16.6	6.4	11.5	35.6	JUL 23	-14.4	JAN 29+	2914	474	1247	72	NOV 14	224	74	JAN 27-28	83	83	60	73	4.6	.9	28	16.5	18	NOV 26+	6.8	69	106	191	121	4	22	60	21	12	102	0
NEWARK	16.7	8.0	12.3	35.6	JUL 23	-13.9	JAN 16	2747	623	1266	96	NOV 8-9	417	99	FEB 23-24	74	76	58	64	4.4	1.2	29	17.9	2	NOV 8	6.8	67	114	185	136	6	22	12	21	15	84	0
TRENTON U	16.2	7.7	11.9	35.6	JUL 19	-15.0	JAN 16	2819	536	1197	74	NOV 8-9	437	81	FEB 19								18.3	E	FEB 19	6.4	87	106	173	152	6			14	17	79	0
NEW MEXICO																																					
ALBUQUERQUE	21.8	5.7	13.7	39.4	JUL 31	-16.1	JAN 5	2294	657	257	24	AUG 18	163	51	NOV 12	36	28	47	58	4.3	.1	21	27.3	E	MAR 18	4.5	156	115	95	64	4	39	6	53	2	122	0
CLAYTON	19.2	3.7	11.4	34.4	JUL 14+	-21.1	DEC 6	2825	364	486	44	JUN 13-14	650	170	NOV 20-21	43	43		72							5.2	130	113	123	73	9			7	14	138	4
ROSWELL	24.4	6.6	15.5	40.0	JUL 31	-18.9	JAN 5	1879	898	419	108	JUL 20	251	97	DEC 14															62	5			84	4	111	1
NEW YORK																																					
ALBANY	13.3	1.8	7.6	32.8	JUL 19+	-26.7	FEB 23	4115	234	1198	68	OCT 6-7	2598	434	NOV 14-15	78	78	57	68	3.9	1.0	26	18.8	NW	FEB 20	7.4	53	92	221	158	23	20	29	5	47	165	14
BINGHAMTON	11.6	2.7	7.1	33.3	JUL 23	-20.6	FEB 23	4262	222	1220	81	JUN 21-22	3058	554	FEB 19-20	81	84	66	73	4.4	1.4	25	18.3		JAN 25	7.8	25	103	238	183	32	34	75	3	68	155	7
BUFFALO	12.3	3.5	7.9	31.1	JUL 18+	-19.4	JAN 15	3989	250	1057	59	JUN 21-22	3051	196	DEC 15-16	81	82	66	73	5.1	2.0	25	22.8	SW	JAN 17	7.9	36	75	255	197	39	24	25	0	54	150	3
NEW YORK U	16.3	7.9	12.1	34.4	AUG 24+	-15.0	JAN 16	2794	591	1703	142	NOV 8	582	145	FEB 19	72	76	58	65	3.9	.7	31	22.4	NE	NOV 8					145	8	17		15	19	78	0
NEW YORK KENNEDY	16.2	8.7	12.4	37.8	JUL 23	-12.8	JAN 16	2636	538	1246	104	NOV 8-9	376	86	FEB 19	72	72	60	67	5.6	.9	29	20.6	26	JAN 25	6.4	79	128	159	135	5	21	32	8	12	65	0
NEW YORK LA GUARDIA	14.9	7.4	11.2	32.8	JUL 23	-14.4	JAN 16	2996	445	1389	113	NOV 8-9	564	160	FEB 19	70	72	59	63	5.2	1.0	31	25.5	NE	NOV 8	6.7	65	125	176	137	6	27	12	4	23	79	0
ROCHESTER	13.9	3.5	8.7	34.4	JUL 20	-19.4	FEB 23	3810	354	972	56	JUN 21-22	3045	251	FEB 19-20	83	82	64	72	4.2	1.6	25	22.4	SW	JAN 25	7.5	41	98	227	179	38	22	12	12	48	144	5
SYRACUSE	13.2	3.3	8.3	33.3	JUL 18+	-21.1	FEB 23	3947	317	1407	99	JUN 21-22	3673	442	FEB 19-20	81	81	63	71	4.1	1.0	26	23.2		JAN 25	7.5	52	84	230	181	44	25	14	7	50	149	6
NORTH CAROLINA																																					
ASHEVILLE	19.5	6.8	13.2	32.8	JUL 23+	-17.8	JAN 16	2226	401	1220	90	JUN 19-20	391	127	MAR 25	89	92	62	72	3.4	.9	34	26.8	34	FEB 19	6.2	92	115	159	133	6	51	76	3	5	96	1
CAPE HATTERAS R	20.9	13.1	17.0	33.3	JUL 23	-8.9	JAN 16	1258	833	1564	94	JUL 26-27	T	T	MAR 23 +	84	83	68	80	5.9	.7	34	17.4	22	DEC 6	6.5	85	99	182	142	0	60	29	5	0	19	0
CHARLOTTE	20.8	9.3	15.1	34.4	JUL 24+	-14.4	JAN 16	1858	734	1123	73	DEC 14-15	107	94	MAR 25	76	82	56	62	3.9	.2	29	15.2	SW	JUL 26	6.1	103	107	156	130	1	36	35	28	1	60	0
GREENSBORO	19.7	7.9	13.8	35.6	JUL 24	-18.3	JAN 16	2192	595	1078	125	JUN 20-21	201	79	MAR 25	80	84	57	65	3.3	.5	27	15.2	SW	APR 16+	6.3	95	106	165	131	3	40	30	22	2	80	1
RALEIGH	20.6	8.8	14.7	34.4	JUL 23	-15.6	JAN 16	1917	643	1314	70	SEP 29-30	102	66	MAR 25	78	83	55	66	3.8	.4	27	24.1	20	MAY 3	6.2	92	109	165	128	1	53	40	15	2	65	0

See reference notes at end of table

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State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1 00 am EST	7 00 am EST	1 00 pm EST	7 00 pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
NORTH CAROLINA	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm		%	%	%	%	M.p.s	M.p.s		M.p.s.			Tenths											
WILMINGTON	23.1	11.7	17.4	36.7	JUL 23	- 9.4	JAN 17	1244	960	1316	124	JUL 11-12	T	T	FEB 19	88	87	61	77	3.7	.3	30	16.5	SW	FEB 3	6.3	95	100	171	129	0	38	35	42	0	28	0
NORTH DAKOTA																																					
BISMARCK	10.5	- 1.8	4.4	37.8	AUG 15	- 37.2	JAN 15	5311	256	385	50	MAY 25-26	1158	147	MAR 26-27	75	79	57	57	4.3	.5	34	26.4	NW	FEB 17	6.9	62	109	195	86	17	24	19	20	93	176	58
FARGO	9.7	- 1.9	3.9	35.6	JUL 10	- 36.1	JAN 15	5544	319	452	43	MAY 12-13	1565	183	DEC 30	76	79	62	61	5.0	.2	29	22.4	NW	FEB 17	6.9	65	112	189	114	19	31	9	15	112	180	73
WILLISTON	9.8	- 2.7	3.6	37.8	AUG 12	- 35.6	JAN 26	5540	190	456	62	AUG 14	1321	163	DEC 1-2	79	84	63	61	4.6	.7	30	23.2	NW	FEB 17	6.8	65	114	187	113	17	35	23	11	92	197	60
OHIO																																					
AKRON	14.1	4.1	9.1	32.2	JUL 22+	- 26.1	JAN 16	3625	303	1115	86	JUL 15-16	1115	124	FEB 6-7	78	81	65	69	4.2	1.2	24	15.6	21	JUL 9+	7.4	58	77	231	169	15	41	34	3	40	133	9
CINCINNATI ABBE OB.	16.8	6.8	11.8	36.1	JUL 23	- 25.0	JAN 16	2896	553	1103	73	MAY 8	389	114	FEB 5								13.9	NW	JUL 24+					142	3			23	25	107	2
CLEVELAND	13.7	4.6	9.2	32.8	JUL 23+	- 25.6	JAN 16	3575	294	1228	102	JUN 22-23	1699	163	DEC 15-16	79	81	66	70	4.6	1.3	22	21.0	SW	JUL 18	7.4	65	65	236	184	25	32	14	5	38	125	8
COLUMBUS	14.9	4.9	9.9	33.3	JUL 23	- 24.4	JAN 16	3336	328	1158	96	AUG 17-18	688	119	FEB 6	75	78	61	65	4.3	.7	23	18.3	SW	JUL 9	7.3	54	97	215	156	9	44	14	3	29	114	4
DAYTON	15.7	5.0	10.3	36.1	JUL 23	- 26.7	JAN 16	3324	462	910	42	JUN 13	668	114	FEB 6	79	81	63	68	4.6	1.1	23	23.2		JUL 24	7.1	67	102	[illegible]	150	7	[illegible]	28	16	29	125	7
MANSFIELD	14.9	4.8	9.9	33.3	JUL 21+	- 26.1	JAN 16	3421	402	1059	98	AUG 17	960	150	DEC 15-16	80	83	65	72	5.0	1.7	23	15.6	26	JAN 25	7.4	60	94	221	159	12	39	46	9	32	130	5
TOLEDO	13.9	3.3	8.6	34.4	JUL 21	- 27.2	JAN 16	3801	293	976	101	SEP 17-18	907	84	NOV 25-26	78	79	60	67	4.3	1.0	26	21.0		JAN 24	7.3	53	97	216	159	15	49	15	6	44	157	11
YOUNGSTOWN	13.1	3.1	8.1	32.2	JUL 23+	- 23.9	JAN 16	3903	219	890	41	APR 14-15	1430	114	FEB 6-7	86	87	70	74	4.6	1.1	24	18.8	25	JAN 25	7.6	50	86	[illegible]	172	[illegible]	[illegible]	36	2	47	[illegible]	7
OKLAHOMA																																					
OKLAHOMA CITY	21.6	9.1	15.3	38.9	JUN 27+	- 17.2	JAN 15	2203	1158	792	94	OCT 21	371	140	NOV 18	73	80	54	53	5.7	1.2	16	20.6	NW	MAR 20	5.4	130	96	140	72	4	52	23	49	14	65	[illegible]
TULSA	21.2	9.5	15.3	40.0	AUG 24	- 16.7	JAN 15	2213	1178	963	93	OCT 21-22	330	102	NOV 18	76	82	57	55	4.4	1.3	18	17.9	SE	APR 26	5.8	111	107	148	86	5	43	15	84	19	82	[illegible]
OREGON																																					
ASTORIA	14.8	6.3	10.6	35.0	SEP 2	- 14.4	DEC 8	2827	33	1713	67	DEC 20-21	185	109	DEC 11-12	79	74	87	89	4.1	1.0	23	19.7	24	FEB 29	7.4	62	79	225	194	[illegible]	8	43	3	[illegible]	44	[illegible]
BURNS	14.8	.0	7.4	37.2	AUG 8	- 32.2	DEC 9	4121	185	261	27	JAN 21-22	980	145	MAR 1	56	43	61	71	3.1	1.3	28				5.7	117	97	152	87	13			20	32	177	21
EUGENE	17.3	4.9	11.1	41.1	AUG 7	- 24.4	DEC 8	2798	199	1462	108	JAN 20	295	160	DEC 5-6	75	61	83	89	4.0	.8	22	19.7	18	APR 7	6.9	76	81	209	148	3	[illegible]	54	26	11	64	5
MEACHAM	10.8	1.1	6.0	30.7	AUG 8	- 26.7	DEC 9+	4586	115	828	47	NOV 25-26	3414	231	MAR 1	66	61	76	81				19.7	25	JAN 11					[illegible]	49			5	67	165	14
MEDFORD	19.2	4.3	11.8	42.8	AUG 7	- 21.1	DEC 10+	2768	408	524	48	JAN 21-22	406	95	DEC 11-12	67	48	72	84	2.3	.8	32	13.0	15	DEC 16+	5.9	122	72	172	[illegible]	5	9	[illegible]	48	9	[illegible]	4
PENDLETON	17.4	5.2	11.3	43.9	AUG 8	- 25.0	DEC 10	3011	506	296	39	MAY 20-21	599	114	DEC 5-7 +	51	44	58	63	4.0	1.6	25	20.6	26	JAN 11	6.3	99	94	173	[illegible]	7	[illegible]	24	48	26	77	14
PORTLAND	17.4	6.9	12.2	40.0	AUG 7	- 13.3	DEC 8	2488	295	996	46	DEC 20-21	165	127	DEC 11-12	69	56	73	82	3.6	.4	20	21.5	S	APR 5	6.8	87	69	210	150	2	[illegible]	29	12	13	42	[illegible]
SALEM	17.2	4.3	10.8	40.0	AUG 7	- 24.4	DEC 8	2880	171	1016	78	JAN 20	391	239	DEC 5-6	68	55	76	82	3.1	.8	22	14.3	17	APR 5	6.7	92	66	208	152	4	4	28	26	11	74	5
SEXTON SUMMIT R	13.3	3.9	8.6	36.1	AUG 7	- 16.7	DEC 8	3717	209	1157	88	JAN 21-22	2822	353	FEB 22	70	59	72	74				23.7	19	FEB 22					131	26			7	91	164	[illegible]
PACIFIC AREA																																					
GUAM TAGUAC R	29.2	22.3	25.8	31.7	SEP 25+	16.1	JAN 14+	0	2776	2777	161	AUG 2-3	0	0		78	90	92	79				13.0	NE	MAR 30+					263	0	11	0	0	0	0	0
JOHNSTON	27.7	24.3	26.0	30.6	OCT 11+	22.0	JAN 28	0		869	158	AUG 19	0										46.9	NW	AUG 19						0			0	0	0	0
KOROR R	31.0	24.2	27.6	33.9	MAY 19	21.7	SEP 28+	0	3451	3813	152	SEP 28-29	0	0		76	87	89	80	3.8	.4	1	22.4	N	DEC 2	8.9		73	293	241	0	33	0	73	0	0	0
KWAJALEIN	30.2	25.2	27.7	32.8	JUL 22	22.2	DEC 17	0	3473	2439	434	DEC 16-17	0	0		84	77	79	84	5.5	3.3	7	16.1	23	OCT 6	8.7	14	59	293	250	0	5	0	5	0	0	0
MAJURO	29.5	24.9	27.2	31.1	OCT 17+	21.1	MAR 6	0	3322	4305	454	DEC 12-13	0	0		84	78	80	84	4.1	2.5	7	17.0	E	DEC 12	8.7	8	76	283	253	0	4	0	0	0	0	0
PAGO PAGO	29.6	23.9	26.8	33.3	DEC 14	18.9	MAY 16	0	3125	3317	261	SEP 7-8	0	0		85	75	82	85	4.2	2.9	10	21.0	NW	DEC 31	7.7	16	139	211	232	0	16	0	14	0	0	0
PONAPE R	30.4	23.4	26.9	32.8	NOV 24+	20.0	APR 7	0	3194	5125	179	JUL 27-28	0	0		79	89	91	78	3.4	.8	10	13.0	SW	MAY 31	8.8	6	65	276	281	0	24	0	21	0	0	0
TRUK MOEN ISLAND	29.9	24.8	27.3	32.8	JUL 24	21.7	JUN 4	0	3338	3783	209	MAR 1	0	0		79	85	87	79	4.7	1.0	6	22.4	SW	SEP 16	9.4		30	336	263	0	21	0	1	0	0	0
WAKE	29.2	23.3	26.2	32.8	SEP 11+	18.3	FEB 4	0	2933	752	66	SEP [illegible]	0	0		80	66	71	79	7.1	6.0	7	19.2	E	DEC 19	5.6	105	154	107	179	0	4	0	29	0	0	0

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State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
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PACIFIC AREA	°C	°C	°C.	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm.		%	%	%	%	M.p.s	M.p.s		M.p.s			Tenths											
YAP R	30.4	24.1	27.2	32.2	AUG 12+	21.1	MAY 13	0	3309	2874	130	SEP 15-16	0	0		76	87		78				11.2	NW	AUG 20	7.7	13	135	218	247	0	28	0	4	0	0	0
PENNSYLVANIA																																					
ALLENTOWN	15.3	4.9	10.2	36.1	JUL 21	-16.7	FEB 23+	3332	399	1419	89	JUN 22-23	645	226	FEB 18-19	79	82	59	66	4.0	1.0	30	17.0	28	JUL 25	6.7	84	101	181	152	6	31	27	13	23	131	0
ERIE	11.7	3.5	7.6	31.7	JUL 20	-18.9	FEB 10+	4040	179	1106	53	JUN 22-23	2390	211	FEB 4	81	83	71	74	4.7	1.5	23	23.2	29	FEB 4	7.6	47	87	232	177	30	32	13	0	51	153	5
HARRISBURG	16.3	6.8	11.6	36.1	JUL 23	-13.3	JAN 16	2938	528	1505	319	JUN 21-22	848	330	FEB 19	74	77		63	3.4	.7	30	18.8		JAN 25	6.6	81	110	175	146	9	30	18	18	16	105	0
PHILADELPHIA	16.9	7.6	12.3	35.6	AUG 26	-14.4	JAN 16	2767	597	1261	82	JUN 21-22	307	94	FEB 19-20	78	79	59	66	4.5	.8	30	19.2	N	AUG 26	6.7	82	92	192	138	5	25	8	18	12	89	0
PITTSBURGH	14.9	4.9	9.9	32.8	JUL 22	-23.3	JAN 16	3345	327	1018	55	SEP 13-14	1308	191	FEB 13-14	75	78	60	64	4.4	1.5	27	20.6	27	APR 16	7.5	52	77	237	174	15	42	28	4	33	124	5
PITTSBURGH U	15.9	6.2	11.1	33.3	JUL 22+	-22.8	JAN 16	3027	425	1045	62	SEP 13-14	693	76	FEB 18-19+															170	15			9	28	106	2
SCRANTON	13.4	3.7	8.6	33.3	JUL 23+	-18.3	FEB 23+	3804	286	1148	79	JUN 21-22	1234	300	FEB 19	79	83	64	68	4.0	.8	26	16.1	SW	JAN 25	7.4	48	94	224	166	13	27	28	6	41	146	3
WILLIAMSPORT	13.9	4.4	9.2	32.8	JUL 23+	-21.1	FEB 23	3585	306	1556	220	JUN 22	1697	518	FEB 18-19	81	83	62	68	3.3	.7	29	17.0	27	JAN 25	7.4	54	87	225	172	16	42	42	3	29	137	5
RHODE ISLAND																																					
BLOCK ISLAND	13.4	6.4	9.9	32.8	JUL 18	-14.4	FEB 23+	3265	238	1351	73	FEB 19	224	61	FEB 6-7															128	3			1	20	88	0
PROVIDENCE	14.8	4.8	9.8	32.8	JUL 12	-17.8	FEB 23+	3395	324	1653	79	SEP 2-3	772	119	MAR 14-15	78	78	59	69	4.7	.9	31	20.6	16	FEB 4	6.7	82	97	187	143	13	18	30	2	25	128	2
SOUTH CAROLINA																																					
CHARLESTON	24.5	12.7	18.6	36.1	AUG 19+	-8.3	JAN 17	974	1123	1089	97	NOV 29-30	0	0		86	86	57	73	4.1	.3	29	25.0	SW	FEB 3	5.9	99	127	140	100	0	41	32	50	0	20	0
COLUMBIA	23.7	10.8	17.3	36.1	AUG 19+	-11.1	JAN 17	1303	974	1410	78	JUN 20-21	0	0		87	90	56	69	3.4	.4	32	15.6	35	AUG 19+	5.9	100	116	150	130	0	58	33	61	1	47	0
GRNVLLE-SPRTNBRG	21.3	9.2	15.3	35.0	JUL 23	-13.9	JAN 16	1782	727	1476	118	JUN 19-20	145	84	FEB 18	79	82	56	66	2.9	.4	32	16.5	NW	FEB 20	5.7	114	106	146	125	2	53	39	25	1	60	0
SOUTH DAKOTA																																					
ABERDEEN	11.7	-.6	5.6	36.7	SEP 19+	-37.2	JAN 15	4972	355	518	50	JUL 19	1069	130	DEC 30-31	78	82	63	61	4.8	.4	2	20.1	3	MAY 1	6.6	85	93	188	100	14	40	21	20	83	176	52
HURON	12.0	.3	6.2	35.6	AUG 17+	-33.9	JAN 15	4726	336	672	51	NOV 11-12-	1186	213	DEC 30-31	76	80	62	61	5.0	.1	11	22.4	NW	FEB 17	6.6	80	100	186	112	12	34	16	15	70	173	43
RAPID CITY	13.8	-.4	6.7	36.7	AUG 13+	-30.6	DEC 8+	4426	223	437	59	JUN 9-10	587	81	FEB 31-1	55	53	73	76	5.0	1.7	34	25.0	NW	FEB 16	6.3	78	124	164	110	9	36	28	14	56	182	31
SIOUX FALLS	11.9	-.1	5.9	36.7	AUG 17	-35.6	JAN 15	4816	344	671	100	MAY 30-1	688	127	MAR 3	78	81	62	64	5.1	.1	35	19.7	30	FEB 17	6.5	91	90	185	107	9	36	24	20	77	168	44
TENNESSEE																																					
BRISTOL	19.1	7.3	13.2	33.3	JUL 23+	-18.9	JAN 16	2298	479	1300	92	SEP 28-29	251	81	FEB 6-7	83	87	60	67	2.5	.6	29	14.3	32	APR 14	6.8	73	106	187	161	4	42	57	8	6	89	1
CHATTANOOGA	20.3	8.3	14.3	33.9	JUL 24+	-16.7	JAN 16	2038	621	1638	78	MAY 12-13	25	25	MAR 25	82	85	60	63	3.0	.3	28	16.1	NW	JAN 25	6.3	97	92	177	147	1	49	34	15	4	70	0
KNOXVILLE	19.6	9.4	14.5	33.9	JUL 23+	-17.2	JAN 16	2009	669	1473	91	JUN 28-29	287	170	MAR 25	79	83	62	64	3.3	1.0	30	17.9	NE	MAY 19+	6.7	79	99	188	154	2	46	35	8	5	56	0
MEMPHIS	21.3	10.8	16.1	35.6	SEP 19	-14.4	JAN 16	1876	1106	1497	92	NOV 6-7	10	8	JAN 4	71	76	56	57	4.1	.5	18	17.9	30	MAY 16	5.9	110	101	155	123	0	62	10	52	4	61	0
NASHVILLE	21.2	9.4	15.3	34.4	JUL 23+	-18.3	JAN 16	1923	874	1382	60	OCT 18-19	64	23	MAR 25	80	84	60	63	4.1	.8	23	20.6	NW	APR 7	6.3	103	95	168	143	0	59	23	33	6	65	1
OAK RIDGE R	19.6	8.4	14.1	33.9	AUG 19+	-18.9	JAN 16	2147	632	1648	90	DEC 9-10	249	107	FEB 6								20.6		JUN 29	6.8	79	87	200	154	2			13	6	72	1
TEXAS																																					
ABILENE	24.1	10.7	17.4	41.1	JUN 27+	-13.3	JAN 15	1561	1276	558	73	AUG 12-13	28	18	JAN 31	68	78	54	49	5.5	2.2	18	22.8	NE	JUN 28	4.9	148	104	114	57	0	44	5	91	4	70	0
AMARILLO	20.8	5.6	13.2	35.6	JUN 25	-18.3	DEC 6	2482	673	390	39	JUL 17-18	439	91	NOV 17-18	61	70	44	40	6.2	2.1	20	28.6	NE	JUN 21	4.8	144	115	107	75	5	54	29	36	16	120	1
AUSTIN	25.9	14.6	20.3	37.8	JUL 30	-7.8	JAN 5	966	1726	662	86	MAY 1-2	T	T	JAN 31 +	75	84	57	54	4.0	.8	14	21.9	N	MAY 1	5.7	110	111	145	87	0	48	28	110	0	23	0
BROWNSVILLE	27.8	18.5	23.2	35.6	APR 15	1.1	FEB 4	322	2141	834	110	JUN 8-9	0	0		86	88	63	70	4.6	2.1	13	21.0	SE	APR 28	6.2	81	136	149	105	0	31	34	80	0	0	0
CORPUS CHRISTI	27.8	17.4	22.7	36.7	JUL 30	-2.2	DEC 27+	483	2116	925	94	AUG 2-3	0	0		89	92	65	71	5.4	2.6	11	21.0	SE	APR 28	5.9	93	130	143	92	0	33	35	117	0	8	0
DALLAS	25.0	13.6	19.3	40.0	JUN 25	-9.4	JAN 15	1302	1700	619	69	APR 27	23	13	JAN 4	68	80	55	51	4.9	1.7	15	21.0	NW	JUN 21	5.4	132	101	133	70	0	30	5	115	1	34	0
DEL RIO	27.5	14.3	20.9	39.4	JUL 31+	-8.3	JAN 5	748	1749	447	49	AUG 11-12	T	T	JAN 31 +	65	80	55	44	4.5	2.6	12	17.0	1	MAY 2	5.7	115	114	137	63	0	33	15	133	0	17	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2 °C and above	0 °C and below	0 °C and below	-17.8 °C and below
TEXAS	°C	°C	°C	°C		°C		Base 18.3 °C	Base 18.3 °C	Mm	Mm		Mm	Mm		%	%	%	%	M.p.s	M.p.s		M.p.s			Tenths											
EL PASO	25.5	9.8	17.7	40.0	JUN 31	- 12.2	JAN 5	1272	1091	229	45	AUG 25-26	64	51	JAN 31	35	28	45	56	3.7	.6	25	25.5	N	JUL 12	4.1	178	109	79	58	1	47	3	78	0	57	0
FORT WORTH	25.1	12.7	18.9	40.6	JUN 25	- 9.4	JAN 5	1318	1588	565	61	OCT 21-22	36	36	DEC 10	73	84	55	53	4.6	1.3	17	16.5	22	SEP 23	5.5	133	98	135	68	1	53	12	114	0	38	0
GALVESTON U	24.3	18.8	21.6	33.9	AUG 27+	- 1.7	JAN 5	563	1818	1015	75	MAY 12	0	0		79	83	71	74				17.0	NW	SEP 29					133	0			14	0	4	0
HOUSTON INTERCON	26.1	14.1	20.1	36.7	JUN 29	- 5.6	DEC 17+	830	1531	1290	190	MAR 20	T	T	JAN 4	90	93	61	69	3.2	.8	11	16.5	33	NOV 13	6.3	83	116	167	106	0	86	42	89	0	21	0
LUBBOCK	22.7	8.0	15.3	38.9	JUN 27	- 16.1	JAN 5	1908	862	637	69	AUG 27	241	94	NOV 18	65	76	50	42	5.1	1.5	18	19.7	21	DEC 5	4.7	151	113	102	65	4	52	17	38	7	94	0
MIDLAND	24.6	9.4	17.1	40.0	JUN 28	- 16.1	JAN 5	1499	1081	296	36	AUG 26-27	76	43	JAN 31	67	80	45	39	5.2	2.0	16	18.3	30	NOV 12	4.7	158	100	108	59	1	46	15	68	2	67	0
PORT ARTHUR	25.0	14.6	19.8	34.4	AUG 27+	- 6.1	JAN 6	847	1434	1498	93	APR 27-28	0	0		92	94	67	76	4.4	1.1	12	23.2	S	MAY 12	5.9	109	105	152	106	0	84	40	57	0	16	0
SAN ANGELO	26.2	11.3	18.8	40.6	JUL 31	- 12.2	DEC 16	1224	1441	582	90	SEP 20-21	84	74	JAN 31	68	79	48	45	4.5	1.8	19	20.6	29	NOV 12	5.0	149	94	123	60	1	35	10	115	2	58	0
SAN ANTONIO	26.6	14.2	20.4	36.7	JUL 30	- 8.3	JAN 5	852	1668	800	166	MAY 6-7	T	-	DEC 11 +	79	85	59	55	3.8	1.1	11	15.6	NW	NOV 12+	6.0	96	122	148	90	0	41	27	102	0	23	0
VICTORIA	27.1	16.0	21.6	35.6	SEP 20+	- 4.4	DEC 17+	669	1893	1077	215	MAY 6-7	0	0		85	88	60	66	4.3	1.4	11	21.5	N	SEP 29+	6.3	84	118	164	94	0	64	50	107	0	12	0
WACO	25.2	13.4	19.3	39.4	JUN 26	- 7.8	JAN 5	1221	1633	727	108	OCT 21-22	T	T	DEC 10 +	75	84	58	54	4.8	1.6	16	16.5	17	JUL 18	5.4	134	98	134	72	0	47	17	114	1	35	[illegible]
WICHITA FALLS	24.4	9.7	17.1	43.9	JUN 25	- 13.9	JAN 15	1814	1393	593	87	OCT 30-31	112	48	FEB 11	76	86	53	51	5.7	1.5	16	17.4	36	DEC 5+	5.2	128	110	128	61	2	51	14	127	12	61	[illegible]
UTAH																																					
MILFORD	18.3	.6	9.5	38.3	JUL 29+	- 35.6	DEC 10	3556	366	271	27	AUG 27	1389	244	DEC 28-29											5.0	146	92	128	53	15			51	24	177	16
SALT LAKE CITY	18.0	4.6	11.3	40.0	JUL 29	- 26.1	DEC 15	3121	588	400	46	DEC 28-29	1951	450	DEC 28-29	43	39	59	64	4.2	1.0	17	24.6	NW	SEP 5	5.9	[illegible]	102	155	89	[illegible]	4	8	56	28	[illegible]	[illegible]
WENDOVER	17.2	5.3	11.3	38.3	AUG 6+	- 21.1	DEC 10	3166	638	135	23	OCT 19-20	287	147	FEB 24-25	42	34	48	55							5.3	142	81	143	54	4			41	33	110	7
VERMONT																																					
BURLINGTON	10.9	.6	5.8	33.3	JUL 15+	- 30.0	FEB 23	4746	199	968	72	JUN 15-16	3089	229	DEC 15-16	79	80	64	69	3.6	.7	22	21.9	SW	JAN 25	7.4	52	94	220	170	36	21	21	2	82	184	22
VIRGINIA																																					
LYNCHBURG	18.8	7.7	13.3	34.4	JUL 23+	- 20.0	JAN 16	2322	527	1517	159	JUN 20-21	399	140	FEB 1-2		81	56	66				14.8	NW	NOV 8	6.2	93	109	164	136	5			14	3	82	2
NORFOLK	19.8	11.8	15.3	35.0	JUL 24	- 13.3	JAN 16	1751	691	1174	77	SEP 20-21	46	46	FEB 19	81	81	63	72	5.4	.4	34	21.5	SW	FEB 3	6.3	92	110	164	138	1	44	21	17	1	31	[illegible]
RICHMOND	19.7	8.5	14.1	35.0	JUL 23	- 16.1	JAN 16	2143	651	1507	99	JUN 18	363	135	FEB 1-2	82	84	58	[illegible]	3.3	.3	28	17.9	NW	APR 15	6.4	84	104	178	135	3	29	28	20	1	68	[illegible]
ROANOKE	18.8	7.0	12.9	34.4	JUL 24+	- 20.0	JAN 16	2384	469	1312	101	JUN 20-21	325	94	FEB 1-2	77	78	54	62	3.7	1.1	[illegible]	17.9	31	FEB 19	6.3	87	110	169	132	6	31	27	12	6	84	1
WASHINGTON																																					
OLYMPIA	15.1	3.2	9.2	35.6	AUG 8+	- 21.7	JAN 27	3354	49	1636	100	MAR 4-5	1097	521	JAN 24-25	78	65	87	94	3.2	1.4	20	15.6	20	APR 5	7.2	73	67	226	170	10	[illegible]	15	[illegible]	15	169	6
QUILLAYUTE	13.7	4.1	8.9	33.3	SEP 2	- 13.9	DEC 8	3442	41	2791	172	DEC 25-26	737	191	JAN 24-25	78	71	87	[illegible]	3.0	.5	19	15.6	SW	FEB 27	7.5	[illegible]	72	234	[illegible]	8	6	53	3	[illegible]	81	[illegible]
SEATTLE-TACOMA	14.6	6.7	10.6	35.0	AUG 7	- 11.1	JAN 27	2886	118	1228	73	MAR 4-5	564	246	JAN 24-25	72	62	74	82	3.8	.8	19	17.0	SW	APR 5+	7.1	65	86	215	164	6	9	31	6	13	32	[illegible]
SPOKANE	13.8	2.6	8.2	39.4	AUG 8	- 24.4	FEB 2	3897	239	344	25	MAY 8-9	795	208	JAN 24-25	59	49	67	72	4.5	1.7	21	26.4	SW	JAN 9	6.4	97	90	179	[illegible]	12	13	66	17	34	137	15
STAMPEDE PASS R	6.9	.7	3.8	30.6	AUG 7	- 20.0	DEC 8+	5301	33	2932	101	JAN 10-11	13569	958	JAN 10-11	80	76		88							7.6	71	45	[illegible]	199	[illegible]			[illegible]	90	186	6
WALLA WALLA	17.2	6.5	11.8	42.2	AUG 8	- 20.0	DEC 9	2833	508	387	27	MAY 20-21	566	102	JAN 25-26								18.8	SW	JAN 11	6.5	90	94	182	118	8			36	[illegible]	57	6
YAKIMA	17.7	1.6	9.7	41.1	AUG 8+	- 23.3	FEB 2	3429	305	186	17	JUN 23-24	610	102	JAN 24-25	50	40	65	[illegible]	3.4	1.5	29	20.5	26	MAR 5	5.8	107	110	149	77	[illegible]	11	14	44	29	160	13
WEST INDIES																																					
SAN JUAN P.R.	30.4	24.1	27.3	35.6	JUN 21	20.0	FEB 15	0	3312	958	51	DEC 9-10	0	0		74	71	60	69	4.5	3.6	[illegible]	19.7	NE	OCT 21	5.7	61	218	87	185	0	44	[illegible]	57	0	0	0
WEST VIRGINIA																																					
BECKLEY	15.4	5.1	10.3	30.6	JUL 24+	- 26.1	JAN 16	3097	211	1326	45	FEB 25-26	912	160	FEB 19-20	83	85	65	73	4.3	1.4	22	14.3	29	DEC 16+	7.5	47	91	228	189	11	43	65	0	20	111	3
CHARLESTON	18.2	6.8	12.5	34.4	JUL 24+	- 20.6	JAN 16	2539	459	1299	51	JUL 31	673	97	DEC 30-1 +	79	81	60	65	2.7	.9	25	19.2	27	MAY 2	7.6	36	92	238	183	9	57	115	9	16	95	2
ELKINS	16.1	3.4	9.8	30.0	AUG 23	- 24.4	JAN 16	3251	176	1492	62	OCT 5	1501	131	FEB 13-14		80	[illegible]	69							7.9	33	90	243	193	21			0	21	135	8

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes									Snow †										Fastest mile (1.6 kilometers)				Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00am EST	7:00am EST	1:00pm EST	7:00pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm	Mm		Mm	Mm		%	%	%	%	Mps	Mps		M.ps			Tenths											
WEST VIRGINIA																																					
HUNTINGTON	17.4	6.9	12.2	33.9	JUL 23	- 22.8	JAN 16	2674	467	1187	61	DEC 8-9	551	76	MAR 3 +	82	85	64	67	2.8	.8	23	15.6	15	MAR 21	7.7	46	85	235	168	10	47	80	8	19	94	2
PARKERSBURG U	17.1	7.0	12.1	35.6	JUL 22	- 21.1	JAN 16	2727	494	1203	64	AUG 3-4	551	86	MAR 3								20.1		APR 16					168	7			9	22	94	2
WISCONSIN																																					
GREEN BAY	11.2	.2	5.7	35.0	JUL 20	- 33.3	JAN 15	4844	275	693	42	SEP 31-1	1595	211	MAR 29	78	79	62	67	4.4	.9	28	18.8		JAN 25	6.9	75	86	205	138	21	36	25	8	83	162	38
LA CROSSE	11.9	1.2	6.6	35.6	AUG 17+	- 31.1	JAN 15	4619	381	925			1334			81	85	63	66	3.1	.1	27								131	15	38	15	17	78	163	38
MADISON	12.0	.2	6.1	34.4	AUG 17+	- 31.1	JAN 15	4673	258	786	46	AUG 25-26	1275	277	MAR 29	83	86	64	69	4.5	.7	26	18.3	NW	AUG 14	6.9	78	85	203	124	16	46	15	11	69	166	34
MILWAUKEE	10.7	2.1	6.4	33.3	JUL 21	- 30.0	JAN 15	4529	232	932	59	SEP 17-18	1275	170	MAR 13	79	81	68	71	5.2	1.3	28	20.6	N	SEP 18	6.9	77	86	203	141	17	29	27	6	75	155	25
WYOMING																																					
CASPER	14.1	- .8	6.7	36.7	AUG 12	- 40.0	JAN 14+	4399	169	302	23	OCT 4-5	2083	246	JAN 12	51	47	71	77	6.0	2.7	23	22.8	27	JAN 11	6.3	81	121	164	100	25	35	11	17	51	174	22
CHEYENNE	13.7	.3	7.1	33.9	JUL 30	- 31.1	DEC 5	4168	84	306	20	MAY 19	1234	142	MAR 27-28	42	44	62	65	6.0	3.0	29	33.5	NW	MAR 6	6.5	73	121	172	102	16	58	26	3	41	170	20
LANDER	13.4	- .6	6.4	35.0	AUG 12	- 32.2	DEC 11+	4476	165	335	21	APR 13-14	3147	325	DEC 28-29	48	43	57	64	3.4	1.1	26	35.8	SW	MAR 6	6.0	86	146	134	82	29	39	5	10	53	174	29
SHERIDAN	14.2	- .9	6.6	36.1	AUG 12	- 34.4	DEC 8+	4403	163	343	27	JUN 18-19	1895	343	JAN 1-2	49	48	68	72	3.7	1.6	31	22.4	SW	MAR 6	6.5	76	113	177	133	24	44	7	17	46	174	21

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

Data in this table are obtained by conversion from data in the English Units table.

† Includes all forms of frozen precipitation, except hail occurring alone.

+ And also on an earlier date or dates

B Number of days maximum 21.1°C or above for Alaskan Stations

Y Peak gust

V Sun below horizon November 19 - January 23, inclusive

W Sun below horizon November 24 - January 17, inclusive

NORMALS, MEANS AND EXTREMES

State and Station	Elevation Ground (Meters)	Temperature (°C)								Normal Heating Degree Days (1931 1960)		Precipitation (Millimeters)									Relative Humidity (Percent)						Wind Speed (m.p.s.)			Sunshine (% of Possible)		Annual Mean Number of Days									
		Normal (1931 1960)					Extremes					Normal (1931 1960)			Extremes			Snow @			January			July			Mean Speed					Sunrise to Sunset							Temperature		
		January		July														Mean Total		Extreme																			Max	Min	
		Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Annual	Length (Yrs)	Record Highest	Record Lowest	January	Seasonal	Wettest Month	Driest Month	Annual	Wettest Month	Driest Month	Maximum In 24 Hours	January	Seasonal	Maximum In 24 Hours	7 00 a m EST	1 00 p m EST	7 00 p m EST	7 00 a m EST	1 00 p m EST	7 00 p m EST	January	July	Fastest Mile (1 6 Kilometers)	January	July	Clear	Partly Cloudy	Cloudy	Precipitation 25mm or More	Snow Sleet Hail 25.4mm or More	Thunderstorms	Heavy Fog	≥ 32 2°C	≤ 0°C	≤ 17 8°C
ALABAMA							89	44.4	-31.1							0	516																								
BIRMINGHAM	188	13.7	2.4	33.6	21.5	17.8	9	38.9	[illegible]	328	1417	152	75	1347	449	0	179	[illegible]	33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	[illegible]	[illegible]	[illegible]	151	[illegible]	1	[illegible]	8	42	63	*
HUNTSVILLE	193	11.3	[illegible]	[illegible]	[illegible]	16.7	5	38.3	-16.1	385	1705	133	69	1236	251	20	128	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44	[illegible]	[illegible]
MOBILE	64	16.2	5.2	32.5	22.5	19.7	11	38.9	-13.3	254	940	246	[illegible]	1731	490	1	339	3	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MONTGOMERY	[illegible]	14.7	3.2	33.3	[illegible]	18.3	9	38.9	[illegible]	[illegible]	1272	156	58	1288	542	1	224	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	*	61	22	[illegible]	41	[illegible]
ALASKA							89	37.8	-62.2							0	359																						B		
ANCHORAGE PR 2 1966	[illegible]	-5.4	-15.4	18.1	[illegible]	1.8	44	[illegible]	-38.9	[illegible]	6035	65	11	374	150	0	52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ANCHORAGE	[illegible]	-5.7	-15.4	18.9	[illegible]	2.1	8	29.4	-34.4	911	5915	65	11	374	117	0	42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ANNETTE	[illegible]	3.6	[illegible]	17.3	10.8	7.6	12	[illegible]	-17.2	527	3926	429	144	3006	886	14	193	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16	[illegible]	[illegible]	[illegible]
BARROW	[illegible]	[illegible]	-31.6	[illegible]	0.7	-12.4	52	25.6	-48.9	1398	[illegible]	23	3	[illegible]	71	0	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BARTER ISLAND	11	-23.3	-30.9	8.6	1.7	-12.0	23	[illegible]	-50.6	1408	11033	27	4	[illegible]	125	0	57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BETHEL	38	-11.3	-19.9	16.5	8.6	-1.8	[illegible]	[illegible]	[illegible]	1657	7330	107	15	468	148	1	51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BETTLES	196						2	33.3	[illegible]						[illegible]	0	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BIG DELTA	386						31	43.3	-52.8						157	0	54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COLD BAY	29	[illegible]	[illegible]	12.4	[illegible]	3.3	28	25.6	-25.0	640	5488	117	37	971	253	1	174	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CORDOVA 1963	12	[illegible]	-9.7	[illegible]	7.8	3.4	[illegible]	28.9	-36.1	721	5423	318	88	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FAIRBANKS	132	-18.2	-29.7	22.1	8.7	-3.4	9	35.6	-51.7	1310	7932	56	6	287	157	0	87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GULKANA	479						[illegible]	43.3	[illegible]						110	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOMER	[illegible]						30	43.3	-29.4			89	[illegible]	622	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ILIAMNA 1969	[illegible]						27	43.3	-42.9						280	0	67	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUNEAU	[illegible]	[illegible]	[illegible]	17.1	8.9	4.5	[illegible]	[illegible]	[illegible]	687	[illegible]	212	73	1387	[illegible]	7	118	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KING SALMON	14	[illegible]	[illegible]	17.2	8.2	[illegible]	9	29.4	-41.1	888	[illegible]	[illegible]	14	487	185	0	51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KOTZEBUE	[illegible]	-17.2	[illegible]	14.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1217	8946	55	7	208	132	0	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MC GRATH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1274	[illegible]	96	12	472	159	0	61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOME	[illegible]	-11.4	[illegible]	[illegible]	[illegible]	-3.3	5	[illegible]	[illegible]	[illegible]	[illegible]	97	18	454	199	0	60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ST. PAUL ISLAND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3	[illegible]	[illegible]	[illegible]	[illegible]	6221	84	24	599	237	2	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SHEMYA	[illegible]	1.1	-1.9	[illegible]	6.4	3.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	693	221	4	134	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SUMMIT	[illegible]						[illegible]	[illegible]	[illegible]						171	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TALKEETNA	[illegible]	[illegible]	-18.2	[illegible]	9.4	[illegible]	33	[illegible]	-44.4	957	[illegible]	135	[illegible]	[illegible]	303	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UNALAKLEET	[illegible]						27	41.3	-45.6						[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YAKUTAT	8	[illegible]	[illegible]	15.8	[illegible]	4.4	8	28.3	-31.1	649	[illegible]	498	129	3348	[illegible]	13	181	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ARIZONA							79	52.8	[illegible]							0	[illegible]																								
FLAGSTAFF	2135	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	649	3972	72	13	465	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PHOENIX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12	46.7	[illegible]	263	[illegible]	28	2	183	141	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PRESCOTT 1966	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	480	2423	68	6	311	244	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TUCSON	[illegible]	[illegible]	[illegible]	36.9	23.4	19.9	[illegible]	43.9	-8.9	261	999	73	[illegible]	279	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WINSLOW	1491	[illegible]	-8.4	35.4	[illegible]	[illegible]	13	[illegible]	-26.1	585	2656	36	7	184	[illegible]	0	54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YUMA	[illegible]	[illegible]	4.4	41.6	[illegible]	[illegible]	8	[illegible]	-4.4	[illegible]	676	13	[illegible]	77	68	0	61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ARKANSAS							82	48.9	[illegible]							0	[illegible]																								
FORT SMITH	[illegible]	[illegible]	[illegible]	34.8	[illegible]	[illegible]	8	43.3	-17.8	433	1828	134	68	[illegible]	356	0	181	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LITTLE ROCK	[illegible]	10.3	[illegible]	33.7	21.7	16.5	13	[illegible]	-20.0	420	1788	134	72	1236	[illegible]	0	196	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TEXARKANA 1968	[illegible]	12.7	1.8	34.1	[illegible]	[illegible]	3	38.3	-12.8	347	[illegible]	135	69	1249	423	0	166	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CALIFORNIA							88	[illegible]	-42.8							0	663																								
BAKERSFIELD	144	[illegible]	[illegible]	[illegible]	[illegible]	18.4	9	[illegible]	-4.4	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	0	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BISHOP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-21.1	485	2348	[illegible]	2	148	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLUE CANYON	[illegible]	5.4	[illegible]	[illegible]	[illegible]	[illegible]	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BURBANK 1965	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41.1	[illegible]	[illegible]	914	82	[illegible]	369	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EUREKA	[illegible]	12.0	[illegible]	[illegible]	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	976	355	0	146	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FRESNO	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	43.9	[illegible]	325	[illegible]	[illegible]	0	283	[illegible]	0	66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LONG BEACH	[illegible]	18.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	59	0	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LOS ANGELES	[illegible]	[illegible]	7.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	192	949	73	0	321	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LOS ANGELES CITY	[illegible]	[illegible]	8.2	28.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	172	749	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MT SHASTA	[illegible]	[illegible]	[illegible]	[illegible]	10.4	9.9	[illegible]	[illegible]	[illegible]	546	3178	[illegible]	5	933	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OAKLAND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97	[illegible]	455	[illegible]	0	188	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
POINT ARGUELLO 1963	[illegible]	[illegible]	4.6	18.6	10.8	12.9	4	36.1	-4.4	263	1997	60	[illegible]	286	[illegible]	0	98	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RED BLUFF	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	28	48.3	[illegible]	[illegible]	1397	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SACRAMENTO	[illegible]	11.8	[illegible]	[illegible]	[illegible]	[illegible]	12	[illegible]	[illegible]	341	[illegible]	82	[illegible]	414	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SACRAMENTO 1966	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	91	[illegible]	458	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SANDBERG	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38.9	[illegible]	432	2338	66	1	[illegible]	[illegible]	0	174	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SAN DIEGO	[illegible]	18.1	7.4	[illegible]	[illegible]	[illegible]	[illegible]	43.9	[illegible]	[illegible]	[illegible]	55	0	264	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SAN FRANCISCO	[illegible]	[illegible]	5.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-4.4	[illegible]	[illegible]	[illegible]	0	475	312	0	116	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SAN FRANCISCO [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	[illegible]	[illegible]	116	0	528	[illegible]	0	93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SANTA CATALINA 1968	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5	[illegible]	1.1	196	[illegible]	[illegible]	1	365	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SANTA MARIA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
STOCKTON	[illegible]	[illegible]	[illegible]	31.2	16.1	[illegible]	[illegible]	[illegible]	[illegible]	349	[illegible]	58	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NORMALS, MEANS AND EXTREMES

State and Station	Elevation Ground (Meters)	Temperature (C)								Normal Heating Degree Days (1931 1960)		Precipitation (Millimeters)									Relative Humidity (Percent)						Wind Speed (m p s)			Sunshine (% of Possible)		Annual Mean Number of Days									
		Normal (1931 1960)					Extremes					Normal (1931 1960)			Extremes			Snow @			January			July			Mean Speed		Fastest Mile (1 6 Kilometers)	January	July	Sunrise to Sunset			Precipitation 25mm or More	Snow, Sleet, Hail 25.4mm or More	Thunderstorms	Heavy Fog	Temperature		
		January		July		Annual	Length (Yrs)	Record Highest	Record Lowest	January	Seasonal	Wettest Month	Driest Month	Annual	Wettest Month	Driest Month	Maximum In 24 Hours	Mean Total		Ex treme	7 00 a m EST	1 00 p m EST	7 00 p m EST	7 00 a m EST	1 00 p m EST	7 00 p m EST	January	July				Clear	Partly Cloudy	Cloudy					Max	Min	
		Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum													January	Seasonal	Maximum In 24 Hours																			≥ 32 2 C	≤ 0 C	≤ -17 8 C
COLORADO							85	47.8	-51.1							0	281																								
ALAMOSA	2296	2.0	-18.2	28.1	8.4	5.5	27	33.9	-45.6	819	4737	27	4	167	89	0	46	104	892	[illegible]	75	59	59	84	39	37						145	140	80	68	12	44	15	1	227	[illegible]
COLORADO SPRINGS	1874	5.5	-9.3	29.0	13.7	9.2	12	37.2	-29.4	626	3568	60	6	335	203	0	78	114	1011	457	56	[illegible]	45	72	39	44	4.5	4.3	26.8			129	120	116	87	11	[illegible]	21	14	161	[illegible]
DENVER	1610	5.6	-9.6	31.3	14.1	9.7	13	38.3	-31.7	628	3490	69	12	376	186	0	87	211	1491	493	[illegible]	44	47	73	[illegible]	[illegible]	4.2	3.8	[illegible]	71	70	115	134	117	87	18	42	[illegible]	32	155	1
GRAND JUNCTION	1476	1.6	-8.3	33.6	17.7	11.4	9	40.6	-26.1	671	3133	27	11	211	88	0	40	183	[illegible]	221	75	62	59	47	[illegible]	[illegible]	[illegible]	4.2	[illegible]	59	77	142	[illegible]	[illegible]	71	9	[illegible]	8	[illegible]	[illegible]	[illegible]
PUEBLO	1427	7.4	-9.6	33.4	16.0	11.5	8	40.6	-28.3	[illegible]	3034	47	8	301	157	0	96	145	[illegible]	427	61	45	42	71	[illegible]	[illegible]	[illegible]	3.8	[illegible]	74	76	[illegible]	124	[illegible]	[illegible]	[illegible]	42	3	61	[illegible]	[illegible]
CONNECTICUT							85	40.6	-35.6							0	308																								
BRIDGEPORT	2	3.0	-5.1	28.1	18.2	10.8	7	37.8	-19.4	599	3120	113	75	1140	450	2	175	175	696	424	69	59	62	77	60	69	5.8	4.4	[illegible]			101	108	156	117	8	21	29	5	[illegible]	*
HARTFORD	51	1.5	-8.2	29.4	16.6	9.9	13	38.9	-32.2	671	3428	102	75	1090	555	9	308	279	1430	381	72	57	63	80	51	62	4.3	3.5	[illegible]	58	60	81	111	173	127	14	22	32	13	139	
NEW HAVEN 1969	1	2.8	-5.6	26.9	17.3	10.1	25	37.8	-22.2	609	3275	117	81	1169	278	3	141	236	942	437	76	63		81	66		3.7	2.8	[illegible]	55	68	[illegible]	[illegible]	156	128	11	7	28	3	113	1
DELAWARE							80	43.3	-27.2							0	199																								
WILMINGTON	22	5.2	-3.6	30.1	18.8	12.3	25	38.9	-20.0	544	2738	142	74	1132	307	4	158	147	541	396	75	61	69	80	54	67	4.4	3.4	[illegible]			97	105	163	115	6	31	40	19	103	*
DIST. OF COLUMBIA																																									
WASHINGTON DULLES	88						10	39.4	-22.2						462	0	302	163	678	391	79	59	68	86	55	70	3.6	2.8	20.6			98	104	163	[illegible]	7	26	37	26	117	
WASHINGTON NATIONAL	3	6.8	-1.4	30.6	20.7	13.9	12	38.3	-16.1	483	2346	124	63	1036	363	0	183	124	444	366	69	54	59	76	53	61	4.5	3.7	34.9	49	61	103	104	158	111	5	29	13	37	[illegible]	
FLORIDA							83	42.8	-18.9							0	983																								
APALACHICOLA U	3	16.8	8.8	30.9	24.1	20.4	43	38.9	-10.6	192	726	217	62	1428	573	0	297	0	0	30	87	69	80	85	72	76	4.8	[illegible]	[illegible]	59	63	132	113	[illegible]	106	*	69	27	19	5	
DAYTONA BEACH	9	20.9	9.3	31.2	22.2	21.3	29	38.9	-6.1	137	488	178	50	1267	505	0	236	0	0		88	[illegible]	79	88	66	73	4.1	3.5	[illegible]			94	137	134	115	0	79	32	55	5	
FORT MYERS	4	23.8	11.2	32.8	22.9	23.2	13	36.7	-3.3	81	245	231	30	1355	472	0	276	0	0		88	59	74	87	60	74	3.8	3.1	41.1			104	158	103	114	0	95	22	102	1	
JACKSONVILLE	7	19.3	7.2	33.3	22.9	20.8	31	40.6	-11.1	184	688	195	43	1355	492	0	258	0	0	38	87	57	74	87	58	75	3.8	3.5	26.7	57	60	99	128	138	116	*	62	34	84	11	
KEY WEST INTL AP	1	23.2	18.6	30.8	26.2	24.9	20	35.0	7.8	22	60	171	39	1016	548	0	225	0	0		83	69	77	76	66	71	5.4	4.6	54.5	70	75	102	163	[illegible]	113	0	62	1	47	0	
LAKELAND	65	21.8	11.2	32.5	22.6	22.4	32	38.3	-6.7	108	367	211	40	1305	398	0	257	0	0								3.3	2.5		61	60	100	158	107	[illegible]	0	100	19	82	2	
MIAMI BEACH 1964	2	23.4	17.7	30.6	25.3	24.6	24	36.7	1.7	31	78	187	42	1175	458	0	212	0	0								5.2	4.9	54.5	67	63	147	[illegible]	[illegible]	[illegible]	0			14	0	
MIAMI INTL AP	2	24.3	14.4	31.6	23.7	23.9	8	35.6	1.1	41	118	241	42	1518	620	0	253	0	0		84	60	70	86	64	72	4.2	3.5	[illegible]			78	169	118	128	0	76	7	33	0	
ORLANDO	32	21.5	10.0	33.3	22.8	22.2	9	36.7	-4.4	122	425	203	40	1305	497	0	246	0	0		87	57	70	89	59	73	4.1	3.4	[illegible]			97	145	123	114	0	78	28	101	2	
PENSACOLA 1/	34	16.8	7.0	31.8	23.4	20.2	9	37.8	-11.7	222	812	204	76	1597	394	0	255	0	0		81	64	73	88	64	70	4.0	3.0	26.4	48	57	99	115	151	116	0	70	35	48	15	
TALLAHASSEE	16	18.4	5.9	32.5	22.2	20.0	12	37.8	-12.2	208	824	204	62	1444	511	0	241	0	0		87	60	73	92	61	74	3.6	2.6	25.9			99	134	132	118	0	82	53	91	35	
TAMPA	5	21.8	10.6	32.1	23.0	22.3	9	36.1	-5.0	112	379	219	37	1310	523	0	308	0	0		87	59	73	87	62	72	4.1	3.4	30.0	66	61	97	142	126	[illegible]	0	87	24	78	4	
WEST PALM BEACH	4	24.2	14.6	32.7	23.5	24.1	8	37.2	-1.7	48	140	245	60	1567	631	1	387	0	0		83	59	73	84	65	75	4.4	3.4	38.4			74	155	136	131	0	[illegible]	9	58	1	
GEORGIA							81	44.4	-27.2							0	457																								
ATHENS	244	12.6	1.4	32.3	20.7	16.6	29	40.6	-18.3	356	1627	130	73	1233	380	0	252	18	51	127	81	58	65	91	60	70	3.9	2.9	23.2			112	106	147	[illegible]	1	51	36	51	53	*
ATLANTA	307	11.1	2.9	30.6	21.5	16.3	12	36.7	-19.4	355	1657	136	62	1197	399	0	144	18	41	211	79	60	64	90	64	[illegible]	4.7	3.3	31.3	48	62	110	[illegible]	145	115	1	[illegible]	29	21	60	*
AUGUSTA	41	15.2	2.1	32.9	21.1	17.8	8	40.0	-15.0	305	1331	114	51	995	290	0	152	5	15	84	83	54	67	90	58	72	3.1	2.6	27.7			109	103	153	[illegible]	*	55	26	62	62	
COLUMBUS	117	15.0	2.6	33.1	21.4	18.0	27	40.0	-16.1	306	1323	153	45	1236	336	0	143	0	0		85	60	71	89	59	70	3.4	2.4	24.6			111	101	153	111	0	58	19	74	46	
MACON	107	15.7	3.4	33.8	21.7	18.7	8	40.0	-16.1	280	1186	143	51	1120	299	0	135	5	10	94	83	58	65	89	[illegible]	69	3.7	3.1	[illegible]	54	64	112	105	148	112	*	56	24	78	54	
ROME	194	11.6	-0.4	32.6	19.7	15.8	26	41.1	-20.6	394	1847	149	74	1327	441	0	191	18	53	208	81	58	73	88	54	67						105	117	143	123	1	61	26	60	81	*
SAVANNAH	14	16.9	4.9	32.9	21.9	19.1	8	38.9	-12.8	242	1010	168	52	1242	511	1	179	0	5	91	84	55	69	89	60	74	3.9	3.4	29.5	55	65	103	116	146	111	*	63	39	58	41	
THOMASVILLE 1963	86	17.4	6.7	33.3	22.2	20.1	41	41.1	-13.3	218	849	173	53	1296	478	0	229	0	0	51	85	60	70	85	60	78	2.4	1.8		54	57	122	119	124	116	*	72	13	77	15	
HAWAII							68	37.8	-7.8							0	965																								
HILO	8	25.9	17.1	28.0	19.7	22.8	26	34.4	11.7			386	172	3470	1291	9	399	0	0		84	79	67	88	81	67	3.4	3.1	[illegible]	44	41	31	123	211	281	0	9	0	1	0	
HONOLULU 1964	3						42	34.4	13.9			98	16	609	475	2	442	0	0																147	0			[illegible]	0	
HONOLULU	2	26.2	18.8	29.2	22.8	24.4	3	32.8	11.7			96	8	556	528	0	434	0	0		79	78	64	67	64	51	4.5	6.1	[illegible]	63	75	95	167	[illegible]	[illegible]	0	7	[illegible]	5	0	
KAHULUI	14	27.1	17.4	30.2	21.2	24.0	8	35.0	8.9			80	5	415	347	0	148	0	0		86	66	65	82	72	55	5.1	7.2	[illegible]	65	75	115	155	95	97	0	6	0	25	0	
LIHUE	31	25.7	17.5	28.4	22.2	23.6	22	32.2	10.0			140	37	1092	582	8	293	0	0		84	83	68	80	75	65	4.6	5.6	[illegible]	51	61	52	170	143	202	0	10	0	*	0	
IDAHO							80	47.8	-51.1							0	182																								
BOISE	865	2.3	-5.5	33.0	15.0	10.6	33	43.9	-30.6	618	3226	34	4	290	102	0	57	196	546	[illegible]	81	74	71	53	33	21	3.9	3.8	27.3	41	89	125	91	149	91	8	15	19	43	126	2
IDA FALLS 42NW R1966	1459	-3.1	-17.7	31.7	9.6	5.4	16	39.4	-41.7	888	4866	31	8	178	128	0	45										2.1	3.6	22.4						66				33	219	41
IDA FALLS 46W R 1966	1503	-2.5	-16.0	31.1	10.1	5.8	17	38.3	-40.0	854	4707	28	7	192	112	0	44	163	678	216							2.5	3.5	22.8						68	10	13	14	25	212	[illegible]
LEWISTON	430	3.2	-4.6	32.1	14.3	10.9	26	46.1	-30.0	590	3078	44	11	336	122	0	44	196	467	325	80	75	72	61	37	23			22.2			96	72	197	103	6	16	21	39	96	3
POCATELLO	1357	-0.2	-10.6	32.0	12.8	8.3	9	40.0	-33.3	735	3906	31	13	276	101	0	42	259	986	257	76	72	67	62	32	22	5.0	4.2	32.2	37	84	110	98	157	93	13	25	14	33	175	[illegible]
ILLINOIS							83	47.2	-37.2							0	420																								
CAIRO U	95	7.0	-1.0	32.4	22.1	15.3	[illegible]	40.0	-20.6	475	2122	122	73	1149	380	0	192	74	249	267	80	67		84	59		4.4	2.9	28.2	45	75	114	104	147	114	3	53	7	49	66	*
CHICAGO O HARE	200	0.2	-8.8	28.9	16.3	9.3	14	37.2	-28.9	702	3688	101	38	832	291	3	117	277	1003	460	76	68	72	82	59	58	5.1	3.5	25.9			89	106	170	123	11	37	16	15	135	14
CHICAGO MIDWAY	185	0.6	-7.2	28.9	19.5	10.4	9	38.3	-26.7	671	3419	103	41	843	360	5	158	246	1008	503	70	64	66	77	55	55	5.2	3.7	26.8	44	69	95	103	167	121	12	38	13	21	120	8
MOLINE	177	-0.2	-10.2	31.1	17.3	10.1	13	37.8	-32.2	729	3559	111	34	833	360	0	160	193	732	417	73	65	69	86	58	60	4.8	3.4	34.4	48	71	103	99	163	111	9	47	20	22	138	17
PEORIA	198	0.9	-8.0	30.6	18.3	10.8	13	38.9	-28.9	676	3346	108	43	885	332	1	129	142	584	229	77	68	71	85	59	60	5.1	3.6	33.5	46	69	100	99	166	110	8	48	21	17	134	12
ROCKFORD	220	-1.0	-10.2	30.2	16.7	9.2	9	37.2	-30.0	740	3794	109	37	905	300	0	141	208	836	277	77	69	73	86	57	59	4.6	3.6	24.1			96	101	168	112	11	42	24	13	143	16
SPRINGFIELD	179	2.4	-6.4	32.0	19.1	12.0	13	41.1	-30.0	630	3015	113	46	885	252	4	130	124	544	262	77	67	70	83	56	57	5.8	3.8	33.5	46	72	109	93	163	112	7	50	17	29	122	9
INDIANA							86	46.7	-37.2							0	267																								
EVANSVILLE	116	5.9	-3.6	32.4	19.6	13.9	12	40.0	-27.8	530	2463	109	65	1053	343	0	154	89	340	269	76	65	67	85	57	59	4.2	2.9	26.4	42	75	103	101	161	114	4	46	14	40	109	4
FORT WAYNE	241	1.3	-6.9	29.5	17.3	10.2	12	38.3	-28.3	654	3446	106	53	897	247	4	117	[illegible]	754	345	79	71	75	83	56	58	5.1	3.6	29.1	41	72	77	107	181	131	9	41	23	14	134	11
INDIANAPOLIS	241	2.8	-6.1	30.0	17.9	11.2	14	37.2	-28.9	618	3165	117	58	997	322	4	102	127	518	317	79	68	70	86	60	62	5.0	3.4	40.2	41	70	91	102	172	122	7	44	21	16	122	8
SOUTH BEND	235	0.6	-7.7	29.2	17.0	9.7	9	36.7	-28.3	678	3576	92	48	907	248	1	119	409	1681	396	80	74	75	84	57	60	5.4	3.8	28.2			72	105	188	141	22	43	24	10	128	8

NORMALS, MEANS AND EXTREMES

State and Station	Elevation Ground (Meters)	Temperature (°C) Normal (1931 1960) January Daily Maximum	January Daily Minimum	July Daily Maximum	July Daily Minimum	Annual	Extremes Length (Yrs)	Record Highest	Record Lowest	Normal Heating Degree Days (1931 1960) January	Seasonal	Precipitation (Millimeters) Normal (1931 1960) Wettest Month	Driest Month	Annual	Extremes Wettest Month	Driest Month	Maximum In 24 Hours	Snow @ Mean Total January	Seasonal	Extreme Maximum In 24 Hours	Relative Humidity (Percent) January 7 00 a m EST	January 1 00 p m EST	January 7 00 p m EST	July 7 00 a m EST	July 1 00 p m EST	July 7 00 p m EST	Wind Speed (m.p.s.) Mean Speed January	Mean Speed July	Fastest Mile (1 6 Kilometers)	Sunshine (% of Possible) January	July	Annual Mean Number of Days Sunrise to Sunset Clear	Partly Cloudy	Cloudy	Precipitation 25mm or More	Snow Sleet Hail 25.4mm or More	Thunderstorms	Heavy Fog	Temperature Max ≥ 32.2 C	Min ≤ 0 C	Min ≤ 17.8 C
IOWA							[illegible]	47.8	[illegible]							0	424																								
BURLINGTON	213	0.4	8.8	[illegible]	18.7	[illegible]	[illegible]	[illegible]	[illegible]	699	3396	127	[illegible]	979	384	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DES MOINES	285	-1.9	-11.[illegible]	30.7	18.4	9.6	12	37.8	-31.1	776	3781	120	28	771	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DUBUQUE	321	-2.6	-11.6	28.7	[illegible]	8.1	7	36.1	-33.3	788	4097	[illegible]	36	917	393	0	225	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SIOUX CITY	333	-2.3	-12.5	31.9	18.4	9.5	13	[illegible]	-32.2	797	3861	110	19	629	262	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WATERLOO	264	[illegible]	-12.9	29.8	[illegible]	8.4	[illegible]	37.2	-36.7	811	4066	123	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KANSAS							86	49.4	[illegible]							0	[illegible]																								
CONCORDIA	448	[illegible]	[illegible]	33.4	[illegible]	12.3	[illegible]	[illegible]	[illegible]	646	3143	[illegible]	18	645	359	[illegible]	139	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DODGE CITY	[illegible]	5.8	[illegible]	33.8	18.7	[illegible]	[illegible]	[illegible]	[illegible]	583	2769	77	[illegible]	489	[illegible]	[illegible]	116	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GOODLAND	1113	4.9	[illegible]	33.2	[illegible]	[illegible]	6	[illegible]	[illegible]	647	3411	68	[illegible]	419	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOPEKA	[illegible]	[illegible]	[illegible]	33.1	[illegible]	[illegible]	8	[illegible]	[illegible]	623	2878	[illegible]	[illegible]	[illegible]	366	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WICHITA	[illegible]	[illegible]	[illegible]	33.6	[illegible]	[illegible]	[illegible]	[illegible]	-24.4	568	2566	[illegible]	[illegible]	722	266	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KENTUCKY							[illegible]	[illegible]	[illegible]							[illegible]	[illegible]																								
COVINGTON	[illegible]	4.7	[illegible]	30.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	964	[illegible]	5	132	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LEXINGTON	299	[illegible]	[illegible]	31.2	[illegible]	13.1	[illegible]	[illegible]	-23.9	525	2611	125	58	1136	[illegible]	6	149	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LOUISVILLE	149	6.4	-3.1	31.4	19.2	13.2	12	[illegible]	-28.9	516	2588	117	57	1050	379	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LOUISIANA							82	45.6	[illegible]							0	559																								
ALEXANDRIA	28	[illegible]	4.4	[illegible]	[illegible]	[illegible]	13	[illegible]	[illegible]	261	[illegible]	146	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BATON ROUGE	19	[illegible]	[illegible]	33.3	[illegible]	[illegible]	24	38.9	-12.2	227	866	159	52	1383	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LAKE CHARLES	2	[illegible]	[illegible]	32.5	[illegible]	[illegible]	8	37.2	-6.7	211	[illegible]	185	78	[illegible]	441	0	358	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NEW ORLEANS [illegible]	1	18.2	[illegible]	[illegible]	[illegible]	[illegible]	8	[illegible]	[illegible]	191	696	[illegible]	[illegible]	1594	258	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NEW ORLEANS [illegible] AP	1	18.7	[illegible]	32.6	[illegible]	[illegible]	16	37.8	[illegible]	[illegible]	[illegible]	171	72	[illegible]	485	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SHREVEPORT	[illegible]	[illegible]	[illegible]	34.6	[illegible]	18.9	[illegible]	[illegible]	-16.1	[illegible]	1213	125	58	[illegible]	315	[illegible]	182	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAINE							85	[illegible]	-44.4							0	[illegible]																								
CARIBOU	[illegible]	[illegible]	[illegible]	23.7	[illegible]	3.6	[illegible]	35.6	[illegible]	938	5425	[illegible]	51	[illegible]	[illegible]	3	158	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PORTLAND	[illegible]	[illegible]	-11.3	26.4	[illegible]	[illegible]	[illegible]	[illegible]	-39.4	743	[illegible]	111	61	[illegible]	[illegible]	7	156	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MARYLAND							77	42.8	[illegible]							0	375																								
BALTIMORE 1964	[illegible]	6.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-21.7	477	2283	[illegible]	[illegible]	1123	449	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BALTIMORE [illegible] AP	47	5.8	[illegible]	30.7	[illegible]	12.9	[illegible]	[illegible]	-21.7	519	2585	142	[illegible]	[illegible]	466	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MASSACHUSETTS							85	41.1	-36.7							0	461																								
BLUE HILL OBS	191	[illegible]	[illegible]	[illegible]	16.4	9.3	87	38.3	-29.4	654	3537	115	83	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BOSTON	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	624	[illegible]	[illegible]	[illegible]	[illegible]	434	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NANTUCKET 1965	3	[illegible]	[illegible]	23.5	[illegible]	[illegible]	4	[illegible]	-16.7	551	3272	115	69	[illegible]	428	0	165	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PITTSFIELD 1968	[illegible]	[illegible]	[illegible]	26.2	[illegible]	[illegible]	9	[illegible]	-31.7	743	[illegible]	[illegible]	64	1128	262	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WORCESTER	[illegible]	[illegible]	-8.4	26.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3871	[illegible]	74	[illegible]	264	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MICHIGAN							86	44.4	-46.1							0	248																								
ALPENA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.6	14	[illegible]	[illegible]	779	[illegible]	92	41	[illegible]	213	4	81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DETROIT CITY AP	[illegible]	[illegible]	[illegible]	28.8	[illegible]	9.1	[illegible]	[illegible]	[illegible]	655	3461	[illegible]	52	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DETROIT METRO AP	[illegible]	[illegible]	[illegible]	28.8	[illegible]	[illegible]	24	[illegible]	[illegible]	668	3619	[illegible]	49	782	176	4	94	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DETROIT W B 1966	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	661	3476	86	49	779	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FLINT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	[illegible]	697	[illegible]	86	43	766	[illegible]	2	153	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GRAND RAPIDS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.7	8	37.8	[illegible]	[illegible]	3887	88	44	792	[illegible]	4	83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOUGHTON LAKE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.1	8	[illegible]	-31.7	788	[illegible]	77	33	[illegible]	169	8	66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LANSING	[illegible]	[illegible]	-8.1	28.5	[illegible]	[illegible]	9	[illegible]	-31.1	[illegible]	3837	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MARQUETTE	[illegible]	[illegible]	[illegible]	[illegible]	14.2	5.9	16	36.9	-29.4	783	4662	88	42	[illegible]	259	5	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MUSKEGON	190	[illegible]	[illegible]	27.7	15.9	[illegible]	13	[illegible]	[illegible]	[illegible]	3719	78	46	764	217	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SAULT STE MARIE	219	[illegible]	[illegible]	24.2	11.9	4.8	42	36.7	-33.3	847	[illegible]	[illegible]	38	793	198	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MINNESOTA							86	[illegible]	[illegible]							0	[illegible]																								
DULUTH	[illegible]	-7.8	-18.1	[illegible]	[illegible]	3.3	12	[illegible]	-39.4	969	5555	[illegible]	24	736	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
INTERNATIONAL FALLS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13	[illegible]	[illegible]	[illegible]	5891	[illegible]	18	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MINNEAPOLIS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13	[illegible]	[illegible]	[illegible]	4856	[illegible]	18	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ROCHESTER	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13	[illegible]	[illegible]	884	[illegible]	113	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ST CLOUD	[illegible]	-6.4	[illegible]	28.4	14.7	5.6	23	39.4	[illegible]	945	4932	114	18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MISSISSIPPI							84	46.1	[illegible]							0	[illegible]																								
JACKSON	[illegible]	14.6	[illegible]	33.8	[illegible]	18.6	9	[illegible]	[illegible]	[illegible]	[illegible]	146	[illegible]	1291	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MERIDIAN	88	15.3	[illegible]	33.7	21.3	[illegible]	8	[illegible]	[illegible]	[illegible]	1271	161	56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VICKSBURG [illegible]	71	14.1	[illegible]	[illegible]	21.9	18.8	29	38.3	[illegible]	284	1133	146	52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NORMALS, MEANS AND EXTREMES

State and Station	Elevation Ground (Meters)	Temperature (C) Normal (1931 1960) January Daily Maximum	Temperature (C) Normal (1931 1960) January Daily Minimum	Temperature (C) Normal (1931 1960) July Daily Maximum	Temperature (C) Normal (1931 1960) July Daily Minimum	Temperature (C) Normal (1931 1960) Annual	Temperature (C) Extremes Length (Yrs)	Temperature (C) Extremes Record Highest	Temperature (C) Extremes Record Lowest	Normal Heating Degree Days (1931 1960) January	Normal Heating Degree Days (1931 1960) Seasonal	Precipitation (Millimeters) Normal (1931 1960) Wettest Month	Precipitation Normal Driest Month	Precipitation Normal Annual	Precipitation Extremes Wettest Month	Precipitation Extremes Driest Month	Precipitation Extremes Maximum In 24 Hours	Snow Mean Total January	Snow Mean Total Seasonal	Snow Extreme Maximum In 24 Hours	Relative Humidity (Percent) January 7 00 a m EST	January 1 00 p m EST	January 7 00 p m EST	July 7 00 a m EST	July 1 00 p m EST	July 7 00 p m EST	Wind Speed (m p s) Mean Speed January	Mean Speed July	Fastest Mile (1 6 Kilometers)	Sunshine (% of Possible) January	Sunshine July	Annual Mean Number of Days Sunrise to Sunset Clear	Partly Cloudy	Cloudy	Precipitation 25mm or More	Snow Sleet Hail 25.4mm or More	Thunderstorms	Heavy Fog	Temperature Max ≥ 32.2 C	Min ≤ 0 C	Min ≤ -17.8 C
MISSOURI							85	47.8	-40.0							0	462																								
COLUMBIA MUNI 1969	237	4.1	-5.9	32.1	19.8	12.8	30	45.0	-27.8	597	2803	119	43	939	338	2	111	112	493	252	79	65	[illegible]	[illegible]	[illegible]	56	[illegible]	3.6	28.2	[illegible]	74	116	96	153	[illegible]	6	[illegible]	14	4	[illegible]	4
COLUMBIA REGIONAL	270	3.3	-6.3	30.8	19.5	12.4	3	39.4	-23.9	614	2844	119	43	939	249	6	55	[illegible]	[illegible]	157	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	183	112	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KANSAS CITY 1971	226	4.4	-4.8	33.3	21.7	13.8	12	41.1	-22.8	573	2617	116	31	865	303	1	189	142	503	325	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.4	[illegible]	[illegible]	53	76	119	102	144	98	[illegible]	[illegible]	13	42	[illegible]	3
ST JOSEPH	247	2.9	-8.3	32.8	19.9	12.1	9	39.4	-28.9	651	3146	151	28	868	349	0	181	142	500	287	74	64	66	85	[illegible]	57	4.9	3.9	[illegible]			124	98	143	95	6	[illegible]	19	42	[illegible]	6
ST LOUIS	163	4.6	-4.7	31.8	19.4	12.9	12	41.1	-23.9	569	2721	109	50	897	231	2	84	107	[illegible]	294	79	[illegible]	[illegible]	[illegible]	[illegible]	56	4.6	[illegible]	[illegible]	52	69	101	105	159	106	[illegible]	44	[illegible]	[illegible]	[illegible]	3
SPRINGFIELD	386	6.3	-4.6	32.4	19.6	13.6	13	38.9	-23.3	541	2533	134	50	1043	476	2	174	66	368	399	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1	[illegible]	[illegible]	71	116	99	150	[illegible]	5	[illegible]	[illegible]	40	[illegible]	3
MONTANA							106	47.2	-56.7							0	292																								
BILLINGS	1087	0.7	-10.5	31.4	16.0	8.6	14	40.6	-32.8	719	3915	65	14	336	194	0	72	229	1400	[illegible]	65	61	58	64	[illegible]	31	5.8	4.4	35.3	48	78	91	117	157	94	19	[illegible]	19	[illegible]	162	17
GLASGOW	696	-6.9	-17.8	29.6	13.4	5.2	8	41.1	-43.9	950	4997	76	10	312	136	0	101	206	716	[illegible]	71	68	[illegible]	79	44	35	[illegible]	4.7	[illegible]			85	108	172	88	[illegible]	[illegible]	12	[illegible]	[illegible]	[illegible]
GREAT FALLS	1116	-0.2	-10.8	29.3	12.3	7.1	12	41.1	-41.7	749	4305	74	15	357	207	0	81	254	1435	279	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.0	4.6	[illegible]	[illegible]	[illegible]	86	104	175	99	[illegible]	26	13	[illegible]	[illegible]	[illegible]
HAVRE	787	-4.3	-15.8	29.6	12.6	5.6	12	43.9	-46.7	879	4832	69	11	302	120	0	59	[illegible]	1026	411	73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.8	4.2	[illegible]	[illegible]	84	85	103	177	84	14	21	11	[illegible]	185	46
HELENA	1166	-1.8	-13.1	29.1	11.3	6.3	9	40.6	-38.9	798	4515	57	11	276	120	1	52	231	1240	546	69	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.1	3.5	[illegible]	48	79	[illegible]	[illegible]	187	[illegible]	14	35	8	[illegible]	[illegible]	[illegible]
KALISPELL	903	-2.4	-11.1	28.7	8.7	6.0	13	40.6	-37.2	778	4550	56	24	392	120	0	60	518	1748	391	80	[illegible]	[illegible]	[illegible]	44	34	3.3	3.0	23.2			75	[illegible]	[illegible]	132	23	24	34	17	[illegible]	[illegible]
MILES CITY	801	-2.6	-14.7	32.3	15.8	7.7	35	43.3	-38.3	835	4290	69	9	309	248	0	69	175	[illegible]	267	73	[illegible]	[illegible]	[illegible]	[illegible]	31	4.2	4.2				101	108	156	93	13	[illegible]	11	39	172	[illegible]
MISSOULA	972	-2.2	-12.1	29.4	9.4	6.2	13	40.6	-34.4	788	4513	49	18	326	106	0	45	351	1265	284	84	81	79	77	43	37	2.4	3.0	[illegible]	28	80	77	79	209	124	17	24	28	24	[illegible]	[illegible]
NEBRASKA							97	47.8	-43.9							0	334																								
GRAND ISLAND	561	1.2	-11.7	32.6	17.6	10.1	12	41.7	-33.3	729	3627	98	14	555	355	0	137	145	724	305	76	64	66	83	53	49	5.2	4.8	25.5			122	102	141	88	9	[illegible]	18	39	151	17
LINCOLN U 1971	350	1.1	-8.8	33.5	19.9	11.6	7	40.6	-27.8	687	3257	114	23	697	328	1	137	[illegible]	734	483							4.4	4.2	28.6	58	75	115	104	146	96	8	49	8	33	129	8
NORFOLK	470	-1.1	-13.0	31.8	18.2	9.4	27	[illegible]	-32.2	785	3876	108	19	608	310	0	107	137	[illegible]	257	76	63	68	84	53	57						117	100	148	87	9	[illegible]	11	[illegible]	[illegible]	21
NORTH PLATTE	845	2.9	-11.8	32.2	16.8	9.6	8	39.4	-31.7	706	3713	83	10	464	203	0	97	135	800	246	79	[illegible]	[illegible]	[illegible]	[illegible]	52	[illegible]	[illegible]	[illegible]	59	74	118	110	137	84	10	49	19	[illegible]	181	17
OMAHA	297	-0.2	-10.6	32.1	19.6	10.8	9	41.7	-27.2	735	3454	115	20	700	349	0	164	[illegible]	813	455	75	[illegible]	[illegible]	[illegible]	[illegible]	57	[illegible]	4.1	[illegible]	55	75	112	107	146	99	9	49	15	33	[illegible]	13
SCOTTSBLUFF	1206	3.7	-11.2	31.8	15.6	9.3	8	39.4	-31.7	683	3706	79	7	365	212	0	95	[illegible]	937	307	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	39	4.9	4.2	35.8			122	109	134	84	12	44	11	34	172	15
VALENTINE	788	0.7	-14.1	32.6	15.7	8.3	18	42.8	-33.9	774	4124	79	9	439	228	0	86	[illegible]	645	229	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.5	4.5	[illegible]	64	76	118	107	140	78	8	45	5	39	177	26
NEVADA							84	50.0	-45.6							0	188																								
ELKO	1539	1.7	-12.2	32.7	9.1	7.4	8	38.9	-33.3	729	4129	29	8	230	117	0	105	259	1008	424	76	70	59	56	[illegible]	19	2.5	2.8	25.9			133	97	135	78	15	22	6	44	196	14
ELY	1905	2.7	-12.9	30.4	8.9	6.8	34	37.2	-33.3	726	4295	24	12	212	90	0	39	216	1186	333	71	59	55	51	[illegible]	21	4.8	4.6	33.1	65	80	133	108	124	72	15	32	2	16	218	19
LAS VEGAS	658	12.3	0.0	39.7	24.3	18.7	13	46.7	-13.3	382	1504	13	1	99	66	0	66	20	[illegible]	127	51	37	[illegible]	[illegible]	[illegible]	14	3.1	4.4	28.6	79	86	216	82	67	24	*	15	1	133	42	0
RENO	1342	7.0	-8.8	31.9	7.7	9.1	9	39.4	-26.7	596	3517	30	4	182	133	0	60	168	665	429	72	65	49	[illegible]	[illegible]	19	2.7	2.9	35.8	66	92	166	89	110	49	8	14	8	53	188	3
WINNEMUCCA	1310	4.3	-9.6	33.3	9.9	8.6	23	41.1	-36.7	651	3755	27	4	219	73	0	45	145	653	251	77	66	57	45	21	14	3.4	3.8	29.5	46	86	136	88	141	57	9	15	4	54	194	8
NEW HAMPSHIRE							96	41.1	-43.9							0	264																								
CONCORD	104	-0.2	-11.9	28.2	13.6	7.6	7	38.9	-33.9	754	4101	95	63	986	257	10	114	424	1656	483	70	66	63	88	54	68	3.3	[illegible]	[illegible]	51	62	95	111	159	125	18	21	52	8	174	26
MT WASHINGTON OBS	1908	-9.6	-19.0	12.7	6.3	-2.8	40	21.7	-43.9	1011	7675	178	132	1882	649	19	264	[illegible]	5771		82	83	[illegible]	91	86	[illegible]	20.6	11.1	103.3	33	31	51	75	239	[illegible]	64	16	309	0	243	65
NEW JERSEY							88	43.3	-36.7							0	376																								
ATLANTIC CITY	19	6.1	-3.0	28.8	19.1	12.3	8	41.1	-22.2	519	2673	124	72	1076	332	3	164	132	437	366	76	57	69	86	59	74	5.4	4.1	26.8	52	58	100	103	162	112	5	26	48	17	115	[illegible]
NEWARK	2	4.2	-3.9	30.1	19.2	12.1	7	40.6	-17.2	563	2814	113	71	1076	301	5	199	183	737	660	73	58	63	72	52	60	5.1	3.9	36.7			96	114	155	122	7	25	[illegible]	[illegible]	88	0
TRENTON U	17	4.4	-3.2	29.6	19.3	12.2	40	41.1	-25.6	549	2766	121	66	1049	358	1	192	142	599	422							4.4	3.5	28.6	51	65	101	115	149	122	7	33		18	89	*
NEW MEXICO							81	46.7	-45.6							0	287																								
ALBUQUERQUE	1618	8.0	-4.7	32.9	18.8	13.7	13	40.0	-27.2	516	2415	34	10	207	85	0	49	46	246	361	66	47	35	61	36	28	3.5	4.1	40.2	74	76	174	110	81	58	4	43	5	61	120	1
CLAYTON	1514	7.9	-6.6	31.3	15.9	11.7	28	40.0	-29.4	547	2865	70	8	369	197	0	119	76	490	323	63	41	46	77	42	42						162	98	105	67	7	54	11	36	143	3
RATON 1968	1944	7.4	-10.8	30.3	11.6	9.4	23	36.7	-35.0	619	3459	67	7	375	303	0	142	122	615	257		45			38							134	132	99	78	9	75	8	16	182	9
ROSWELL	1100	12.8	-6.3	35.2	16.5	14.7	12	43.3	-22.2	466	2107	46	9	295	143	0	108	69	282	389	70	46	37	73	40	35	3.8	4.2	33.5	78	76	178	102	85	50	4	40	9	107	109	1
SILVER CITY 1968	1637	11.4	-3.1	32.4	17.7	14.6	7	38.9	-22.8	439	2058	61	7	273	114	0	53	66	213	178		43	39		36	36						187	110	68	60	3	54	1	43	105	*
NEW YORK							83	42.2	-46.7							0	284																								
ALBANY	83	-0.6	-9.8	28.7	15.8	8.7	7	36.7	-33.3	728	3819	91	56	891	228	5	115	384	1709	556	79	63	73	77	54	62	4.3	3.3	31.7	46	63	72	111	182	134	16	28	23	8	159	18
BINGHAMTON	484	-1.1	-8.1	25.7	14.7	7.7	21	35.6	-28.9	709	4047	98	55	920	240	7	99	495	2281	584	81	73	75	85	58	66	5.2	3.8	32.2	37	66	47	104	214	162	25	31	53	3	149	8
BINGHAMTON U 1968	261	-1.2	-7.3	28.4	15.8	9.3	77	39.4	-33.3	661	3583	97	60	932	244	4	116	325	1326	533															151	15			9	133	7
BUFFALO	214	-0.7	-7.7	26.7	15.2	8.2	12	34.4	-28.9	697	3922	91	65	906	232	3	99	569	2261	617	77	72	75	79	56	62	6.5	4.7	40.7	34	69	58	107	200	167	26	30	20	3	138	5
NEW YORK CENTRAL PK.	40	4.2	-2.8	29.6	20.1	12.5	104	41.1	-26.1	547	2705	113	72	1076	428	1	284	193	752	671	68	60	61	75	55	63	4.9	3.4	31.3	51	65	107	125	133	121	8	18		17	82	*
NEW YORK KENNEDY	3	3.3	-3.6	29.3	19.5	11.8	12	40.0	-18.9	571	2899	126	74	1116	442	0	167	178	665	505	71	59	64	73	57	70	5.9	4.7	23.2			95	122	148	118	8	23	31	10	89	*
NEW YORK LA GUARDIA	3	4.2	-2.5	29.3	20.4	12.6	11	41.7	-18.9	540	2672	129	78	1123	408	1	181	168	719	579	64	56	57	71	52	60	6.3	4.6	31.3			95	117	153	120	8	24	14	13	78	*
ROCHESTER	166	-0.3	-7.9	28.1	15.9	8.9	9	36.7	-23.9	685	3748	76	60	800	246	6	80	556	2192	475	73	66	71	81	53	59	5.2	3.5	32.6	37	70	66	109	190	154	27	29	13	10	138	6
SYRACUSE	124	-0.3	-8.6	28.0	16.7	8.9	9	36.1	-32.2	706	3753	91	72	955	312	5	108	673	2812	622	74	67	77	79	56	63	4.8	3.8	28.2	35	66	66	102	197	167	33	29	9	6	141	10
NORTH CAROLINA							86	42.8	-33.9							0	564																								
ASHEVILLE U 1964	671	9.4	-0.9	29.4	17.6	13.6	34	37.2	-21.7	435	2245	109	56	962	349	0	172	63	310	401	81	59	66	89	57	70	4.2	2.5	23.2	48	60	105	124	136	128	3	50	47	13	84	*
ASHEVILLE	652	8.6	-2.4	28.6	16.3	12.6	8	35.6	-21.7	471	2480	149	70	1223	287	4	130	117	556	414	86	50	70	97	66	76	4.2	2.7	26.8	56	62	100	109	156	129	6	50	82	6	109	1
CAPE HATTERAS R	2	11.8	4.4	28.8	22.3	16.8	15	35.0	-11.1	322	1451	163	76	1384	372	11	206	10	48	178	80	68	78	85	71	83	5.8	4.7	32.2	53	65	104	99	162	122	1	46	18	3	32	0
CHARLOTTE	224	10.8	1.1	31.6	20.8	16.0	12	37.8	-16.7	383	1772	124	64	1102	277	0	123	56	142	305	79	56	62	89	59	68	3.5	3.0	26.4	56	68	111	107	147	111	2	42	25	34	74	0
GREENSBORO	273	9.8	-1.2	30.9	19.4	14.6	9	37.8	-18.3	435	2113	122	68	1071	337	3	190	84	224	363	80	57	65	90	62	72	3.7	[illegible]	28.2	51	62	112	108	145	118	2	47	31	27	87	*
RALEIGH	132	11.1	-0.4	31.2	19.8	15.3	8	36.7	-17.8	402	1884	139	69	1107	329	6	132	71	185	236	76	53	61	90	61	74	3.9	3.1	32.6	56	61	114	108	143	113	2	46	35	24	85	*
WILMINGTON	8	14.7	2.9	31.7	21.6	17.7	9	37.8	-10.6	303	1303	195	72	1303	394	4	209	8	38	135	80	56	71	86	65	78	4.2	3.8	39.3	57	64	116	110	139	117	1	45	23	39	44	0
WINSTON SALEM 1964	293	9.9	-0.3	31.2	19.9	15.1	10	37.8	-17.2	418	1997	118	71	1121	276	3	91	81	234	277	72	52	59	84	57	67	4.2	3.3				121	102	142	115	3	42	32	34	76	0

NORMALS, MEANS AND EXTREMES

State and Station	Elevation Ground (Meters)	Temperature (°C)								Normal Heating Degree Days (1931 1960)		Precipitation (Millimeters)									Relative Humidity (Percent)						Wind Speed (m p s)			Sunshine (% of Possible)		Annual Mean Number of Days									
		Normal (1931 1960)					Extremes					Normal (1931 1960)			Extremes			Snow @			January			July			Mean Speed					Sunrise to Sunset							Temperature		
		January		July														Mean Total		Ex treme																			Max	Min	
		Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Annual	Length (Yrs)	Record Highest	Record Lowest	January	Seasonal	Wettest Month	Driest Month	Annual	Wettest Month	Driest Month	Maximum In 24 Hours	January	Seasonal	Maximum In 24 Hours	7 00 a m EST	1 00 p m EST	7 00 p m EST	7 00 a m EST	1 00 p m EST	7 00 p m EST	January	July	Fastest Mile (1 6 Kilometers)	January	July	Clear	Partly Cloudy	Cloudy	Precipitation 25mm or More	Snow Sleet Hail 25.4mm or More	Thunderstorms	Heavy Fog	≥ 32 2°C	≤ 0°C	≤ 17 8°C
NORTH DAKOTA							81	49.4	-51.1							0	196																								
BISMARCK	504	-6.9	-17.7	29.8	14.3	5.7	13	42.2	-41.7	948	4916	86	9	385	211	0	83	188	993	394	71	66	67	83	49	43	4.6	4.3	32.2	54	76	94	[illegible]	163	96	13	[illegible]	12	21	186	[illegible]
FARGO	273	-8.2	-19.4	28.8	[illegible]	5.1	13	37.8	-37.2	993	5125	77	13	469	216	1	[illegible]	17	869	284	71	68	72	[illegible]	[illegible]	[illegible]	[illegible]	4.8	51.4	[illegible]	71	[illegible]	[illegible]	167	[illegible]	11	[illegible]	13	15	181	[illegible]
WILLISTON	578	-7.0	-19.4	29.9	13.7	4.9	11	41.7	-40.6	976	5134	84	12	348	187	0	128	[illegible]	914	193	77	71	[illegible]	[illegible]	[illegible]	[illegible]	4.6	4.1	[illegible]	[illegible]	75	[illegible]	[illegible]	[illegible]	94	[illegible]	[illegible]	11	[illegible]	[illegible]	[illegible]
OHIO							99	[illegible]	-39.4							0	267																								
AKRON	368	[illegible]	-6.2	28.4	16.6	[illegible]	9	36.1	-26.1	632	3354	[illegible]	57	925	290	5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CINCINNATI ABBE OBS.	[illegible]	5.2	-3.3	[illegible]	19.1	12.9	[illegible]	42.9	-27.2	[illegible]	[illegible]	[illegible]	57	[illegible]	[illegible]	3	121	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CLEVELAND	236	1.9	[illegible]	[illegible]	[illegible]	9.8	12	36.7	-28.3	[illegible]	3441	89	59	898	241	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COLUMBUS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-26.1	[illegible]	3144	[illegible]	[illegible]	[illegible]	248	[illegible]	[illegible]	[illegible]	[illegible]	226	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DAYTON	[illegible]	[illegible]	-5.4	[illegible]	[illegible]	11.3	9	37.8	-26.7	[illegible]	3123	[illegible]	57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	287	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MANSFIELD	394	2.4	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	-26.1	623	[illegible]	[illegible]	58	969	[illegible]	11	129	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOLEDO	[illegible]	1.2	[illegible]	29.5	[illegible]	9.4	17	[illegible]	-27.2	[illegible]	[illegible]	96	48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YOUNGSTOWN	359	1.3	[illegible]	[illegible]	15.2	[illegible]	[illegible]	[illegible]	[illegible]	649	3564	[illegible]	[illegible]	[illegible]	251	[illegible]	[illegible]	[illegible]	1488	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OKLAHOMA							81	48.9	-32.8							0	[illegible]																								
OKLAHOMA CITY	[illegible]	7.7	[illegible]	33.8	[illegible]	15.7	[illegible]	[illegible]	-17.2	482	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TULSA	198	7.7	-3.1	[illegible]	[illegible]	15.4	13	43.3	-19.4	496	2144	134	[illegible]	942	478	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OREGON							[illegible]	[illegible]	[illegible]							0	[illegible]																								
ASTORIA	2	8.1	1.6	[illegible]	[illegible]	[illegible]	19	[illegible]	-14.4	418	[illegible]	[illegible]	32	[illegible]	556	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BURNS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	692	[illegible]	41	[illegible]	[illegible]	146	[illegible]	[illegible]	386	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EUGENE	[illegible]	7.4	[illegible]	[illegible]	[illegible]	11.4	30	41.1	-24.4	[illegible]	[illegible]	168	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	142	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEACHAM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.4	[illegible]	[illegible]	-30.6	671	4374	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEDFORD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12	[illegible]	-21.1	[illegible]	[illegible]	86	[illegible]	[illegible]	[illegible]	[illegible]	95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PENDLETON	451	4.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	564	2848	38	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PORTLAND 1964	9	[illegible]	[illegible]	[illegible]	14.4	[illegible]	[illegible]	[illegible]	-16.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	443	[illegible]	127	[illegible]	231	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PORTLAND	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	944	326	[illegible]	[illegible]	122	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ROSEBURG 1964	[illegible]	8.4	[illegible]	28.9	[illegible]	11.9	11	41.1	-18.3	[illegible]	[illegible]	[illegible]	[illegible]	841	[illegible]	[illegible]	[illegible]	81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SALEM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	[illegible]	-24.4	[illegible]	[illegible]	187	9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEXTON SUMMIT R	[illegible]	4.1	[illegible]	[illegible]	[illegible]	[illegible]	28	37.8	-18.9	[illegible]	3474	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PACIFIC AREA																																									
CANTON ISLAND 1966	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	28.6	[illegible]	[illegible]	21.1			[illegible]	[illegible]	748	[illegible]	[illegible]	141		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ENIWETOK 1966	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21.1			231	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15	[illegible]
GUAM TAGUA R	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			339	67	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JOHNSTON ISLAND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			99	21	663	401	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KOROR R	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	181	3746	884	42	294		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
KWAJALEIN ISLAND	[illegible]	27.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	36.1	[illegible]			[illegible]	55	[illegible]	[illegible]	5	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAJURO ISLAND	[illegible]	28.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	3648	[illegible]	[illegible]	454		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MARCUS ISLAND 1968	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	12.8			183	41	[illegible]	[illegible]	[illegible]	144		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PAGO PAGO AM SAMOA	3						13	33.9	15.7						[illegible]	[illegible]	261		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PONAPE R	37	[illegible]	24.1	[illegible]	[illegible]	26.7	22	[illegible]	18.9			[illegible]	[illegible]	[illegible]	[illegible]	43	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TRUK MOEN ISLAND	[illegible]	[illegible]	24.7	30.1	[illegible]	[illegible]	[illegible]	[illegible]	21.1			359	[illegible]	3493	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WAKE	3	[illegible]	[illegible]	[illegible]	[illegible]	26.7	[illegible]	[illegible]	[illegible]			[illegible]	29	936	449	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YAP	[illegible]	29.6	24.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20.6			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PENNSYLVANIA							[illegible]	[illegible]	-41.1							[illegible]	[illegible]																								
ALLENTOWN	[illegible]	[illegible]	[illegible]	29.6	[illegible]	[illegible]	[illegible]	[illegible]	-24.4	619	[illegible]	122	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ERIE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	93	[illegible]	[illegible]	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HARRISBURG	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PHILADELPHIA	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PITTSBURGH GTR. AP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PITTSBURGH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
READING 1968	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-18.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
W B SCRANTON AVOCA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.7	[illegible]	[illegible]	[illegible]	[illegible]	3474	122	51	[illegible]	198	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WILLIAMSPORT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10.4	[illegible]	38.9	-26.1	[illegible]	[illegible]	[illegible]	64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RHODE ISLAND							[illegible]	[illegible]	[illegible]							[illegible]	[illegible]																								
BLOCK ISLAND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PROVIDENCE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SOUTH CAROLINA							[illegible]	[illegible]	[illegible]							[illegible]	[illegible]																								
CHARLESTON	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COLUMBIA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FLORENCE 1964	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1326	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GRNVLLE SPRTNBRG	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NORMALS, MEANS AND EXTREMES

State and Station	Elevation on Ground (Meters)	Temperature (C)								Normal Heating Degree Days (1931-1960)		Precipitation (Millimeters)									Relative Humidity (Percent)						Wind Speed (m.p.s.)			Sunshine (% of Possible)		Annual Mean Number of Days									
		Normal (1931 1960)					Extremes					Normal (1931 1960)			Extremes			Snow			January			July			Mean Speed					Sunrise to Sunset							Temperature		
		January		July														Mean Total		Extreme																			Max	Min	
		Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Annual	Length (Yrs)	Record Highest	Record Lowest	January	Seasonal	Wettest Month	Driest Month	Annual	Wettest Month	Driest Month	Maximum In 24 Hours	January	Seasonal	Maximum In 24 Hours	7 00 a m EST	1 00 p m EST	7 00 p m EST	7 00 a m EST	1 00 p m EST	7 00 p m EST	January	July	Fastest Mile (1 6 Kilometers)	January	July	Clear	Partly Cloudy	Cloudy	Precipitation .25mm or More	Snow, Sleet, Hail 25.4mm or More	Thunderstorms	Heavy Fog	≥ 32 2 C	≤ 0 C	≤ -17 8 C
SOUTH DAKOTA							84	48.9	[illegible]							[illegible]	[illegible]																								
ABERDEEN	[illegible]	[illegible]	[illegible]	30.9	[illegible]	6.5	[illegible]	44.4	-39.4	933	[illegible]	96	15	486	226		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HURON	[illegible]	-4.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44.4	-39.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	111	[illegible]	[illegible]	[illegible]	[illegible]	444	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RAPID CITY	[illegible]	1.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78	8	374	187		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SIOUX FALLS	[illegible]	[illegible]	-14.[illegible]	30.0	16.9	7.6	9	41.1	[illegible]	[illegible]	[illegible]	[illegible]	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TENNESSEE							[illegible]	45.[illegible]	-35.6							[illegible]	[illegible]																								
BRISTOL	459	[illegible]	-1.3	[illegible]	14.6	13.8	11	[illegible]	-26.1	[illegible]	[illegible]	141	55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	419	411	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.3	1.8	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]	
CHATTANOOGA	[illegible]	9.9	[illegible]	[illegible]	21.9	[illegible]	33	[illegible]	-23.3	401	[illegible]	143	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	112	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	*
KNOXVILLE	[illegible]	[illegible]	[illegible]	31.4	[illegible]	[illegible]	12	[illegible]	-22.8	[illegible]	[illegible]	124	65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEMPHIS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16.4	31	41.1	-25.0	[illegible]	[illegible]	154	69	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	*
NASHVILLE	179	9.3	-0.6	[illegible]	[illegible]	[illegible]	7	[illegible]	-21.1	432	1987	139	59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	81	[illegible]
OAK RIDGE R	[illegible]	9.6	-0.8	[illegible]	19.3	14.6	[illegible]	[illegible]	-22.8	432	[illegible]	151	68	[illegible]	[illegible]	[illegible]	[illegible]	76	[illegible]	[illegible]							2.1	1.7	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	81	[illegible]
OAK RIDGE AREA 1964	[illegible]	9.4	[illegible]	31.1	19.3	14.7	[illegible]	[illegible]	-22.2	428	[illegible]	138	72	[illegible]	[illegible]	[illegible]	147		[illegible]								[illegible]	1.7							119				25	[illegible]	*
TEXAS							92	48.9	-30.6							0	970																								
ABILENE	543	13.6	0.4	34.6	[illegible]	17.9	9	41.7	-16.1	356	1457	110	22	592	335	0	170	46	104	155	69	52	46	63	44	46	5.5	4.7	48.7	63	77	[illegible]	[illegible]	117	65	2	41	7	93	54	
AMARILLO	1098	9.9	-4.7	34.6	19.4	14.8	12	[illegible]	-22.8	487	2213	86	16	[illegible]	273	[illegible]	171	84	363	343	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77	159	[illegible]	[illegible]	67	4	48	25	66	[illegible]	
AUSTIN	182	15.7	4.7	35.1	23.3	20.2	12	40.6	-11.1	260	951	94	49	828	313	0	[illegible]	13	[illegible]	178	78	[illegible]	[illegible]	[illegible]	44	43	4.4	3.8	[illegible]	[illegible]	77	[illegible]	115	[illegible]	81	*	43	[illegible]	[illegible]	[illegible]	
BROWNSVILLE	5	21.4	11.2	[illegible]	24.2	23.2	6	37.8	1.1	113	[illegible]	[illegible]	26	[illegible]	[illegible]	0	[illegible]		0		86	68	74	[illegible]	[illegible]	63	[illegible]	[illegible]	[illegible]	[illegible]	81	[illegible]	36	[illegible]	[illegible]	[illegible]	24	27	[illegible]	1	
CORPUS CHRISTI	14	19.7	8.6	34.2	23.7	22.1	9	38.3	-3.9	161	[illegible]	112	37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	[illegible]	[illegible]	76	*	[illegible]	29	93	7	
DALLAS	146	13.2	2.2	34.7	24.1	18.9	14	41.7	-13.3	[illegible]	[illegible]	123	49	878	[illegible]	[illegible]	[illegible]	[illegible]	51	188	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43	[illegible]	[illegible]	[illegible]	51	77	[illegible]	95	132	79	1	40	8	[illegible]	35	
DEL RIO e	312	17.6	3.8	36.9	[illegible]	21.1	10	42.8	-8.3	243	835	69	16	453	[illegible]	[illegible]	193		15	76	74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.8	4.9	[illegible]			[illegible]	[illegible]	[illegible]	58	*	[illegible]	[illegible]	121	18	
EL PASO	1194	13.5	-1.4	34.9	[illegible]	17.4	13	41.1	-22.2	380	1499	33	7	200	160	0	73	43	109	198	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1	4.1	[illegible]	[illegible]	[illegible]	[illegible]	99	71	45	1	[illegible]	[illegible]	[illegible]	61	*
FT. WORTH GTR. INTL	163	13.3	1.6	35.5	23.8	18.8	9	42.2	-15.6	341	[illegible]	117	43	796	321	1	[illegible]	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44	[illegible]	[illegible]	[illegible]			[illegible]	94	132	78	1	45	11	89	42	
GALVESTON	2	15.8	9.6	[illegible]	26.1	21.1	[illegible]	38.3	-13.3	194	686	129	66	[illegible]	661	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.4	44.[illegible]	[illegible]	[illegible]				[illegible]	*			11	4	
HOUSTON INTERCON	29	17.3	4.2	34.2	21.8	19.9	3	38.3	7.2	251	931	115	71	1163	366	7	[illegible]	5	[illegible]		87	64	69	[illegible]	[illegible]	76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	84	114	167	98	[illegible]	72	42	85	22	
HOUSTON 1966	12	17.0	8.1	33.3	24.3	21.1	29	41.1	-12.2	[illegible]	[illegible]	131	61	[illegible]	449	0	[illegible]	5	8	76															[illegible]	*			[illegible]	7	
HOUSTON HOBBY 1969	15	17.6	6.4	33.4	[illegible]	20.7	9	41.1	8.3	213	[illegible]	111	68	[illegible]	567	[illegible]	[illegible]	5	[illegible]	112	84	64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	47	74	87	126	152	[illegible]	[illegible]	59	42	95	13	
LAREDO 1964	151	20.2	[illegible]	37.2	[illegible]	23.3	[illegible]	43.3	7.8	148	442	73	[illegible]	473	[illegible]	0	141	[illegible]	3	51	81	58	[illegible]	[illegible]	[illegible]	[illegible]	4.3	[illegible]				[illegible]	116	119	58	*	[illegible]	14	174	6	
LUBBOCK	991	11.7	-3.7	33.6	19.2	15.4	26	41.7	-26.7	444	1987	81	14	459	225	0	145	41	231	[illegible]	72	48	46	74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			163	[illegible]	[illegible]	[illegible]	3	44	16	87	[illegible]	
MIDLAND	868	13.9	-0.6	34.7	21.8	17.9	9	41.7	-16.7	361	1439	53	9	[illegible]	171	0	[illegible]	[illegible]	79	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.4	4.6	[illegible]			165	[illegible]	[illegible]	[illegible]	2	35	15	91	68	
PORT ARTHUR	4	17.5	6.5	32.8	[illegible]	20.3	12	41.7	-10.0	213	[illegible]	152	73	1348	475	[illegible]	335	0	13	112	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.1	[illegible]	[illegible]	42	[illegible]	[illegible]	126	146	[illegible]	*	[illegible]	41	85	[illegible]	
SAN ANGELO	580	15.2	1.3	36.1	[illegible]	19.1	13	43.9	-14.4	315	1252	81	20	[illegible]	234	0	[illegible]	[illegible]	71	147	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	4.6	4.4	[illegible]			[illegible]	[illegible]	111	56	1	[illegible]	7	119	53	
SAN ANTONIO INTL AP	240	16.8	5.3	34.4	[illegible]	[illegible]	31	41.1	-17.8	237	858	89	35	707	401	[illegible]	177	5	[illegible]	119	81	[illegible]	[illegible]	[illegible]	[illegible]	43	[illegible]	4.1	[illegible]	49	77	[illegible]	[illegible]	136	79	*	[illegible]	[illegible]	116	[illegible]	*
VICTORIA	31	18.2	7.8	33.2	[illegible]	21.2	12	41.7	8.9	191	651	107	59	919	369	[illegible]	218		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57	4.8	4.1	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44	[illegible]	4	12	
WACO	154	14.6	3.2	35.6	[illegible]	19.6	9	44.4	-13.9	297	[illegible]	116	43	815	381	[illegible]	[illegible]	23	38	178	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	76	1	45	13	[illegible]	[illegible]	*
WICHITA FALLS	302	12.2	-0.2	36.6	22.9	18.1	13	45.0	-20.6	387	1573	117	28	[illegible]	[illegible]	0	142	43	142	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	95	117	69	2	49	12	[illegible]	[illegible]	*
UTAH							82	46.7	-45.6							0	[illegible]																								
MILFORD	1532	2.8	-11.1	33.4	13.1	9.4	24	40.6	-35.6	695	3609	26	11	[illegible]	66	0	[illegible]	211	1095	414	[illegible]	[illegible]		[illegible]	[illegible]							152	[illegible]	112	62	14	[illegible]	7	59	[illegible]	[illegible]
SALT LAKE CITY	1286	2.7	-8.1	34.5	15.3	[illegible]	13	41.7	-27.8	651	3361	45	13	353	124	0	61	333	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.4	4.2	[illegible]	47	84	[illegible]	[illegible]	[illegible]	88	17	35	[illegible]	59	137	[illegible]
WENDOVER	1291	2.2	-7.8	33.3	19.3	11.3	35	44.4	-28.3	654	3209	17	7	119	76	0	34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						152	92	121	48	3	[illegible]	5		[illegible]	
VERMONT							85	41.6	-45.6							0	223																								
BURLINGTON	101	-3.7	-13.9	27.7	13.3	6.2	8	36.7	-32.8	840	4593	98	45	844	293	10	91	444	1979	419	67	61	64	80	[illegible]	64	4.3	3.5	32.2	43	66	59	[illegible]	[illegible]	[illegible]	22	25	16	4	168	[illegible]
VIRGINIA							82	43.3	-33.9							0	686																								
LYNCHBURG	279	7.9	-1.7	30.3	18.8	13.7	9	37.2	-20.0	471	2314	112	66	1024	289	8	159	137	493	340	71	52	59	86	59	71	3.9	3.0	25.0	50	61	112	106	147	120	6	41	40	20	97	1
NORFOLK	7	10.1	0.1	31.1	20.9	15.4	24	39.4	-13.3	410	1900	152	70	1141	326	9	290	79	183	290	75	[illegible]	[illegible]	88	[illegible]	72	5.2	3.9	34.9	57	65	108	[illegible]	151	115	2	[illegible]	24	30	55	-
RICHMOND	49	9.1	-1.7	31.9	19.3	14.5	43	40.0	-24.4	452	2147	142	74	1123	479	8	223	137	376	549	81	57	69	85	57	72	3.6	3.0	30.4	51	65	104	[illegible]	155	113	4	37	29	42	85	1
ROANOKE	350	8.3	-1.6	31.1	18.4	13.8	8	37.8	-20.0	463	2305	118	69	1047	232	5	163	[illegible]	655	442	68	51	56	82	56	64	4.4	3.0	25.9			102	116	147	121	7	39	25	20	94	*
WASHINGTON							106	47.8	-44.4							0	305																								
OLYMPIA	59	7.3	-0.5	26.5	8.9	10.4	13	37.8	-21.7	463	2908	230	19	1330	504	0	125	254	516	521	91	89	83	90	64	48	3.4	2.7	26.8			51	88	226	163	6	5	91	7	88	*
QUILLAYUTE	54	6.7	0.6	21.3	9.4	9.6	6	35.6	-13.9	460	3191	427	53	2630	631	10	211	368	660	213	92	91	86	94	72	63	3.7	2.8	17.4	17	51	53	67	245	215	8	8	45	1	69	0
SEATTLE TACOMA	121	6.4	0.6	24.2	12.3	10.6	13	37.2	-14.4	460	2858	160	21	989	328	0	87	196	409	544	81	80	76	84	66	49	4.7	3.8	20.1	19	67	55	81	229	162	5	8	49	3	32	0
SEATTLE U 1964	4	7.6	2.7	23.9	13.4	11.8	31	37.8	-11.7	410	2457	138	16	866	278	0	84	109	206	292									29.1	28	63	71	93	201	152	3	6		2	15	0
SPOKANE	718	-0.3	-7.1	29.8	13.0	8.8	13	42.2	-31.7	683	3696	62	10	437	145	0	53	483	1361	330	92	81	76	59	37	24	3.9	3.6	26.4	26	81	89	87	189	115	18	11	49	22	140	5
STAMPEDE PASS R	1206	-2.5	-6.9	18.6	8.3	4.2	29	32.2	-29.4	714	5156	411	37	2342	773	5	202			958	94	93	92	86	66	59						68	57	240	206	87	7	252	*	188	3
TATOOSH ISLAND 1966	30	7.3	3.8	15.3	10.8	9.6	63	31.1	-10.0	396	3176	309	50	1973	573	1	150	89	196	305	84	82	82	94	89	87	8.9	4.5	42.0	26	47	58	76	231	197	3	5	59	0	8	0
WALLA WALLA U	289	3.9	-2.6	31.8	17.1	12.3	58	45.0	-26.7	547	2669	48	5	394	149	0	51	203	511	356		76			34		2.3	2.4	[illegible]	23	86	117	87	161	106	7	11	14	37	64	2
YAKIMA	320	2.5	-7.5	31.6	11.7	9.9	26	43.3	-31.7	646	[illegible]	30	3	200	106	0	36	262	640	356	83	76	70	68	35	24	2.6	3.4	21.5			110	91	164	68	8	7	18	33	150	4

NORMALS, MEANS AND EXTREMES

State and Station	Elevation Ground (Meters)	Temperature (°C) Normal (1931 1960) January Daily Maximum	January Daily Minimum	July Daily Maximum	July Daily Minimum	Annual	Extremes Length (Yrs)	Record Highest	Record Lowest	Normal Heating Degree Days (1931 1960) January	Seasonal	Precipitation (Millimeters) Normal (1931 1960) Wettest Month	Driest Month	Annual	Extremes Wettest Month	Driest Month	Maximum In 24 Hours	Snow @ Mean Total January	Seasonal	Extreme Maximum In 24 Hours	Relative Humidity (Percent) January 7 00 a m EST	January 1 00 p m EST	January 7 00 p m EST	July 7 00 a m EST	July 1 00 p m EST	July 7 00 p m EST	Wind Speed (m p s) Mean Speed January	Mean Speed July	Fastest Mile (1 6 Kilometers)	Sunshine (% of Possible) January	July	Annual Mean Number of Days Sunrise to Sunset Clear	Partly Cloudy	Cloudy	Precipitation 25mm or More	Snow Sleet Hail 25.4mm or More	Thunderstorms	Heavy Fog	Temperature Max ≥ 32.2 °C	Min ≤ 0 °C	Min ≤ 17.8 °C
WEST INDIES							[illegible]	39.4	4.4								[illegible]																								
SAN JUAN [illegible] 1966	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16.7			182	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		0																[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
SAN JUAN	[illegible]	[illegible]	[illegible]	30.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			181	56	[illegible]	383	[illegible]	[illegible]		0		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	[illegible]	[illegible]	[illegible]	
SWAN ISLAND [illegible] 1970	8	[illegible]	[illegible]	30.7	[illegible]	[illegible]	[illegible]	[illegible]	17.8			188	16	1411	801	0	[illegible]		0													[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	
WEST VIRGINIA							82	44.4	[illegible]							[illegible]	[illegible]																								
[illegible]	763	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	131	[illegible]	1145	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CHARLESTON	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ELKINS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	559	[illegible]	[illegible]	[illegible]	1166	236	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HUNTINGTON	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.2	[illegible]	[illegible]	[illegible]	488	[illegible]	114	[illegible]	[illegible]	218	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PARKERSBURG [illegible]	[illegible]	6.1	[illegible]	[illegible]	[illegible]	[illegible]	44	[illegible]	[illegible]	[illegible]	[illegible]	108	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WISCONSIN							[illegible]	[illegible]	[illegible]								[illegible]																								
GREEN BAY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	656	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LA CROSSE	198	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MADISON	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	818	[illegible]	[illegible]	[illegible]	[illegible]	278	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MILWAUKEE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13	[illegible]	-31.1	764	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WYOMING							[illegible]	[illegible]	[illegible]								[illegible]																								
CASPER	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38.3	[illegible]	716	[illegible]	52	[illegible]	[illegible]	142	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CHEYENNE	1867	2.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64	[illegible]	[illegible]	136	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LANDER	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38.3	-38.3	787	[illegible]	67	11	[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SHERIDAN	[illegible]	1.1	[illegible]	[illegible]	13.1	[illegible]	[illegible]	39.4	-34.4	752	[illegible]	65	16	[illegible]	[illegible]	[illegible]	98	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Data from airport or from airport and Urban site records combined
U indicates Urban, R indicates Rural sites.
Data for this table are based on records through 1972 except as indicated in notes.
Date after station name indicates last year included in summarization of data
Normal values are based on the period, 1931-1960, and are means adjusted to represent observations taken at the present standard location.
Degree days are based on a daily average of 18.3 °C.
For detailed periods of record see ANNUAL LOCAL CLIMATOLOGICAL DATA, 1972
Clear day averages 0-3 tenths sky cover, Partly Cloudy 4-7 tenths and Cloudy 8-10 tenths.
Heavy Fog includes data formerly referred to as "Dense" or "Thick". The upper visibility limit for heavy fog is 402.3 meters
* Less than one-half
B Number of days Maximum 21.1 °C or above (Alaskan stations).

o Estimated amounts during typhoon.
1 Means and extremes are from post office location through 1962
2 Based on records from Urban office through January 1943 airport through June 1964.
s Relative Humidity readings 8:00 a.m. and NOON Local Time.
e Reopened 1963.

x Sun below horizon continuously Nov. 19 - Jan. 23.
v Sun below horizon continuously Nov. 24 - Jan. 17
(x and v)-Yearly totals for period sun above horizon.
m Mean wind speed record for 1949-1951, 1958-1962
@ Includes all forms of frozen precipitation, except hail occurring alone.
r Resumed 1965

ELEVATIONS

State and station	Ft	Mtrs
ALABAMA		
Birmingham	630	192
Huntsville	644	196
Mobile	221	67
Montgomery	202	62
ALASKA		
Anchorage	132	40
Annette	110	34
Barrow	13	4
Barter Island	50	15
Bethel	150	46
Bettles	672	205
Big Delta	1274	389
Cold Bay	103	31
Fairbanks	454	138
Gulkana	1579	481
Homer	73	22
Iliamna	160	49
Juneau	24	7
King Salmon	49	15
Kotzebue	16	5
McGrath	338	103
Nome	22	7
St. Paul Island	28	9
Shemya	102	31
Summit	2405	733
Talkeetna	356	180
Unalakleet	21	6
Yakutat	31	9
ARIZONA		
Flagstaff	7018	2139
Phoenix	1107	337
Tucson	2555	779
Winslow	4883	1488
Yuma	206	63
ARKANSAS		
Fort Smith	463	141
Little Rock	265	81
CALIFORNIA		
Bakersfield	492	150
Bishop	4145	1263
Blue Canyon	5283	1610
Eureka (U)	60	18
Fresno	327	100
Long Beach	40	12
Los Angeles	104	32
Mt Shasta (R)	3587	1093
Oakland	7	2
Red Bluff	353	108
Sacramento	25	8
Sandberg (R)	4523	1379
San Diego	28	9
San Francisco (U)	155	47
San Francisco	18	5
Santa Maria	238	73
Stockton	27	8
COLORADO		
Alamosa	7541	2298
Colorado Springs	6170	1881
Denver	5332	1625
Grand Junction	4839	1475
Pueblo	4720	1439
CONNECTICUT		
Bridgeport	17	5
Hartford	179	55
DELAWARE		
Wilmington	80	24
DISTRICT OF COLUMBIA		
Wash. Nat'l AP	65	20
Wash. Dulles Int. A.P.	323	98
FLORIDA		
Apalachicola (U)	35	11
Daytona Beach	41	12
Fort Myers	12	4
Jacksonville	31	9
Key West	21	6
Lakeland (U)	236	72
Miami	12	4
Orlando	119	36
Pensacola	118	36
Tallahassee	68	21
Tampa	11	3
West Palm Beach	21	6
GEORGIA		
Athens	811	247
Atlanta	1034	315
Augusta	148	45
Columbus	394	120
Macon	362	110
Rome	643	196
Savannah	51	16
HAWAII		
Hilo	36	11
Honolulu	15	5
Kahului	67	20
Lihue	148	45
IDAHO		
Boise	2868	871
Lewiston	1436	438
Pocatello	4478	1365
ILLINOIS		
Cairo (U)	357	109
Chicago (O'Hare)	674	205
Chicago (Midway)	623	190
Moline	594	181
Peoria	662	202
Rockford	743	226
Springfield	613	187
INDIANA		
Evansville	388	118
Fort Wayne	828	252
Indianapolis	808	246
South Bend	773	236
IOWA		
Burlington	702	214
Des Moines	963	294
Dubuque	1080	329
Sioux City	1103	336
Waterloo	878	268
KANSAS		
Concordia	1484	452
Dodge City	2592	790
Goodland	3688	1124
Topeka	885	270
Wichita	1340	408
KENTUCKY		
Covington	877	267
Lexington	989	301
Louisville	488	149
LOUISIANA		
Alexandria	118	36
Baton Rouge	76	23
Lake Charles	32	10
New Orleans	30	9
Shreveport	259	79
MAINE		
Caribou	628	191
Portland	63	19
MARYLAND		
Baltimore	155	47
MASSACHUSETTS		
Boston	29	9
Nantucket	12	4
Worcester	1017	310
MICHIGAN		
Alpena	693	211
Detroit (City AP)	626	191
Detroit (M. Wayne Co.)	664	202
Flint	766	233
Grand Rapids	803	245
Houghton Lake	1160	354
Lansing	874	266
Marquette (U)	734	224
Muskegon	633	193
Sault Ste. Marie	724	221
MINNESOTA		
Duluth	1417	432
International Falls	1183	361
Minneapolis	838	255
Rochester	1320	402
St. Cloud	1043	318
MISSISSIPPI		
Jackson	331	101
Meridian	310	94
MISSOURI		
Columbia	898	274
Kansas City	750	229
St. Joseph	817	249
St. Louis (Lambert)	564	172
Springfield	1270	387
MONTANA		
Billings	3570	1088
Glasgow	2298	700
Great Falls	3657	1115
Havre	2599	792
Helena	3898	1188
Kalispell	2973	906
Miles City	2634	803
Missoula	3189	972
NEBRASKA		
Grand Island	1856	566
Lincoln (U)	1189	362
Norfolk	1551	473
North Platte	2787	849
Omaha (Eppley AP)	982	299
Scottsbluff	3958	1206
Valentine	2598	792
NEVADA		
Elko	5077	1547
Ely	6262	1909
Las Vegas	2180	664
Reno	4400	1341
Winnemucca	4314	1314
NEW HAMPSHIRE		
Concord	346	105
NEW JERSEY		
Atlantic City (Exp. Cntr.)	67	20
Newark	30	9
Trenton (U)	190	58
NEW MEXICO		
Albuquerque	5314	1620
Clayton	4972	1515
Roswell	3619	1103
NEW YORK		
Albany	292	89
Binghamton	1638	499
Buffalo	706	215
New York Central Park	87	27
New York (Kennedy AP)	22	7
New York (LaGuardia)	31	9
Rochester	555	169
Syracuse	408	124
NORTH CAROLINA		
Asheville	2170	661
Cape Hatteras (R)	11	3
Charlotte	769	234
Greensboro	886	270
Raleigh	441	134
Wilmington	38	12
NORTH DAKOTA		
Bismarck	1660	506
Fargo	899	274
Williston	1905	581
OHIO		
Akron	1236	377
Cleveland	805	245
Columbus	833	254
Dayton	1003	306
Mansfield	1312	400
Toledo	692	211
Youngstown	1186	361
OKLAHOMA		
Oklahoma City	1304	397
Tulsa	676	206
OREGON		
Astoria	22	7
Burns (U)	4170	1271
Eugene	373	114
Meacham	4056	1236
Medford	1329	405
Pendleton	1495	456
Portland	39	12
Salem	201	61
Sexton Summit (R)	3841	1171
PACIFIC AREA		
Johnston Island	17	5
Koror (R)	109	33
Kwajalein	26	8
Majuro, Marshall Islands	10	3
Pago Pago	10	3
Ponape (R)	151	46
Taguac, Guam (R)	365	111
Truk (Moen Island)	8	2
Wake Island	12	4
Yap (R)	56	17
PENNSYLVANIA		
Allentown	385	117
Erie	737	225
Harrisburg	351	107
Philadelphia	28	9
Pittsburgh	1225	373
Scranton	948	289
Williamsport	525	160
RHODE ISLAND		
Block Island	118	36
Providence	62	19
SOUTH CAROLINA		
Charleston (U)	48	15
Charleston	48	15
Columbia	225	69
Grnvl-Spartanburg	971	296
SOUTH DAKOTA		
Aberdeen	1300	396
Huron	1289	393
Rapid City	3168	966
Sioux Falls	1427	435
TENNESSEE		
Bristol	1525	465
Chattanooga	688	210
Knoxville	980	299
Memphis	284	87
Nashville	605	184
Oak Ridge (R)	914	279
TEXAS		
Abilene	1753	534
Amarillo	3604	1099
Austin	621	189
Brownsville	20	6
Corpus Christi	44	13
Dallas	488	149
Del Rio	1027	313
El Paso	3916	1194
Fort Worth	576	176
Galveston (U)	54	16
Houston	108	33
Lubbock	3241	988
Midland	2862	872
Port Arthur	22	7
San Angelo	1908	582
San Antonio	794	242
Victoria	117	36
Waco	508	155
Wichita Falls	1030	314
UTAH		
Milford	5033	1534
Salt Lake City	4227	1288
Wendover	4239	1292
VERMONT		
Burlington	340	104
VIRGINIA		
Lynchburg	937	286
Norfolk	30	9
Richmond	177	54
Roanoke	1176	358
Wallops Island	13	4
WASHINGTON		
Olympia	200	61
Seattle-Tacoma	450	137
Spokane	2365	721
Stampede Pass (R)	3967	1209
Walla Walla (U)	991	302
Yakima	1066	325
Quillayute	205	62
WEST INDIES		
San Juan, P. R.	62	19
Swan Island	35	11
WEST VIRGINIA		
Beckley	2514	766
Charleston	951	290
Elkins	1997	608
Huntington	838	255
Parkersburg (U)	637	194
WISCONSIN		
Green Bay	702	214
La Crosse	672	205
Madison	866	264
Milwaukee	693	211
WYOMING		
Casper	5290	1612
Cheyenne	6141	1872
Lander	5558	1694
Sheridan	3968	1209

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

These are the elevations of the barometer (in feet and meters above mean sea level) to which station pressure values pertain in the "Climatological Data" table in the monthly publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

GENERAL SUMMARY OF TORNADOES, 1972

Norman E. Poultney
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The outstanding feature of the 1972 tornado year was that only 27 deaths were recorded, the lowest number in 57 years of record. This despite the fact that 1972 stood fifth in total tornadoes with 741. Timely warnings and the lack of excessively violent tornadic systems contributed to this desirable end. This latter is emphasized by noting that while generally 20 tornadoes a year cause fatalities, only 12 caused deaths in 1972.

The tornado year got off to a fast start on New Year's Day and ended on December 30. The 741 tornadoes occurred on 194 days, killing 27 people and injuring 986 compared to the 20-year (1953-72) averages of 114 deaths and 1662 injuries. Alaska, Delaware, Hawaii, Nevada, New Jersey, Utah, and the U. S. Virgin Islands were fortunate to escape a tornado visitation. A number of the more prominent tornadoes are outlined below:

1972 TORNADOES

JANUARY --- The first tornado of 1972 touched down at Friendswood, near Galveston, Texas, at 3:30 p.m. on the first. All other tornadic activity was confined to the Southeast. Alabama reported four, one of which killed four people, injured 88 and damaged 68 mobile homes and numerous houses in Coffee and Dale Counties. At Lowe Field, 15 helicopters were damaged. Florida and South Carolina reported three apiece. Georgia was hit by 15 tornadoes, 11 of them on the 13th. The most destructive of these swept through Jefferson and Burke Counties, injuring 21 persons and damaging several houses, mobile homes and other buildings. A 15-acre pecan grove was flattened. Mississippi was visited by seven tornadoes. One of these followed a 13-mile path through Jones and Wayne Counties causing $1.5 million damage. Twelve citizens were injured and many buildings were damaged, including the R. H. Watkins High School.

MARCH --- After a quiescent February in which only seven tornadoes were reported, March marked a sharp increase in tornadic activity, counting 69 on 17 days. As usual, this early season activity was confined to the southern tier of states. Florida led with 26 on seven days, most of which were of little consequence. This was the largest number of tornadoes for Florida in any one month since 1953. One tornado followed a two-mile path across the northern part of the rocket complex at the Kennedy Space Center, destroying three buildings. Texas observed 19 tornadoes on seven days. At Kaufman, the appendage of a tornado extended about six miles from the parent cloud, arching and coiling above the city with occasional whip-like touchdowns. On the 28th, a tornado cut a 15-mile path 150 yards wide across Angelina County, injuring 13 individuals and causing $3 million damage.

APRIL --- Tornadic activity quickened in April with 96 tabulated on 20 days. Sixteen people were killed and 493 injured. The most destructive tornado ever recorded in Washington hit Vancouver at 12:45 p.m. on the 5th. It first struck the south bank of the Columbia River in Oregon, damaging a number of boats, then crossed the river and barrelled into Vancouver where it killed six people, injured 300, eleven critically, and caused $5-6 million damage. The path was 500 yards wide and nine miles long. Three other tornadoes were reported in Washington on this date; very unusual for this part of the country. Fourteen tornadoes visited Illinois in April. Four of these vicious twisters tore into the northwestern section of Joliet shortly after 8 p.m. on the 6th. One person died of a heart attack and at least 30 others, one of whom later died, were injured. Two of these tornadoes damaged the Volkswagen, Chevrolet, Chrysler-Plymouth and Pontiac dealerships. Twenty-six aircraft were damaged at the Joliet Airport. Total damages were set at several millions.

Mississippi reported seven tornadoes. One, on the 15th, ripped a 10-mile path through Bolivar County, injuring 62 people and causing heavy damage. One of the 11 Oklahoma tornadoes plowed a 25-mile path from Ratliff City to Davis, killing five persons when it wrecked their home. Tennessee had six tornadoes, one of which skipped along a 28-mile path from Cheatham County to Davidson County, injuring 15 people and causing $750,000 damage. On the 22nd, a tornado followed a 33-mile, intermittent route through Lawrence and Giles counties. Ten persons were injured and losses were set at $250,000. Texas counted 13 tornadoes on six days with no deaths or injuries reported.

MAY --- The usual increase in the number of tornadoes occurred this May - 140 on 27 days. For only the third May since 1953, no deaths were reported. The 1953-72 average is twenty-nine. The most severe May tornado hit the Indianapolis area on the 14th. It made five touchdowns along a 29-mile path from East Indianapolis to Mechanicsburg. Fortunately no one was killed and only 20 injuries were reported in spite of the fact that a large number of houses and mobile homes were destroyed. A church filled with worshippers suffered steeple and wall damage, but no one was injured. Damage was estimated at over $2 million. Nine tornadoes visited Mississippi on the 7th. All but two were in the coastal area. Two coastal storms started as waterspouts and moved inland. Three people were injured; damage was moderate. An outbreak of 16 tornadoes struck Kansas on the 22nd, mostly in open country. No deaths or injuries were reported and damage was light. Texas recorded 43 tornadoes on 13 days, none of them of great intensity. Quemado Valley reported many homes were damaged by water driven through the walls by tornadic winds. A number of outbuildings were carried several miles and set down intact. Three small tornadoes near Houston injured 10 people and caused over $50 thousand damage. On the same day, the 12th, a twister hit the Arcola-Fresno area, near Houston, injuring 7 and causing about $5,000 damage. A woman in a trailer was hit on the head with a television set when the trailer exploded.

JUNE --- The expected slight drop in tornadic activity was realized when 114 occurred on 25 days, causing 2 fatalities and 128 injuries. Most of this activity was confined to the extreme Southeast and the Southwest. Florida reported 21 and Georgia nine, the most for each in any June since 1953. Arizona tallied seven, equalling any complete year of record since 1953 and New Mexico's five for June has been topped only three times during this period. In contrast, the area from a South Carolina-Tennessee line north and east of the Mississippi, which experienced below normal temperatures, reported only eight tornadoes. The first six-month period of 1972 was noteworthy in that just 23 deaths were recorded, bettered only by 1962 when 22 deaths were attributed to tornadoes. The seven Arizona tornadoes were easily the top story for June. One occurred on the 13th and six on the 21st. Total damages exceeded $5 million. Eloy was hit at 3:15 p.m. on the 21st by a well-developed tornado which injured 18 persons and caused heavy damage to homes, trailers and businesses. At 6:30 p.m. a multi-funnel tornado struck the Phoenix-Scottsdale-Paradise Valley area injuring three people and causing damage estimated at many millions. Of the 21 Florida tornadoes, 15 occurred on the 18th and 19th during the passage of Hurricane Agnes. One of these smashed through Geiger and Big Coppit Keys, injuring 40 individuals and damaging several houses and 60 trailers. Damage was set at $342,000. On Merritt Island, 44 aircraft and 90 percent of the hangers were damaged at the airport the 19th. Also on the 19th, the Port Canaveral Coast Guard Station and many shops were damaged to the tune of $550,000 and twelve persons were injured. The lone Florida fatality was a child in Graceville who was killed when a tornado destroyed a mobile home. The other June death was the occupant of a trailer at Pettisville, Ohio.

JULY --- Although this July produced 115 tornadoes, the second highest number since 1953, no fatalities and only 35 injuries were reported. Tornadoes occurred on all but two days. Since 1953, July has had the lowest average death toll of any month - only one. Excepting for Texas, which reported 19, most tornadic activity was in the upper mid-west. Illinois, Iowa, Wisconsin, Kansas, Nebraska and South Dakota accounted for 45. None of these storms caused extensive damage.

AUGUST --- A marked decrease in tornadic activity was recorded in August. Fifty-nine were reported on 23 days. There were two deaths and 12 injuries. Both deaths were in the Northeast. A woman was killed in a trailer in Addison, New York, and one person was killed and $1/2 million damage inflicted when a tornado struck the Cricket Club in the Chestnut Hill section of Newton, Massachusetts. A tornado near Pontiac, Michigan, caused $500,000 damage. Arizona reported three small tornadoes, bringing their 1972 total through August up to 11. This is more than any complete year since 1916.

SEPTEMBER --- September saw a further diminution in tornadic activity, tallying 49 on 19 days with no deaths and 33 injuries. Rhode Island reported its first tornado since December 1, 1934 and only the fifth reported in that state since 1787. It moved from Jamestown across Narragansett Bay to Ft. Admas. A tornado swept a five-mile path through North Chicago from the Great Lakes Naval Station to Waukegan. Damage exceeded $500,000 and 20 persons were injured, most of them in the Forrestal Village Trailer Park. A strong tornado touched down near Waubeno, Wisconsin, on the 16th, crossed the Wisconsin-Michigan state line three times and ended up near the Bay of Green Bay. Considerable damage was inflicted in both states. Four more tornadoes were reported in Arizona, bringing the total to date up to 15. This is more than twice the total for any previous complete year. One of these at Mesa produced copper-green lightning.

OCTOBER --- The tornado scene moved south in October. The total of 34 has been exceeded only in 1970 and 1971. The principal feature was an outbreak of 14 tornadoes on the 27th in the Florida Panhandle and southwestern Georgia. Three people were injured in Florida. Arizona continued in the news with two. Texas counted nine and California three. Two "finger-like" tornadoes skipped through western Waco, Texas, injuring three residents and causing $1.25 million damage. Another month passed with no deaths reported.

NOVEMBER --- Seventeen tornadoes were reported on four days this month, killing two persons and injuring eight. Texas and Louisiana reported the largest numbers with seven and five respectively. Most of them were on the ground only briefly. The longest-lived tornado of the month covered a discontinuous, 24-mile path through Coryell and McLennan Counties in Texas, causing over $100,000 damage to newly built mobile homes at three mobile home factories. The two fatalities were at Zavalla where a man and wife perished when their mobile home was demolished. A tornado in Smith County, Mississippi, wrecked two chicken houses, killing 1000 chickens and causing $30,000 damage.

DECEMBER --- Eight tornadoes occurred on six days to wind up the year. One in Oklahoma travelled a 30-mile path, but was on the ground only 20 percent of the time.

Additional information is presented in the tables and charts which follow.

TORNADO SUMMARY 1972

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
ALABAMA													
Number	4		3	1		2	1			1	1	1	14
Days	3		2	1		2	1			1	1	1	12
Deaths	4												4
Injuries	90					2						3	95
ALASKA													
(None)													
ARIZONA													
Number						7	1	3	4	2			17
Days						2	1	3	3	2			11
Deaths													0
Injuries						26			2				28
ARKANSAS													
Number			6	4		2	2						14
Days			3	2		2	1						8
Deaths													0
Injuries			3										3
CALIFORNIA													
Number						1				3			4
Days						1				2			3
Deaths													0
Injuries													0
COLORADO													
Number					3	6	2						11
Days					3	3	2						8
Deaths													0
Injuries						3							3
CONNECTICUT													
Number							1	2					3
Days							1	2					3
Deaths													0
Injuries													0
DELAWARE													
(None)													
DISTRICT OF COLUMBIA													
(None)													
FLORIDA													
Number	[illegible]	5	26	1	2	21	3	1	1	11	1	2	77
Days	3	3	[illegible]	1	2	5	3	1	1	2	1	2	31
Deaths						1							1
Injuries	5	3	15			74	7			3			107
GEORGIA													
Number	15	[illegible]	[illegible]	5	1	9		1		4	1		42
Days	4	1	[illegible]	3	1	3		1		2	1		17
Deaths	1												1
Injuries	35		12	1		[illegible]							50
HAWAII													
(None)													
IDAHO													
Number						1	1						2
Days						1	1						2
Deaths													0
Injuries													0
ILLINOIS													
Number				14	[illegible]	4	7	2	1				30
Days				4	1	3	3	2	1				14
Deaths				5									5
Injuries				56		3	[illegible]	1	20				81
INDIANA													
Number				[illegible]	2		1	1					6
Days				[illegible]	1		1	1					5
Deaths													0
Injuries					[illegible]								[illegible]
IOWA													
Number					1	[illegible]	[illegible]	[illegible]	[illegible]	1			[illegible]
Days					1	[illegible]	[illegible]	[illegible]	[illegible]	1			[illegible]
Deaths													[illegible]
Injuries						[illegible]			[illegible]				[illegible]

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
KANSAS													
Number				12	18	1	7	4	3				45
Days				3	3	1	6	3	1				17
Deaths													0
Injuries				5			8						13
KENTUCKY													
Number				7			2	2	1				12
Days				3			2	2	1				8
Deaths													0
Injuries				5				1	3				9
LOUISIANA													
Number		1	4	3	3		1				5		17
Days		1	4	2	2		1				2		12
Deaths													0
Injuries		3	2								3		8
MAINE													
Number							2						2
Days							2						2
Deaths													0
Injuries													0
MARYLAND													
Number			1										1
Days			1										1
Deaths													0
Injuries													0
MASSACHUSETTS													
Number							4	[illegible]	[illegible]				[illegible]
Days							2	[illegible]	1				5
Deaths								1					1
Injuries							4	7					11
MICHIGAN													
Number				3	[illegible]	1	[illegible]	[illegible]	[illegible]				17
Days				1	[illegible]	1	[illegible]	4	[illegible]				12
Deaths													[illegible]
Injuries				8			[illegible]						9
MINNESOTA													
Number					1	1	3						[illegible]
Days					1	1	3						[illegible]
Deaths													[illegible]
Injuries													[illegible]
MISSISSIPPI													
Number	[illegible]		[illegible]	[illegible]	[illegible]	1			[illegible]		[illegible]	[illegible]	[illegible]
Days	[illegible]		[illegible]	3	[illegible]	1			[illegible]		[illegible]	[illegible]	[illegible]
Deaths													[illegible]
Injuries	[illegible]		1	[illegible]	[illegible]	[illegible]			[illegible]				[illegible]
MISSOURI													
Number			1	4			[illegible]		[illegible]			[illegible]	[illegible]
Days			1	4			[illegible]		[illegible]			[illegible]	[illegible]
Deaths													
Injuries				[illegible]			[illegible]					[illegible]	[illegible]
MONTANA													
Number						[illegible]							[illegible]
Days						[illegible]							[illegible]
Deaths													
Injuries													
NEBRASKA													
Number					[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
Days					[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
Deaths													
Injuries													[illegible]
NEVADA													
None													
NEW HAMPSHIRE													
Number					[illegible]		[illegible]						[illegible]
Days					[illegible]		[illegible]						[illegible]
Deaths													
Injuries													[illegible]
NEW JERSEY													
None													

TORNADO SUMMARY 1972 Continued

STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
NEW MEXICO													
Number					[illegible]	[illegible]	[illegible]		[illegible]				1[illegible]
Days					[illegible]	[illegible]	[illegible]		1				1[illegible]
Deaths													[illegible]
Injuries							[illegible]						[illegible]
NEW YORK													
Number					[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
Days					2	1	1	1					[illegible]
Deaths								1					1
Injuries						[illegible]		[illegible]					[illegible]
NORTH CAROLINA													
Number					[illegible]			1	1	1			[illegible]
Days					1			1	1	1			[illegible]
Deaths													[illegible]
Injuries					[illegible]								[illegible]
NORTH DAKOTA													
Number						[illegible]	[illegible]	1					9
Days						[illegible]	2	1					[illegible]
Deaths													[illegible]
Injuries						1							1
OHIO													
Number						1	3	6					1[illegible]
Days						[illegible]	2	[illegible]					[illegible]
Deaths						1							1
Injuries													0
OKLAHOMA													
Number				11	[illegible]	6	3	1		2		2	30
Days				5	3	4	2	1		1		1	20
Deaths				5									5
Injuries				6				1		1			8
OREGON													
Number				1									1
Days				1									1
Deaths													0
Injuries													0
PACIFIC													
(None)													
PENNSYLVANIA													
Number					1				1				2
Days					1				1				2
Deaths													0
Injuries					3								3
PUERTO RICO													
Number						1							1
Days						1							1
Deaths													0
Injuries													0
RHODE ISLAND													
Number									1				1
Days									1				1
Deaths													0
Injuries													0
SOUTH CAROLINA													
Number	3		1					1					5
Days	2		1					1					4
Deaths													0
Injuries	3												3

STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
SOUTH DAKOTA													
Number						[illegible]	[illegible]		[illegible]				[illegible]
Days							[illegible]	1	[illegible]				[illegible]
Deaths													[illegible]
Injuries													[illegible]
TENNESSEE													
Number				[illegible]	[illegible]		[illegible]						[illegible]
Days				[illegible]	[illegible]	[illegible]							[illegible]
Deaths													[illegible]
Injuries				19	[illegible]	[illegible]							[illegible]
TEXAS													
Number	[illegible]		19	1[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
Days	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
Deaths													[illegible]
Injuries			1[illegible]		[illegible]	[illegible]			1	6	[illegible]		[illegible]
UTAH													
(None)													
VERMONT													
Number							1	1					2
Days							1	1					2
Deaths													0
Injuries													0
VIRGIN ISLANDS													
(None)													
VIRGINIA													
Number							1		1				2
Days							1		1				2
Deaths													0
Injuries							2						2
WASHINGTON													
Number				4									4
Days				1									1
Deaths				6									6
Injuries				301									301
WEST VIRGINIA													
Number									1				1
Days									1				1
Deaths													0
Injuries													0
WISCONSIN													
Number					2	2	7	2	10				23
Days					2	1	4	2	3				12
Deaths													0
Injuries							3						3
WYOMING													
Number						2	1						3
Days						2	1						3
Deaths													0
Injuries													0
TOTAL													
Number	33	7	69	* 96	140	114	115	59	* 49	34	17	8	* 741
Days †	10	4	17	20	27	25	29	23	19	10	4	6	194
Deaths	5	0	0	16	0	2	0	2	0	0	2	0	27
Injuries	147	6	50	493	57	128	35	12	33	12	8	5	986

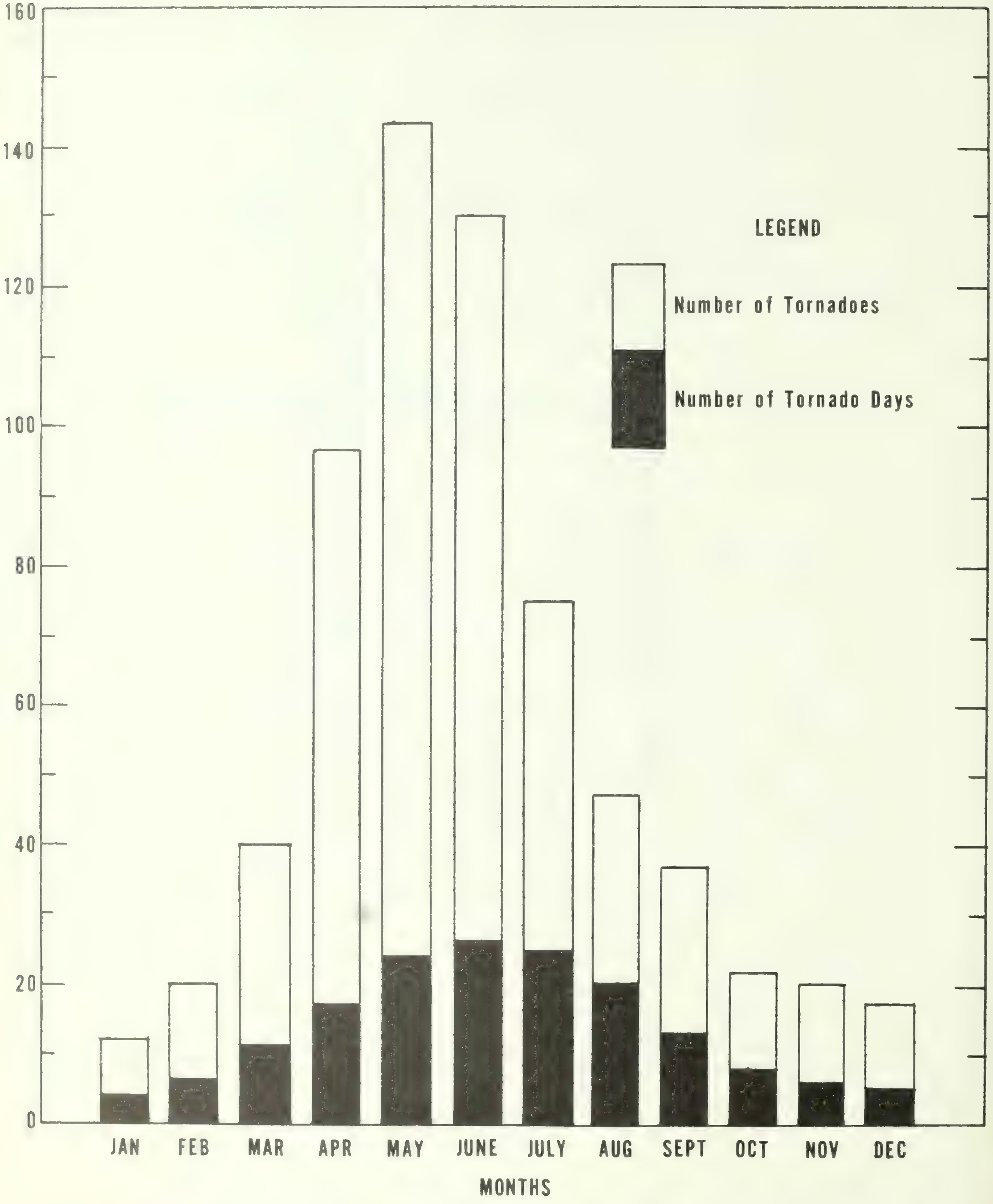
* Corrected for boundary crossing tornadoes.
† Tornado days for country as a whole.

NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY MONTHS, 1953-72

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL		
YEAR	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS
1953	14	6	0	17	3	3	40	10	24	45	16	34	99	21	162	114	24	244	40	19	0	26	15	0	5	4	0	6	4	0	11	6	0	20	8	49	437	136	516
1954	2	1	0	19	9	2	69	13	10	117	22	3	97	22	8	101	26	5	46	23	0	46	21	1	20	10	3	15	8	2	2	2	0	16	3	1	549	159	35
1955	2	2	0	4	3	0	41	15	4	101	18	7	150	26	103	148	28	2	50	21	5	34	18	0	16	8	2	23	7	1	20	4	1	3	[illegible]	0	593	153	125
1956	2	2	0	47	12	8	31	7	1	87	15	67	88	24	4	66	21	0	101	26	1	43	20	2	19	10	0	30	8	0	8	6	0	10	4	0	532	155	83
1957	17	3	13	5	3	0	39	7	1	216	21	29	226	26	87	148	25	14	54	19	0	26	14	0	17	10	2	17	11	2	61	11	25	38	4	18	864	154	191
1958	12	7	0	20	5	13	15	10	0	78	19	4	69	21	0	128	27	42	119	30	1	45	20	1	24	14	1	9	6	4	45	6	0	1	1	0	565	166	66
1959	15	2	3	19	5	21	42	11	9	30	12	1	225	28	8	73	25	2	62	24	0	37	18	0	54	15	14	19	10	0	11	4	0	2	2	0	589	156	58
1960	9	4	0	28	10	0	27	10	0	70	20	7	200	26	34	123	27	3	48	22	1	48	23	1	21	13	0	18	10	1	25	6	0	1	1	0	618	172	47
1961	1	1	0	31	8	0	121	17	7	73	19	3	135	25	23	101	23	2	77	27	0	25	16	0	53	16	15	13	5	0	36	7	1	16	5	0	682	169	51
1962	11	3	1	25	7	0	37	9	17	41	8	1	201	22	3	173	29	0	75	26	0	49	21	6	27	11	0	12	10	0	5	4	0	2	2	0	658	152	28
1963	14	5	1	6	3	0	49	12	8	82	14	16	69	21	1	93	23	0	62	26	0	27	13	2	33	13	3	14	5	0	12	6	0	0	0	0	461	141	31
1964	14	3	10	2	2	0	36	11	6	161	23	15	135	20	16	144	24	0	61	23	0	79	23	2	24	10	0	24	4	22	15	8	0	18	5	2	713	156	73
1965	21	11	0	29	4	0	33	9	2	130	20	264	271	25	19	149	28	6	86	26	0	60	23	2	63	21	0	15	4	0	35	6	5	7	4	0	899	181	298
1966	1	1	0	23	5	0	10	6	58	81	20	12	98	17	0	124	28	20	92	27	3	58	21	0	23	13	0	29	6	6	20	3	0	11	3	0	570	150	99
1967	40	4	7	8	5	0	40	14	3	146	18	73	112	25	3	205	28	8	88	25	1	29	16	2	139	16	5	34	7	4	8	5	0	63	10	10	912	173	116
1968	5	3	0	7	3	0	28	8	0	104	15	40	146	26	72	137	27	11	54	22	2	69	23	2	24	14	0	14	9	0	41	12	3	32	9	1	661	171	131
1969	3	1	32	5	5	0	8	2	1	67	15	2	144	25	4	136	28	7	99	27	0	68	21	15	20	11	4	26	10	0	5	3	0	23	7	1	604	155	66
1970	9	5	0	15	3	1	25	12	2	117	16	29	88	19	26	134	24	6	79	26	3	54	21	0	54	20	0	50	13	6	10	4	0	14	8	0	649	171	73
1971	18	7	1	83	12	131	40	13	2	75	14	11	165	24	7	199	28	1	100	30	1	50	21	0	47	15	0	38	12	0	16	7	0	57	9	2	888	192	156
1972	33	10	5	7	4	0	69	17	0	96	20	16	140	27	0	114	25	2	115	29	0	59	23	2	49	19	0	34	[illegible]	[illegible]	27	4	[illegible]	6	[illegible]	[illegible]	741	144	27
TOTAL	243	81	73	400	111	179	800	213	155	1917	345	634	2858	470	580	2610	518	375	1508	498	18	932	391	38	732	263	[illegible]	440	[illegible]	[illegible]	403	114	[illegible]	[illegible]	[illegible]	[illegible]	13185	[illegible]	2270
MEAN	12	4	4	20	6	9	40	11	8	96	17	32	143	24	29	130	26	19	75	25	1	47	20	2	37	13	2	22	8	[illegible]	[illegible]	6	2	17	5	4	659	[illegible]	114

AVERAGE NUMBER OF TORNADOES AND TORNADO DAYS EACH MONTH IN THE UNITED STATES

(Based on 13,185 Tornadoes That Occurred from 1953 – 1972)



NUMBER OF TORNADOES, TORNADO DAYS AND RESULTING LOSSES BY YEARS, 1916-72

YEAR	Number Tornadoes	Tornado Days	Total Deaths	Most Deaths in Single Tornado	PROPERTY LOSSES BY CATEGORY†			
					Total	Category 5	Category 6	Category 7 and Over
1916	90	36	150	30	6	7	1	0
1917	121	38	509	101	7	21	9	0
1918	81	45	135	36	7	20	5	0
1919	64	35	206	59	7	10	2	0
1920	87	50	498	87	7	14	10	0
1921	105	55	202	61	7	22	3	0
1922	108	64	135	16	7	27	5	0
1923	102	59	109	23	6	21	1	0
1924	130	57	376	85	7	26	11	1
1925	119	65	794	689	7	34	2	1
1926	111	57	144	23	6	28	0	0
1927	163	62	540	92	7	42	9	1
1928	203	79	92	14	7	40	7	0
1929	197	74	274	40	7	48	4	0
1930	192	72	179	41	7	38	6	0
1931	94	57	36	6	6	14	1	0
1932	151	67	394	37	7	23	1	1
1933	258	96	362	34	7	46	9	0
1934	147	77	47	6	6	10	3	0
1935	180	77	70	11	6	29	0	0
1936	151	71	552	216	7	17	5	1
1937	147	75	29	5	6	24	0	0
1938	213	76	183	32	7	29	6	0
1939	152	75	87	27	7	21	3	0
1940	124	62	65	18	7	13	2	0
1941	118	57	53	25	6	24	1	0
1942	167	66	384	65	7	42	10	0
1943	152	61	58	5	7	28	8	0
1944	169	68	275	100	7	50	9	0
1945	121	66	210	69	7	21	10	1
1946	106	65	78	15	7	29	7	0
1947	165	78	313	169	7	46	7	1
1948	183	68	140	33	7	62	11	2
1949	249	80	212	58	7	54	13	0
1950	199	88	70	18	7	47	9	0
1951	272	113	34	6	7	35	11	2
1952	236	98	230	57	7	53	19	0
1953	437	136	516	116	8	63	18	7
1954	549	159	35	6	7	63	8	1
1955	593	153	125	80	7	74	13	1
1956	532	155	83	25	7	83	24	1
1957	864	154	191	44	8	129	26	3
1958	565	166	66	19	7	70	8	1
1959	589	156	58	21	7	70	4	1
1960	618	172	47	16	7	65	11	1
1961	682	169	51	16	7	103	21	1
1962	658	152	28	17	7	51	10	0
1963	461	141	31	5	7	77	15	1
1964	713	156	73	22	7	113	17	5
1965	899	181	298	44	8	126	30	11
1966	570	150	99	58	8	79	13	4
1967	912	173	116	33	8	125	33	8
1968	661	171	131	34	8	82	26	6
1969	604	155	66	32	8	98	16	3
1970	649	171	73	26	8	97	24	6
1971	888	192	156	58	8	71	30	5
1972	741	194	27	6	8	100	28	1
Means: 1953-72	659	163	114	---	---	87	19	3

NOTE: -- The above estimated losses are based on values at time of occurrence.

† Storm damages in categories:

5. $50,000 to $500,000
6. $500,000 to $5 million
7. $5 million to $50 million
8. $50 million and over.

NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY STATES, 1953-72

	TORNADOES							DAYS		DEATHS		
STATE	TOTAL	AVERAGE	GREATEST	YEAR	LEAST	YEAR	Per # 10,000 Sq.Mi.	TOTAL	AVERAGE	TOTAL	AVERAGE	Per @ 10,000 Sq Mi
Alabama	328	16	45	1957	5	1956	3.18	188	9	88	4	17
Alaska	1	0	1	1959	0	1972+	.00	1	0	0	0	0
Arizona	74	4	17	1972	0	1965	.32	62	3	2	0	0
Arkansas	325	16	37	1961	2	1969	3.06	181	9	91	5	17
California	50	3	10	1958	0	1968+	.16	40	2	0	0	0
Colorado	274	14	38	1965	1	1959	1.31	194	10	3	0	0
Connecticut	27	1	3	1972+	0	1969+	2.69	25	1	1	0	2
Delaware	13	1	4	1967	0	1972+	3.16	12	1	0	0	0
District of Columbia	0	0	0	-	0	-	.00	0	0	0	0	0
Florida	617	31	77	1972	13	1965	5.27	407	20	41	2	7
Georgia	407	20	46	1971+	7	1960	3.46	241	12	43	2	7
Hawaii	9	0	4	1971	0	1972+	.07	8	0	0	0	0
Idaho	24	1	5	1956	0	1971+	.14	23	1	0	0	0
Illinois	434	22	42	1957	6	1953	3.85	226	11	114	6	20
Indiana	417	21	48	1965	6	1972+	5.75	204	10	147	7	40
Iowa	507	25	54	1964	7	1955	4.50	235	12	36	2	6
Kansas	989	49	94	1964	17	1969	6.01	448	22	131	7	16
Kentucky	128	6	16	1971	0	1953	1.58	87	4	25	1	6
Louisiana	321	16	30	1957	3	1955	3.31	206	10	73	4	15
Maine	63	3	11	1971	0	1964	.95	52	3	1	0	0
Maryland	37	2	5	1967	0	1970+	1.75	33	2	1	0	1
Massachusetts	95	5	12	1958	0	1959	5.75	66	3	94	5	114Ø
Michigan	226	11	24	1956	1	1959	1.94	137	7	218	11	37
Minnesota	325	16	34	1968	5	1972	1.93	189	9	67	3	8
Mississippi	383	19	41	1971	5	1964	4.01	212	11	292	15	61
Missouri	574	29	71	1967	7	1953	4.12	286	14	101	5	14
Montana	70	4	10	1962	0	1967+	.24	57	3	0	0	0
Nebraska	667	33	54	1958	10	1966	4.32	327	16	40	2	5
Nevada	9	0	4	1964	0	1972+	.04	8	0	0	0	0
New Hampshire	53	3	9	1963	0	1971+	2.85	45	2	0	0	0
New Jersey	25	1	5	1960	0	1972+	1.59	22	1	0	0	0
New Mexico	190	10	18	1972	0	1953	.78	139	7	2	0	0
New York	55	3	7	1969	0	1953	.55	52	3	2	0	0
North Carolina	139	7	12	1964	2	1970	1.32	107	5	9	0	2
North Dakota	261	13	41	1965	2	1961	1.85	163	8	15	1	2
Ohio	228	11	32	1965	3	1966+	2.77	140	7	101	5	25
Oklahoma	1161	58	106	1957	30	1972+	8.30	486	24	132	7	19
Oregon	15	1	6	1964	0	1969+	.08	14	1	0	0	0
Pacific	0	0	0	-	0	-	.00	0	0	0	0	0
Pennsylvania	107	5	23	1954	0	1964+	1.18	86	4	4	0	1
Puerto Rico	5	0	2	1969	0	1971+	.07	5	0	0	0	0
Rhode Island	1	0	1	1972	0	1971+	.41	1	0	0	0	0
South Carolina	180	9	22	1965+	1	1970	2.90	123	6	8	0	3
South Dakota	462	23	64	1965	1	1958	3.00	240	12	7	0	1
Tennessee	169	8	17	1957	1	1962	2.00	106	5	23	1	5
Texas	2214	111	232	1967	49	1953	4.14	936	47	288	14	11
Utah	30	2	5	1970	0	1972+	.18	25	1	0	0	0
Vermont	23	1	5	1962	0	1971+	1.20	19	1	0	0	0
Virgin Islands	0	0	0	-	0	-	.00	0	0	0	0	0
Virginia	81	4	12	1959	1	1963+	.99	64	3	13	1	3
Washington	22	1	4	1972	0	1968+	.16	18	1	6	0	1
West Virginia	30	2	5	1967	0	1960+	.62	28	1	0	0	0
Wisconsin	357	18	33	1964	3	1953	3.18	202	10	49	2	9
Wyoming	114	6	17	1962	0	1970	.58	97	5	1	0	0
United States	*13185	659	912	1967	437	1953	1.82	†3256	163	2270	114	6

+ Also in earlier year(s).

* Corrected for boundary-crossing tornadoes.

† Tornado Days for country as a whole.

Ø Ninety deaths in Worcester tornado of June 9, 1953.

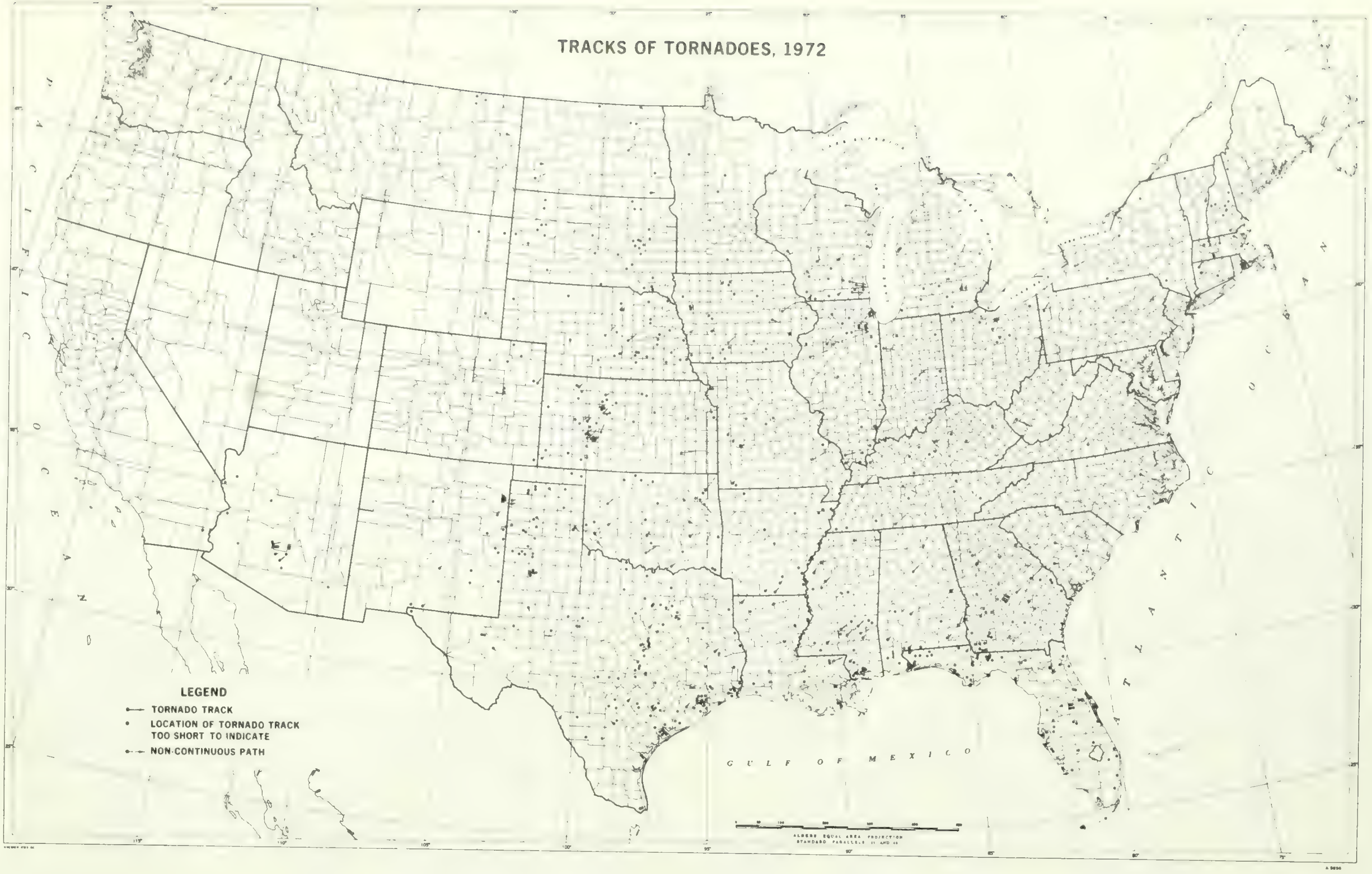
# Mean annual tornadoes per 10,000 square miles.

@ Number of deaths per 10,000 square miles -- 1953-72

NUMBER OF FUNNEL CLOUDS IN 1972

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
Alabama			1		1	2	1		1	1	2		9
Alaska							1						1
Arizona						3			1	1			5
Arkansas			7	10	2	13	14	5	1				52
California								1		13	4	1	19
Colorado					6	6	6	1					19
Connecticut													0
Delaware													0
District of Columbia													0
Florida	13	4	9	1	9	16	19	22	26	11	3	7	140
Georgia	6		2	2	1		1		2		1		15
Hawaii				2								3	5
Idaho							3						3
Illinois			4	8	17	16	4		1				50
Indiana				6	1	7	7	12	5				38
Iowa				1	3	8	23	4	20				59
Kansas				22	14	4	10	3					53
Kentucky				5		2	3						10
Louisiana	1	2	6		10	5	14	9	6				53
Maine													0
Maryland													0
Massachusetts							1						1
Michigan					5		1	3					9
Minnesota					17		16	10	1				44
Mississippi	2	1	21	14	6	12			4				60
Missouri			1	13	4	3	2	1					24
Montana					2	8	6	1					17
Nebraska					9	9	30	2					50
Nevada													0
New Hampshire							2						2
New Jersey			1										1
New Mexico					8	1	1						10
New York					1			2					3
North Carolina					1		1	1	1				4
North Dakota					25	16	8	3					52
Ohio					1	3	2	16	1				23
Oklahoma			1	30	15	19	4						69
Oregon	1				1	1			1				4
Pacific											3		3
Pennsylvania													0
Puerto Rico													0
Rhode Island													0
South Carolina						1	1						2
South Dakota					41	7	12						60
Tennessee				5		3	1	1	4				14
Texas	2	1	21	25	68	82	38	87	46	4	4	1	379
Utah						3			5				8
Vermont							1						1
Virgin Islands													0
Virginia	1				2				1	2	1		7
Washington													0
West Virginia													0
Wisconsin					2	5	3	5	6				21
Wyoming						5		2					7
TOTAL	26	8	74	144	272	260	236	191	133	32	18	12	1406

TRACKS OF TORNADOES, 1972



HAILSTORM LOSSES FOR PAST YEARS

Year	Property (exclusive of crops) †	Crops †	Total †
1933	–	–	7
1934	–	–	7
1935	–	–	7
1936	6	7	7
1937	6	7	7
1938	6	7	7
1939	5	6	6
1940	6	7	7
1941	6	7	7
1942	6	7	7
1943	6	7	7
1944	7	7	8
1945	6	7	7
1946	7	7	7
1947	6	8	8
1948	7	8	8
1949	7	7	7
1950	7	7	7
1951	7	7	8
1952	7	7	7
1953	7	7	7
1954	7	8	8
1955	7	7	8
1956	7	8	8
1957	7	8	8
1958	7	8	8
1959	6	7	[illegible]
1960	7	8	8
1961	8	8	8
1962	9	8	9
1963	8	8	8
1964	8	8	8
1965	8	8	8
1966	8	8	8
1967	8	8	8
1968	8	8	8
1969	8	8	8
1970	8	8	8
1971	7	8	8
1972	7	7	8

* Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 million
7 $5 million to $50 million
8 $50 million to $500 million
9 $500 million to $5 billion.

NOTE.--The above estimated losses are based on values at time of occurrence.

WINDSTORM LOSSES PAST YEARS

(Windstorms other than tornadoes)

Year	Total loss of life	Total property loss †
1916	65	7
1917	25	6
1918	79	7
1919	344	7
1920	42	6
1921	65	7
1922	133	7
1923	68	7
1924	78	7
1925	88	7
1926	357	8
1927	64	7
1928	1,947	8
1929	46	7
1930	49	7
1931	17	7
1932	306	7
1933	156	8
1934	109	7
1935	461	7
1936	121	7
1937	43	7
1938	630	8
1939	60	6
1940	251	7
1941	43	7
1942	68	7
1943	61	7
1944	448	8
1945	85	7
1946	70	7
1947	117	8
1948	52	8
1949	102	8
1950	210	8
1951	289	8
1952	137	8
1953	118	8
1954	292	9
1955	301	8
1956	196	8
1957	553	8
1958	129	8
1959	145	7
1960	85	8
1961	64	8
1962	134	9
1963	54	9
1964	64	9
1965	107	9
1966	74	8
1967	48	8
1968	49	8
1969	194	9
1970	64	8
1971	76	8
1972	103	8
Total	10,136	

* Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 million
7 $5 million to $50 million
8 $50 million to $500 million
9 $500 million to $5 billion.

NOTE.--The above estimated losses are based on values at time of occurrence.

NORTH ATLANTIC TROPICAL CYCLONES, 1972

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The 1972 tropical cyclone season was one of contrasts. While it was by far the most destructive season on record, fewer tropical storms and hurricanes formed in 1972 than in any season since 1930. The destruction was almost entirely caused by Agnes. She caused more damage than all other tropical cyclones in the past 6 years combined, including Celia and Camille. Yet, Agnes was a minimum hurricane and caused the most trouble as a tropical storm and an extratropical storm. Her lowest central pressure was just 977 millibars. But Agnes had precipitation power. The floods that resulted were devastating. Table 1 puts Agnes' destructiveness in perspective with other potent hurricanes.

The total number of four tropical cyclones (three hurricanes and one tropical storm) was far below the 1930-1972 mean of 9.6 tropical cyclones(5.6 hurricanes). Three storms reached United States shores, but only Agnes was of hurricane intensity. Total damage in the United States was $3,099.54 million or near $3.1 billion. Carrie caused $1.78 million damage. Of the 121 tropical cyclone-related deaths in the United States, 117 occurred in Agnes and four in Carrie. Agnes was also responsible for seven deaths in Cuba.

The following summary was made possible through the hard work of dedicated climatologists. This is particularly true in the case of Agnes. Valuable information was also provided by the National Hurricane Center, the National Red Cross, and the Office of Emergency Preparedness. A more technical discussion of the 1972 North Atlantic tropical cyclone season can be found in the April issue of the Monthly Weather Review.

Table 1.--Most Destructive Tropical Cyclones in United States Since 1930

	Name	Year	Damage (millions)	Deaths
1.	Agnes	1972	3,097.8	117
2.	Camille	1969	1,420.7	258
3.	Betsy	1965	1,420.5	75
4.	Diane	1955	831.7	184
5.	Carol	1954	461.0	60
6.	Celia	1970	453.8	11
7.	Carla	1961	408.3	46
8.	New England Storm	1938	387.1	600
9.	Donna	1960	386.5	50
10.	Hazel	1954	251.6	95

HURRICANE AGNES, JUNE 14-23

Agnes, reminiscent of Camille (1969), was a storm with two lives. Only one, however, was unusual. After a typical tropical trek northeastward across the southeastern United States, the dissipating tropical depression moved inland and rejuvenated in an extratropical environment to help trigger one of the greatest natural disasters in U.S. history.

The one unusual feature in Agnes' first life was her 1000-mile circulation envelope-making her one of the largest June hurricanes of record. Agnes' beginnings have been traced back to the 11th when a band of convective clouds first appeared over the northwestern Caribbean Sea. During the next three days, surface and upper air conditions combined to trigger the development of a depression near Cozumel off the Yucatan coast. By the 16th, the intensifying system became tropical storm Agnes. While satellite photographs showed a huge circulation, reconnaissance reports indicated a poorly defined eye. On the morning of the 17th, Agnes began moving northward at about 10 m.p.h. That afternoon, her central pressure was measured at 986 mb. and her circulation extended into a large cloud mass, to the east, that harbored a growing tropical depression. The area of disturbed weather stretched from Agnes eastward to Puerto Rico and northeastward into the Atlantic, some 2,000 miles. The depression persisted throughout most of Agnes' life. It developed gale force winds in squalls and played havoc with some boats involved in the Newport to Bermuda Yacht Race. More importantly, this strong depression aided the influx of moisture and saturated air into Agnes as she moved over land.

Agnes reached hurricane force on the 18th as 86-m.p.h. winds were found near her center, which passed some 250 miles west of the Keys. Agnes lumbered northward.

By the 18th, winds were gusting from 40 to 50 m.p.h., strengthening first in the Keys and by evening as far north as Orlando. Agnes' center was now about 200 miles west of Fort Myers. Maximum sustained winds over land were running 25 to 45 m.p.h. Agnes' large circulation was bringing an easterly-southeasterly flow over Florida. The result was winds along the east coast were often as strong or stronger than those along the closer west coast. Jacksonville, for example, had the highest gust in Florida at 56 m.p.h. early on the 19th, when Agnes was heading for the panhandle. Agnes was a minimum hurricane at best. Over the open Gulf maximum sustained surface winds reached 85 m.p.h. on the 18th. Minimum surface pressure (in the Gulf of Mexico) fell to 978 mb. on the 19th. Neither the eye nor the wall cloud ever became fully developed. By the afternoon of the 18th, two things were obvious. Agnes would cross the coast along the Florida Panhandle, and her most destructive blow would be storm tides along the west coast.

On the morning of the 19th, these destructive tides hit the west coast. At Fort Myers tides rose 3 feet above normal. A short time later they were 4 to 5 feet above normal, in the Tampa-St. Petersburg area. In the afternoon, Cedar Key recorded a tide 7 feet above normal. As Agnes neared the coast, Apalachicola recorded a 6.4-ft. tide.

Agnes moved ashore as a tropical storm near Panama City late afternoon of the 19th. She was accompanied by 40- to 45-m.p.h. sustained winds and 45- to 55-m.p.h. gusts close to her center. Once into Georgia, Agnes weakened to depression stage. During the 20th, the large, weak depression moved northeastward across Georgia and into South Carolina. Cities like Augusta and Macon, close to the storm path, had recorded their strongest winds earlier, while Agnes was still at sea. Now the principal effect was rain. In Georgia, it was heaviest in the south. In the Carolinas, mountain areas were drenched while in the central and coastal areas rain was light. The system moved northeastward across the Carolinas at 12-15 m.p.h. on the 21st. Early on that day, a secondary low center developed west of the old Agnes depression center. This complex system intensified as it approached the Atlantic Ocean. Cape Hatteras reported a 37-m.p.h. wind with gusts to 62 m.p.h. the secondary low center remained inland and later became dominant. The old Agnes center reached Norfolk on Wednesday night and by then the system was again of tropical storm intensity. It was, however, an unusual system. At one time on the 22d, surface pressures were below 1,000 mb. over an area from upstate New York to the North Carolina Capes, while the lowest pressure hovered near 990 mb. This was due in part to a quasi-stationary trough in the Ohio Valley. The moisture-laden Gulf air in Agnes was replenished by the Atlantic. This moist air encountered the Appalachians and triggered torrential rains over river basins from South Carolina to New York. Many of these basins were already soaked by heavy June rains.

Agnes moved off the Virginia Capes and back out to sea late on the 21st. This occurred on the 22d off the New Jersey coast. Winds near her center were about 70 m.p.h. Winds along the coast from Norfolk to Providence ranged from 25 to 45 m.p.h. with gusts up to 55 m.p.h. Farther inland heavy rain continued. The seaward center crossed the western tip of Long Island on the afternoon of the 22d. That night it was absorbed into the circulation of the secondary low center, which had moved into northeastern Pennsylvania. This large system continued to dominate the weather over the northeast for the next several days.

TORNADOES

Agnes spawned 15 confirmed tornadoes in Florida. They all occurred on the 18th and 19th and were confined to the peninsula south of Daytona Beach. No deaths were tornado related. Total tornado damage was estimated at just over $4.5 million. Three tornadoes touched down in the Keys. The first ripped through Geiger and Big Coppitt Keys in the early morning hours of the 18th. It injured 40 people, destroyed 23 house trailers, and damaged 60 others along with five houses. Damage was estimated at $342,000. Before daylight, another tornado hit Key West ($400,000 damage) and a third tore through Key Colony Beach, Grass Key, Conch Key, and Key Largo. During Saturday afternoon and early evening, nine more tornadoes were reported. Four occurred in the vicinity of Fort Myers. The worst one hit Pine Island, where four trailers were demolished and several stores were damaged. Another tornado hit 17 miles north of Okeechobee and destroyed two trailers. At Haines City, west of Lakeland, six mobile homes were badly damaged. Tornadoes also touched down west of Lakeland, in southeastern Highlands County and in Palm Beach County. Early on the 19th, three tornadoes hit the Cape Kennedy area. On Merritt Island, aircraft and hangars were damaged to the tune of $2 million. Another $1 million damage was estimated in nearby subdivisions. A tornado at Cape Canaveral destroyed two homes and damaged the Port Canaveral Coast Guard Station. Total damage was estimated at $500,000.

In Georgia, tornadoes were reported near Douglas, in Coffee County, and near Blackshear, in Pierre County, during the afternoon of the 19th. The Douglas tornado hit a mobile home park and a factory, causing $100,000 damage. Neither tornado resulted in any deaths.

RAINS AND FLOODS

During the week preceding Agnes, frontal activity brought soaking rains to the mid-Atlantic region. From New England to Virginia, showers and thunderstorms dumped 1- to 3-inch rains with local amounts up to 6 inches. In central Pennsylvania, 2- to 3-inch falls were common. Throughout the rest of the state and over central New York, averages were 1 to 3 inches. In coastal Connecticut, flooding rains fell on the 18th and 19th; Bridgeport had weekend rains totaling 6 inches. Rains in New Jersey averaged 2 to 3 inches. Over Maryland, Delaware, and eastern Virginia, totals ranged from .5 to 2 inches. Local amounts were reported in excess of 4 inches in Virginia and 6 inches in Maryland. Meanwhile, dry weather continued to plague the southeast and was becoming critical in some sections of Georgia, Alabama, and central Florida. The stage was set for Agnes.

Rainfall over Cuba was a harbinger of

things to come. Heavy rains drenched the western part of the island for 4 days. Cape San Antonio was deluged with more than 16 inches. In one 6-hour period, they received a 9-inch downpour. The isle of Pines recorded more than 17 inches of rain during the same 4-day span, which ended on the 18th.

Most sections of Florida received 2 to 3 days of soaking rains from Agnes. In the south, it rained from the 17th through the 19th, while in the north most rain fell from the 18th through the 20th. In the Florida Keys a cloud mass which was to become part of Agnes' circulation started dumping rain late on the 11th. Key West recorded 8.53 inches over a 7-day period. Big Pine Key had 12.69 inches. Five to 7 inches of rain fell over most areas east of Tallahassee. Among the highest totals were 7.87 inches at Naples and 7.17 inches at Tallahassee. Light amounts of less than 2 inches were confined to the east coast, south of Vero Beach.

Alabama, Georgia, and the Carolinas were in the throes of a critical dry spell when Agnes arrived. Rains were mostly beneficial. However, excessive rains in northwestern South Carolina and western North Carolina triggered damaging floods.

Heaviest rains occurred along the eastern slopes of the Blue Ridge Mountains from about Greenville, S. C., to Lake Lure, N. C., northeastward to the Danbury-Reidsville area. Totals ranged from 4 to 10 inches. Much of this fell in less than 48 hours from the 19th through the 21st. Mt. Mitchell, N. C., had a storm total of 10.6 inches. Major river flooding followed flash flooding of Mountain and Piedmont streams. Severe flooding occurred on the Yadkin-Pee Dee River system and the Dan River. Lesser flooding occurred along the Catawba, Saluda, Rock, Congaree, Lumber, and Broad Rivers.

The headwaters of Yadkin River received 6 to more than 10 inches of rain in less than 48 hours. During the night of the 20th and early morning hours of the 21st a rapid 10-ft. rise occurred at Elkin, N. C. Then a few hours after sunrise, the Yadkin crested at 22.6 feet--6.6 feet above flood stage. The crest reached Yadkin College on the afternoon of the 22d. It measured 14.8 feet above flood stage. Near the North Carolina-South Carolina border, 3- to 4-inch rains added to the overflowing river--now called the Pee Dee. The Pee Dee caused severe flooding from Blewett Lake, N. C., to below Cheraw, S. C. Flooding began on the 22d and continued for 4 days. The Pee Dee crested at 40.65 feet at Cheraw on the 24th. This is the fourth time since 1952 that the 40-ft. mark has been reached there. Downstream at Pee Dee, S. C., the 19-ft. flood stage was reached on the 24th, and a 23.89-ft. crest was measured on the 29th.

Five to 10 inches of rain fell along the Dan River and its tributaries. Many records were set on the Dan. Flooding was worst near Madison, Mayodan, and Eden. Kerr Reservoir rose to a new record height. While this caused flooding of recreational lowlands around the lake, it prevented major flooding downstream on the Roanoke River. Rainfall over the headwaters of the Saluda and Broad Rivers was 5 to more than 7 inches in a 48-hour period ending on the morning of the 21st. Along the Broad River a crest 3 feet above flood stage occurred at Gaffney, S. C., on the 21st. Farther downstream, at Blair, S. C., flooding began on the 21st and crested at 25.5 feet on the 23d. The Saluda crested 1.3 feet above flood stage at West Pelzer, S. C., on the 21st. These waters filled Lake Greenwood by the 22d. That evening, a crest 7.4 feet above flood stage was recorded at Chappells, S. C. Waters from the Saluda and Broad Rivers added to the already full Congaree River which flooded Columbia, S. C., during the evening of the 23d. Extensive flooding of lowlands occurred from below Columbia to St. Matthews. Lesser flooding occurred along the Catawba, Rocky, and Lumber Rivers.

Throughout the eastern Carolinas rain was relatively light. East of Charleston-Columbia-Raleigh, totals were generally less than 4 inches, while east of Wilmington-Norfolk, Va., totals less than 2 inches were common. Cape Hatteras recorded a .04-inch total. In the mountains west of Asheville, N. C., totals of 2-5 inches were common.

Eastern Alabama received 2 to more than 7 inches most of which was welcomed and absorbed. Headland reported a total of 7.67 inches. Throughout most of Georgia, 4- to 6-inch totals were common. Most occurred in a 48- to 60-hour period from the 18th to the 21st. East coast amounts ranged from 6 to 9 inches. At Brunswick Airport on St. Simons Island, a total of 9 inches was reported. Eight inches fell in a 24-hour period.

Heavy rains in Virginia produced severe flooding over the James and Appomattox River basins, and along the Potomac and many smaller rivers in the north. In the eastern half of the James River Basin and western half of the Appomattox Basin, flooding was the worst in history. Crest stages exceeded those of Camille '69 by several feet and topped high water records dating back 200 years.

Pre-Agnes rainfall that aided in the flooding occurred on the afternoon and evenings of the 17th and 18th. Heavy showers dumped up to 3 inches of rain over the upper and central James sub-basins. The rainshield of Agnes reached southern Virginia by the 20th. Heaviest precipitation fell on Wednesday the 21st and into early Thursday.

Rains totaling 4 to 10 inches quickly flooded the small streams and tributaries in the upper James Basin and in the central Virginia counties along and east of the Blue Ridge Mountains. Big Meadows had a total of 13.60 inches. The average for the whole James Basin was 6.12 inches from the 19th to the 23d. The heavy rainfall concentrated in the upper portion of the Appomattox basin above Farmville, averaged 8 inches for the same 4 days.

In the upper James Basin, flooding was severe at Covington where the crest was second only to the record set in March 1913. Moderate flooding occurred at Buena Vista. In the Lick Run reach and at Buchanan, the high water marks were exceeded only by those in 1877 and 1913. At Lynchburg-Holcombs Rock reach crests were somewhat below hurricane Camille, 1969. At Lynchburg, flooding occurred on the 21st and 22d. The crest was 8 feet above flood stage. In the lower James Basin, new crest stage records were set at Bent Creek, Scottsville, Bremo Bluff, Columbia, Cartersville, Richmond, Westham, and Richmond City Locks. The river swamped a 200-block area of downtown Richmond, in what appears to be the worst flood in the city's history. A crest of 36.5 feet occurred at the City Locks on the 23d. This topped the old mark of 30.0 feet set back in 1771. Palmyra on the Rivanna recorded a crest just 2.5 feet below the one in hurricane Camille.

In the Appomattox Basin, Farmville suffered the most destructive flood in its history. The crest that occurred on the 22d was 6.5 feet above the record crest set in 1940. Downstream at Mattaox, the crest was 1 foot below the 1940 record. At Petersburg, near the confluence with the James, flooding was comparable to that in 1940. The 16-ft. crest at M.S. No. 1 bridge matched the 1940 record.

Heaviest rain in all Virginia fell in the north. Ten inches or more fell over the counties of Madison, Rappahannock, Culpeper, Fauquier, Prince William, Fairfax, and Loudoun. The highest total was about 16 inches near Chantilly. Nearby Dulles Airport recorded 13.65 inches total and a maximum 24-hour amount of 11.88 inches. Torrential downpours from Wednesday afternoon through Thursday morning were responsible for flash flooding throughout northern Virginia. Near Alexandria, Four Mile Run flooded the heavily populated section known as Arlandria. The Run began rising at 7:15 p.m., e.s.t. Less than 1 hour later, it reached flood stage. Shortly before midnight, flood stage was exceeded by 9.5 feet. Heaviest precipitation flooded Bull and Broad Runs and threatened the Occoquan Dam. Most northern Virginia streams and creeks overflowed their banks during the night, washing out roads and, in some cases, destroying homes. On the Rapidan River, a record 26.0-ft. crest occurred at Rapidan.

In Maryland and the District of Columbia, heavy rains in less than 24 hours, on the 21st and 22d, resulted in severe flooding. Delaware had local flash flooding from the 4 to 6 inches of rain that fell in the northern part of that state. Maryland's heaviest rains occurred in the north-central part of the state where totals set all-time records. Highest total rainfall was 14.68 inches at Westminster and 13.85 inches at Woodstock. Totals of 8 inches or more fell in an area west of Chesapeake Bay and east of Hagerstown. The District of Columbia reported more than 7 inches. In Delaware, the maximum reported total was 6.76 inches at Middletown. Flooding was abetted by the short period in which much of this rain fell. The 11.55 inches at Westminster and 11.35 inches at Woodstock on the 21st, are among the greatest 1-day falls in Maryland history. One-day record falls for Maryland include 14.75 inches at Jewell in July 1897 and 12.61 inches at White Marsh in August 1971. The previous 1-day June record was 6.05 inches at Elkton on June 27, 1938. A 24-hour (not limited to 1 day) total of 7.19 inches at Washington National Airport on June 21-22 was second only to the 7.31-inch total of August 11-12, 1928.

The heavy rains caused disastrous flash flooding of creeks and streams in Maryland, the District of Columbia, and Newcastle County, Delaware. Major flooding followed. The Potomac, fed by heavy rains over its entire basin, began flooding on the 22d. At Little Falls, just outside of Washington, the river crested at 22.0 feet in the early hours of the 24th. Flood stage here is 10.0 feet. Meanwhile at Wisconsin Avenue, downtown Washington, a 15.45-ft. crest had occurred and persisted for about 8 hours.

Along the Monocacy River, a crest of 36.1 feet occurred at Frederick, Md. The previous record was 30.0 feet set back in 1889. Flooding also occurred along the Anacostia and Patuxent Rivers and along Seneca and Rock Creeks. Flooding along the Patapsco River, broke all existing records. Near the Pennsylvania border the Susquehanna, which had devastated much of the Keystone State, threatened the Conowingo Dam. Flood waters covered small towns below the dam and a wide swath of land on both sides of the river from the dam to the river's mouth at Chesapeake Bay, some 12 miles away. Flood gates were opened for more than 48 hours and the dam held.

In Delaware, the Brandywine Creek flooded northeast Wilmington. It crested there at a record level of 15.4 feet.

In New Jersey, heavy rains caused extensive flooding. Rains of 1 to 2 inches, falling in a 24-hour period on wet ground, caused the Saddle, Ramapo, and Passaic Rivers to overflow their banks on the 22d. Total rainfall in northern New Jersey was 2 to nearly 5 inches. Greatest amounts fell in the northwest; Sussex recorded a total of 4.61 inches and Long Valley reported 4.90 inches. Crests were generally 1 to 2 feet above flood stage and flooding continued into the 24th. Along the Passaic, water remained high for 5 to 6 days as additional rain fell on the 24th and 25th. Flooding also occurred along the Pequannock, Pompton, Wanaque, Rockaway, and Millstone Rivers from the 22d to the 24th. Crests were 1 to 3 feet above flood stage. Heaviest rains occurred in southwestern New Jersey, south of Philadelphia, Pa. Twenty-four-hour rainfall averaged 3 to 5 inches over Camden, Gloucester, Salem, and Cumberland Counties. Total storm rainfall ranged up to 6.24 inches at Camden. Flash flooding in these counties caused extensive agricultural damage. The Delaware River was the beneficiary of rains from New York and New Jersey. However, it remained below flood stage.

Connecticut rains were spread out over a 5- to 6-day period and were heaviest mainly in the western half of the state. Heaviest amounts fell on the 22d, 23d, and 24th, and ranged from .5 to 2 inches. Total storm amounts generally ranged from 2 to 4 inches. Saugatuck Reservoir, for example, reported 4.04 inches of rain from the 21st through the 26th.

In Pennsylvania, Agnes' heavy rains fell on wet ground. Runoff was heavy, flooding disastrous. Torrential rains began Wednesday (21st) and continued through Thursday. Maximum 24-hour totals exceeded 7 inches in a band from north of Williamsport, southward through Sunbury, Harrisburg, and York to the Maryland border. Harrisburg had a maximum 24-hour amount of 12.55 inches. In extreme western Schuylkill County, a gauge at a watershed research site measured 14.5 inches in a 24-hour period. Total storm rainfall averaged 8 to 12 inches throughout the entire central section of the state with several areas where precipitation went above 12 inches. In western Schuylkill County up to 18.8 inches fell.

Small streams began flooding Wednesday night. Major river flooding followed on Thursday and Friday. Along the main stem of the Susquehanna River, flood levels exceeded previous marks set in March 1936 by 3 to 6 feet. Crests were generally 12 to 18 feet above flood stage. At Wilkes-Barre water crept over the levees early Friday morning. By Saturday evening, the powerful river crested more than 18 feet above flood stage. Along the West Branch of the Susquehanna, most of the flooding occurred downstream of Karthaus. Crests ranged 6 to 16 feet above flood stage. In Williamsport, Milton, and Lewisburg crests topped previous 1936 marks. Records were also set at Loch Haven and Jersey Shore. On the Juniata River, crests were generally a little less than the 1936 levels. On the 23d, at Lewistown, the Juniata crested at 42.1 feet, 19 feet above flood stage and just below the record 42.3-ft. crest of 1936.

In southeastern Pennsylvania, the Schuylkill River, beneficiary of some of Agnes' heaviest rain, reached record or near-record levels. At Berne, Pa., a 19-ft. crest topped a 1955 previous high by more than 3 feet. All time record crests quickly followed downstream at Reading, Pottstown, and Norristown. At Pottstown, flooding occurred from the 22d to the 24th. The Schuylkill crested almost 17 feet above flood stage and more than 8 feet above the previous record set in 1902. Sections of Philadelphia were also flooded. Four to 10 inches of rain swelled the Lehigh River to overflowing at Lehighton, Walnutport, Bethlehem, and Allentown.

Flooding occurred along most of the navigable streams in western Pennsylvania. At Pittsburgh the Ohio River reached its highest crest since 1942. Crests on the Ohio River ranged from 9.3 feet above flood stage at Dam 14, Clarington, Ohio, to 12.1 feet above flood stage at Wellsburg, W. Va. Along the Allegheny River record flooding occurred from Salamanca, N. Y., to above Eldred, Pa. At Olean, N. Y., where flood stage is 10 feet, the river crested at 24.2 feet on the 23d. At Eldred, Pa., the crest was 1.5 feet above the previous record set in 1942. Major flooding also occurred on the Clarion River. At Cooksburg and Johnsonburg crests were just below previous records. At Ridgway the crest, which came early on the 23d, was more than 8 feet above flood stage.

The Monongahela River flooded from Point Marion, Pa., down to its mouth at Pittsburgh; major flooding was continued between Charleroi and Pittsburgh. The Youghiogheny River was in flood through most of its length; greatest flooding occurred from Jacobs Creek on down to its mouth at McKeesport. Serious flash flooding occurred all over Westmoreland County where up to 13.50 inches of rain was measured in a bucket survey (near Mt. Pleasant).

Shortly before midnight on Tuesday (20th), rains turned heavy in New York's southwestern highlands. Morning reports showed falls of 4 inches, 5 inches, and 6 inches over the upper reaches of the Chemung River Basin. Runoff caused local flash flooding in Allegany and Steuben Counties. A few hours later, most of New York State was under the Agnes rainshield. Over the Chemung watershed an average of 3 more inches fell during Wednesday. Runoff from the 2-day rains brought the main rivers to above bankfull stages. By the morning of the 23d, another 3 to 5 inches was added to the river basin.

Before it was over 10 to 13 inches fell in Allegany and western Steuben Counties. Wellsville had an unofficial total of more than 13 inches. At Alfred, 12.9 inches was measured. The 4-day average along the basin was near 9 inches. This resulted in highest stages of record all along the Chemung River. At Chemung, N. Y., where flood stage is 12 feet, the river flooded from the 22d to the 25th and crested at 31.62 feet early on the 24th. At Elmira, the river crested about 15 feet above flood stage. During the height of the flood, a lake 4 miles wide was created by the Chemung River between Corning and Elmira. The Allegheny, Genesee, Canesteo, and lower Susquehanna Rivers were also in this heavy rain area. Total rainfall was greater than 6 inches, west of Binghamton and south of Rochester. The Allegheny crested nearly 3 feet higher than the all-time record in the Olean-Salamanca area. At Addison, the Canesteo crested about 3 feet above flood stage on the 23d. Flood stage is 17 feet.

In the Finger Lakes region, from Wyoming County eastward to Cortland County, totals of 6 to 9 inches were common. Ten inches of rain was measured in the hilly terrain just west of Canandaigua Lake in Ontario County. The inflow of streams into the Finger Lakes produced record high lake levels and severe flooding of shore areas. Cayuga Lake, near Ithaca, reached a peak level of 387.75 feet on June 25. This exceeded the previous record of 386.4 feet in April 1916. Record water levels also occurred in Seneca and Canandaigua Lakes. Between June 20 and the 25th, the Keuka Lake level rose 5 feet. Severe flooding also occurred along the south shore of Oneida Lake from Bridgeport, west of Brewerton.

Three to 5 inches of rain fell over the Chenango River watershed, in south-central New York. Flooding occurred along the river from the 22d to the 24th. Crests were generally 1 to 2 feet above flood stage. Farther south in the Catskills, 4- to 6-inch rainfall totals were common.

DEATHS AND DAMAGES

Agnes is the costliest hurricane in United States history. Total storm damage is presently estimated at $3.09 billion. For flooding of this consequence the storm death toll of 117 is very light. Pennsylvania is responsible for more than two-thirds of the damage and 48 of the deaths. Table 2 shows the deaths and damages by States. The impact of the hurricane on property is summarized in Table 3.

Outside the United States, Cuba suffered heavily. On the western part of the island, torrential rains caused severe flooding. In Pinar Del Rio, some 97 homes were destroyed and another 300 damaged. There were seven deaths.

Florida suffered nine deaths, 170 injuries and $8.243 million damage. Damage resulted from tides, winds, and tornadoes. All Gulf coast counties from Monroe to Bay were declared disaster areas. Panama City, some 18 feet above sea level, suffered little damage, but low lying coastal villages between Carabelle and Apalachicola suffered great damage. Storm tides, highest in many years, destroyed homes and businesses, washed out roads, and cut off access to many offshore islands. Pinellas County was also hard hit particularly in the St. Petersburg area. Inland, winds and tornadoes were responsible for the damage and for most of the deaths. Inland disaster counties include Brevard, Hardee, Hendry, and Okeechobee. At Okeechobee City, a series of windstorms cut a path 100 yards wide through Treasure Island Park, a fishing lodge and several other mobile home parks. Six people were killed and 40 injured. Damage, including destruction of 50 mobile homes, was estimated at $500,000. A windstorm near Ft. Denaud, in Hendry County, destroyed a trailer, killing a woman and injuring her daughter. It then tore up some citrus groves and several other trailer parks near La Belle. Damage was estimated at $200,000 to property and $10,000 to crops. As mentioned before, 15 tornadoes were responsible for more than $4.5 million damage. Other deaths included a child drowning in a rain-swollen stream and a heart attack attributed to Agnes.

The Yadkin River in North Carolina flooded more than 86,000 acres. Total losses in the Basin were estimated at $4.22 million. Of the losses, more than $3.5 million were agricultural and mainly to growing crops. Street flooding in Elkin, Yadkin College, and other river towns accounted for the remainder. Two deaths occurred in North Carolina, one in Surry County when a canoe overturned and the other in Iredell County, when a man driving a tractor was swept away in floodwaters. Estimates of flooding in the Catawba, Congaree, and Reedy River Basins total $32,000; mostly minor home and trailer damage and some crop losses. Total North Carolina damage is estimated at $6.558 million.

Total storm damage in Georgia was estimated at $205,000. The tornado near Douglas was responsible for $100,000 damage. The Blackshear tornado destroyed a mobile home and damage was estimated at $5,000. Over the rest of the state, property damage was estimated at $80,000 and crop damage at $20,000. South Carolina damage was also minimal and restricted to flooding. In the Pee Dee Basin, floods caused an estimated $25,000 in crop losses. Total storm damage for South Carolina was about $50,000.

Flood damage in Virginia has been estimated at $125,987 million. The death toll stands at 13. Destruction was widespread throughout central Virginia. It ranged from agricultural damage on small streams, to inundated towns and cities on the larger rivers. Richmond was hit hard. Water supply and sewage treatment plants were inundated. Electrical and gas plants were flooded and partially closed. Only one of the five bridges crossing the James was usable. Downtown Richmond was closed for several days. Industry and business suffered immense damage. Many residents were evacuated from their homes. Other hard hit towns and cities included Manassas, Occoquan, Fredericksburg, Scottsville, Glascow, Buchanan, Farmville, Roanoke, Salem, Danville, Alexandria, Charlottesville, Lynchburg, Lexington, and Waynesboro. Highways were also devastated. At the height of the flood, 600 miles of road were under water. Some 103 state highway bridges were destroyed or damaged. Most of these were small bridges on secondary highways.

The real tragedies occurred along the smaller tributaries. Every creek and stream worthy of the name, overflowed its banks and wiped clean the adjacent land. Uninsured homes and a lifetime accumulation of household goods were quickly swept away. Northern Virginia was particularly hard hit. Fairfax County reported an estimated $25 million damage, by far the largest in the state. This tragedy was lessened somewhat by timely warnings that saved an untold number of lives.

Total storm damage in Maryland has been estimated at $110,186 million. There were 19 storm deaths in Maryland, one in Delaware, and none in the District of Columbia. The following Maryland counties, including Baltimore City, were declared disaster areas: Anne Arundel, Baltimore, Carroll, Cecil, Charles, Frederick, Harford, Howard, Montgomery, Prince Georges, and Washington. Along the Chesapeake Bay, the counties named were Calvert, Dorchester, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, and Wicomico. Damage in Delaware was mostly minor.

Disaster to the Chesapeake Bay counties was primarily in the form of losses to the shellfish and oyster industry with resultant unemployment. Heavy rains cause excessive freshwater runoff into the Bay. This greatly reduces the salinity. The freshwater forms a layer on the surface of the Bay, which moves downstream mixing with and diluting the bottom layer of salty water. Oysters cannot survive prolonged exposure to low salinities. In addition, there is a lack of dissolved oxygen which occurs when fresh water flows over top of heavier salt water with little mixing. It appears now that the damage to the industry will be less than that attributed to the floods of hurricane Camille in 1969.

An indication of the severity of damage in Pennsylvania, is that the whole state has been declared a disaster area. Total storm damage is currently estimated at $2,119 billion. The enormity of this figure can be realized when compared to the total storm damages of hurricanes Camille and Betsy. In each storm, the total was about $1.4 billion. The floods resulting from Agnes have caused the worst natural disaster to ever hit Pennsylvania. In addition to the damage, there were 48 deaths. Altogether, some 250,000 people were forced to evacuate their homes. Many returned to find their homes gone. Public water and sewage facilities flooded out in many areas. Some towns had to ration water. Fires broke out in many communities where firemen, unable to reach the blaze because of flooding, stood helplessly by.

Crop losses were initially estimated at $120 million. Full effects on some crops will not be known until later this season. Roads and bridges suffered some $300 million damage. There were 569 bridges either washed out or closed by floodwaters. Industry suffered heavily.

Damage in Ohio was mainly confined to the southern shore of Lake Erie. Northeasterly winds generated 15-ft. waves and caused a 3.5-ft. rise in the lake level along the south shore.

There was some flooding along the Ohio River from Hannibal to East Liverpool. Powhatan Point was especially hard hit. Total damage in Ohio is estimated at $2.002 million.

Total damage in West Virginia was estimated at $7.753 million. Almost all of this occurred along the Ohio River from New Martinsville, W. Va., to Chester. Wheeling was particularly hard hit. Some 3,000 homes and 1,500 businesses were inundated. In Greenbrier County, Dry and Howard Creeks overflowed their banks, damaging some 22 businesses and 56 homes. Five houses were completely destroyed.

Total damage in New York has been estimated at $702,502 million. The death toll stands at 24. Some 100,000 people had to evacuate their houses. In Corning, almost the entire population was forced to flee the floodwaters. In Elmira about one-half the city evacuated. Pressure on dams forced many people below the dams to flee. Lake shore residents also moved to higher ground. These counties were declared disaster areas: Allegany, Cattaraugus, Cayuga, Chemung, Livingston, Ontario, Schuyler, Seneca, Steuben, Tompkins, Wyoming, and Yates. About 5,000 homes were destroyed or badly damaged. The greatest loss of homes was in the Elmira-Corning area. Other hard hit cities include Salamanca, Olean, Wellsville, and Hornell. The overflow of several Finger Lakes caused damage to boats, docks, marinas, and surrounding properties. Rains and floods caused severe crop damage throughout the southwestern tier and Finger Lake counties. Hardest hit were potatoes, corn, and hay. Dairy farmers also suffered serious losses. Grape vineyards in the Naples area were inundated and heavy rains occurred at the critical bloom stage. Floods also caused the collapse of a hospital wing at Wellsville. Another tragic loss was the famous Glass Museum at Corning Glassworks. Water rose almost to the ceiling of the museum rooms. Losses included many priceless, ancient glass objects.

Total storm damage in New Jersey was estimated at $15 million with one storm fatality. Crop damage contributed $10 million to the total. In New England damage from wind and rain was considered minor.

Table 2

U. S. DEATHS AND DAMAGE ATTRIBUTED TO AGNES

	Damage	Deaths
Pennsylvania	$2,119,269,000	48
New York	702,502,000	24
New Jersey	15,000,000	1
Maryland	110,186,000	19
Ohio	2,002,000	0
Delaware	Light	1
West Virginia	7,753,000	0
Virginia	125,987,000	13
North Carolina	6,558,380	2
South Carolina	50,000	0
Georgia	205,000	0
Florida	8,243,000	9
Total	$3,097,755,380	117

Table 3

IMPACT OF HURRICANE AGNES ON PROPERTY

	Va.	Md.	W.Va.	D.C.	N.Y.	Pa. N.J.	Ohio	Fla.	Ga.	N.C.	Total
Total Families Suffering Loss	7,063	3,479	1,946	506	40,090	69,860	405	2,893	1	7	126,250
Dwellings Destroyed	95	103	108	0	628	2,321	0	96	0	0	3,351
Dwellings, major damage	1,307	866	344	0	4,922	33,412	3	447	0	1	41,302
Dwellings, minor damage	3,086	1,664	1,214	350	27,910	29,455	302	1,355	0	0	65,336
Mobile Homes Destroyed	125	50	118	0	135	1,266	0	177	0	0	1,871
Mobile Homes, major damage	450	43	91	0	367	1,908	100	374	1	6	3,340
Farm Buildings Destroyed	11	17	0	0	92	435	0	0	0	0	555
Farm Buildings, major damage	27	44	10	0	341	1,249	0	0	0	0	1,671
Small Businesses, Destroyed or major damage	205	81	18	0	1,547	3,003	0	988	0	0	5,842

* Almost all damage occurred in Pennsylvania

TROPICAL STORM BETTY, AUGUST 22-SEPTEMBER 1

Betty was spawned by a small intense subtropical low identified as Bravo. Bravo was spawned within an old frontal zone some 250 miles north-northwest of Bermuda on the 22d. The VISURGIS reported 40-m.p.h. winds close to the center which was moving eastward at about 15 m.p.h. During the next few days, Bravo slowed but continued to intensify. By the 25th, the upper air situation was such that the overflow and convective processes were enhanced. Reconnaissance reports indicated a transformation to a warm core system was in progress. The FORT D'ORLEANS passed very near the center just before daybreak and reported squalls to near 65 m.p.h. and a minimum pressure of 997 mb. Further intensification was delayed until the 26th. On the 27th, about 800 miles west of the Azores (39° N, 46° W), Bravo became hurricane Betty. This is the farthest north that a system has first become a hurricane. Reconnaissance aircraft found maximum sustained winds of 98 m.p.h. blowing around a 987-mb. pressure center. These reports indicated a classic eyewall and a clear eye was observed on satellite photographs. Betty continued to deepen as she accelerated east-northeastward. Late on the 27th, the hurricane reached her peak intensity when central pressure fell to 976 mb. and maximum winds climbed to 104 m.p.h. By the 29th, the storm has slowed. Although still a hurricane, Betty was weakening. On the 30th, the HOEGH TRANSPORTER, some 120 miles north of the storm's center, encountered 45-m.p.h. winds in 13-foot seas. After coming within 150 miles of the island of Corvo, Betty turned back to the west. Later on the 30th, winds dropped below hurricane force, and late the following day were barely tropical storm strength. By the 1st of September, Betty was extratropical and accelerating northward ahead of another approaching trough of low pressure.

TROPICAL STORM CARRIE, AUGUST 29-SEPTEMBER 5

Tropical storm Carrie may have been spawned by a disturbance that moved off the African coast late on the 15th. It was not until 2 weeks later, off the east-central Florida coast, that a closed circulation became apparent. By midday on the 31st, reconnaissance crews found 50- to 55-m.p.h. winds around a 1002-mb. center that was located some 350 miles east-southeast of Cape Hatteras. Carrie began to fill as she moved northwestward late on the 1st. Late on the 2d, Carrie turned toward the north-northeast and began to deepen once again. By midday on the 3d, her central pressure reached a low of 992 mb. Carrie was less than 60 miles south of Cape Cod. Her outer circulation was causing weather along the New England coast. There was a large 1025-mb. high centered just south of Newfoundland. The two systems produced a tight gradient along the New England coast causing maximum winds to occur away from Carrie's center. The situation was more typical of a northeaster than a tropical cyclone.

High winds and wind-generated seas along with heavy rains and rain-generated floods did most of the damage. These effects were confined to coastal areas from Rhode Island to Maine. Providence was battered by 52-m.p.h. gusts, while Boston reported gusts to 46 m.p.h. In general, sustained winds ranged from 35 to 50 m.p.h. A gust of 84 m.p.h. was reported at Point Judith, R.I., and one of 69 m.p.h. came in from Cape Cod. Rains were confined to within 70 miles of the coast and ranged from 2 to more than 10 inches. At Tashmou on Martha's Vineyard, 12.50 inches of rain fell in about 16 hours. Rain was heaviest along the Massachusetts coast where totals ranged from 4 to 9 inches. Other coastal areas were doused by 2 to 5 inches.

Local flooding, winds, and surf caused considerable damage, particularly in Massachusetts. Plymouth was declared a local disaster area. Damage in Massachusetts was estimated at $1.20 million. Wind-toppled trees knocked down powerlines, blocked roads, and damaged homes and cars. Rain-filled streams flooded cellars and eroded shorelines. High waves also caused erosion and swamped hundreds of small boats. Many buildings suffered directly from wind damage, particularly walls under construction. At Rockland, Maine, a cottage was blown from its foundation, and near Eagle Lake a track washout caused a train derailment.

There were four deaths associated with Carrie--two in Massachusetts and two in Maine. In Maine, two people drowned in rough surf. An East Boston man drowned after a cabin cruiser capsized off Manomet Point. The other Massachusetts death occurred when a man overturned in a canoe on Long Pond in Freetown. Total storm damage in New England was estimated at $1.78 million.

Late on the 3d, Carrie turned extratropical. The following day the storm moved across New Brunswick. Carrie's remnants slowly petered out in the Gulf of St. Lawrence during the next few days.

HURRICANE DAWN, SEPTEMBER 4-14

The embryo of hurricane Dawn was tracked across the Atlantic during the last week in August. The actual birth took place in the Florida Straits during the evening of the

4th; a circulation characteristic of tropical depression was observed. The fledgling storm moved across southeastern Florida and into the Bahamas on the 5th. Nursed by warm waters and fed by the tropical atmosphere, Dawn reached tropical storm strength on the 6th. A reconnaissance aircraft reported winds of 58 m.p.h. near her center, which was 200 miles east of Cape Hatteras. During the next 24 hours, her course changed from east-northeastward to northeastward, her forward speed increased to 18 m.p.h., and she became better organized. On the 7th, Dawn blossomed into a hurricane, slowed, and turned northward. Hurricane Dawn reached full maturity that same day near 35°N, 71°W. Winds of 80 m.p.h. blew around a 997 mb. pressure center. Unfriendly blocking conditions off New England doomed Dawn to Dixie. Dawn was turned back about 50 miles off North Carolina's Outer Banks. This blow seemed to age Dawn rapidly, and by the evening of the 8th she was a tropical storm meandering southeastward. For the next few days, the storm continued to move in a southeasterly then southerly direction. Late on the 10th, a frustrated Dawn turned westward. By the 13th, in hostile Georgia coastal waters, the shriveling Dawn was a depression with an unusually small area of cloudiness and cyclonic circulation. For one last fling, the depression turned northeastward and brushed the Georgia coast. The following day, coastal radar men tolled the death knell, as the last evidence of cyclonic circulation vanished from their scopes.

Dawn caused no significant coastal damage since her maximum winds and heavy rains remained out at sea. Some local flooding and beach erosion did occur in the northern Bahamas.

TABLE 4

TROPICAL CYCLONE DATA

HURRICANE AGNES JUNE 14-23, 1972

PRELIMINARY TROPICAL CYCLONE DATA
HURRICANE AGNES JUNE 14-23, 1972

[illegible]	Date	Pressure (inches)		Wind (miles per hour)				Highest Tide ft. abv. msl.	Time+	Rainfall (inches)	Date/ Time+	Greatest 24-hr rainfall inches	Date
		Low	Time+	Fastest Mile	Time+	Gusts	Time+						
FLORIDA													
Apalachicola WSO	[illegible]	29.1[illegible]	1512			E 55'	0612	6.4#	1512	3.40	18/1050-20/0610	2.99	18-19
[illegible] FAA	[illegible]	29.07	[illegible]	NE 39	1958								
Daytona Beach WSO	19	[illegible]	1656	E 29	18/2337	E 45	0312	1.7	0057	4.37	18/0701-19/1340	4.02	18-19
Fort Myers WSO	18	29.65	1630	E 25'	17/1328	SE 53	0955	3.7#	19/08-12	5.55	17/1200-19/1000	4.96	18-19
[illegible] WSO	[illegible]			E 39	0636	SE 56	0637	2.8#		5.36	18/1343-20/1315	5.14	18-19
Key West WSO	18	29.59	0310	SE 43	0519	E 52	0144	1.4	02-05'	**6.19**	**17-20**	3.66	17-18
Lakeland	[illegible]	29.6[illegible]	[illegible]	SE 33	18/1828	SE 55	18/1816			5.10	17/2335-20/0800	4.53	18-19
Orlando WSO	19	29.68	1655	ESE 30	18/2013	E 41	18/1928			5.28	18/0620-19/1905	4.64	18-19
Panama City, FAA	19	29.16¢	16[illegible]-1800	NE 40	0700-0750								
Pensacola Fwf, NAS	19	29.44	1555-1655	NNE 35	0737	NNE 48	0648			2.58	18/1451-19/2055		
Pensacola WSO	19	29.45	1500	NNW 23	1556	N 43	1223	2.0	0458	2.34	18/1440-20/0035	2.18	19
St. Petersburg, AP, FAA	19	29.58¢	0353-0553	[illegible] 29	0850	S 48	1455						
Tallahassee WSO	19	29.27	1709	[illegible] 31	1757	SSE 46	1817			7.17	18/1118-20/1145	6.44	18-19
Tampa WSO	19	29.59	0600	SE 27*	18/2057	SE 43'	18/2048	5.6	1115	3.47	18/0300-19/0955	3.38	18-19
Tyndall AFB	19	29.11	1458	NE 40	0655	NE 52	0655			5.66	18/1239-19/2358		
W. Palm Beach WSO	18	29.7[illegible]	1632	E 32*	1632	E 46	1632			1.97	17/0632-19/2000	0.86	18-19
ALABAMA													
Dothan FAA	20	29.26	0200	N 29	19/2157	N 43	19/2157			3.52	18/1452-20/1124		
Mobile WSO	19	29.59	1745	N 22	1457	N 35	1452	1.3#	0330-0600	1.08	19/0617-19/1830		
Montgomery WSO	20	29.48	0200-0400	[illegible] 25	1421	N 37	19/1411			2.12	19/0528-20/0710	2.07	19-20
GEORGIA													
Albany FAA	20	29.30	0555	ENE 17	19/1156	NE 29	19/1115			4.54	19-21		
[illegible] NAS	20	29.27	0558	ENE 24	19/1158	SE 33	19/2128			2.77	19-20		
Augusta WSO	20	29.32	1800-2000	E 24	19/2010	E 35	19/1957			3.70	19/0500-21/0500	2.57	19-20
Macon WSO	20	29.40	1010	E 33	19/1537	NE 35	19/1555			3.18	19/0200-20/2000	2.28	19-20
Macon, Robins AFB	20	29.37	0655	ENE 35	19/[illegible]14	NE 37	19/1545			3.55	18-20		
Savannah WSO	20	29.38	1800	E 37*	19/1349	E 48	19/1340			3.95	19-21	3.19	19
SOUTH CAROLINA													
Beaufort MCAS	21	29.31	0200	SE 29	19/1941	ESE 46	19/1901			4.11	19-21		
Charleston WSO	21	29.30	0400	W 39'	0644	E 40	19/2234	7.0		3.10	19/0255-21/0823	2.29	19
Columbia WSO	21	29.30	0300-0400	E 24	19/2255	E 32	19/2254			4.19	19/0527-21/0653	3.08	20-21
Florence FAA	21	29.24	0400	WNW 23	1354	WNW 44	1354			3.61	19-21		
Greer WSO	21	29.38	0200	E 21	20/0200	N 29	20/2156			5.89	19/0338-21/0505	4.66	19-20
Myrtle Beach AFB	21	29.23	0700	WNW 29*	1[illegible]36	NW 46	1350			1.57	19-21		
NORTH CAROLINA													
Cape Hatteras WSO	21	29.13	1755	WNW 37*	2158	WNW 62	2155			0.43	20/0915-21/2035		
Charlotte WSO	21	29.2[illegible]	0400	NW 23	0617	NNW 26	0622			2.85	19/0915-20/0910	2.06	20-21
Elizabeth City FAA	21	29.11	1358	SSE 23*	0600	SSW 35	1159						
Greensboro WSO	21	29.30	0700	NW 26	0804	NNW 30	0747			5.43	19-21	4.91	20-21
New Bern FAA	21	29.19	1450	SE 18	0255	W 32	1855			1.43	19-21		
Pope AFB	21	29.22	0955	E 12	20/0457	NNW 30	1125			3.03	19-21		
Raleigh WSFO	21	29.25	0956	N 24*	1256	WSW 3[illegible]	22/1555			2.92	19/1404-21/1620	2.47	20-21
Rocky Mount FAA	21	29.18	1358	NNW 23*	1555	NNW 35	1555			3.11	20-21		
Wilmington WSO	21	29.20	1055-1255	SE 26'	20/1038	SE 37	20/1004			2.53	19/0518-21/1535	1.90	20-21
VIRGINIA													
Chesapeake Lt/Sta	[illegible]	29.1[illegible]	2300										
Langley AFB	[illegible]	29.1[illegible]	1855	NNW 35	22/0055	NW 54	22/0058			0.57	22-23		
Norfolk WSO	21	29.10	2000	NW 42*	22/0037	NW 54	22/0032	1.2#	1730	0.33	20-23		
Richmond WSO	[illegible]	29.14	1658	NW 3[illegible]	1905	NW 32	1858			3.28	20-23		
DISTRICT OF COLUMBIA													
Andrews AFB, Md.	21	29.26	1855	NNW 29	2230	NNW 46	0209			5.57	21-22		
Dulles Int'l AP, Va.	[illegible]	29.29	1555	NNW 25*	1855	N 50	1853			13.65	20-23	11.88	21-22
Washington Nat'l AP	21	[illegible]	2015	NW 43	2217	NW 49	2103			8.16	20-23	7.19	21-22
MARYLAND													
Assateague	[illegible]			SW 20	1[illegible]00	SW 50	0800			2.77			
Baltimore WSO	[illegible]	29.24	0042	NW 37	0116	NW 39	0155			6.81	20-23	5.19	21-22
Patuxent NAS	[illegible]	29.12	2358	NNW 25	22/0158	NNW 43	22/0257			3.53	21-23		
Salisbury FAA	[illegible]	29.0[illegible]	0256-0356	W 28	1259	NW 57	0708			3.80	21-23		
DELAWARE													
Dover AFB	22	29.1[illegible]	0355	NW 4[illegible]	0928	NW 67	0918			3.17	20-23		
Rehoboth Beach	22	29.12	0500-0800'	NW [illegible]	1100	NW 37	1200	1.5#					
Wilmington WSO	22	29.1[illegible]	0807	NW 3[illegible]	1055	WNW 51	1133			4.94	21/0200-23/1100	4.35	21-22
NEW JERSEY													
Atlantic City, WSO	22	29.[illegible]1	0900-1115	WNW 3[illegible]	1255	W 49	1227	2-3#		2.12	22-23	1.91	22-23
Trenton WSO	22	29.00	1300	SW 29	2018					2.51	21-23	1.97	21-22
NEW YORK													
JFK Int'l AP WSO	22	28.98	1451	WSW 32*	1651	WSW 47	1712			1.25	21-23		
LaGuardia Fld. WSO	22	28.98	1454	NE 4[illegible]	0848	WSW 44	1747	2.9	1300	1.22	21-23		
New York City WSO	[illegible]	28.9[illegible]	1450	NE 36	0843	NE 55'	0839			1.86	21-23		
CONNECTICUT													
Hartford WSO	22	29.00	[illegible]	[illegible] 29	[illegible]	S 46	1923			1.62	22-23		
New Haven FAA	22	29.00	1712	[illegible]W 29	2047	SW 40	1945						
RHODE ISLAND													
Providence WSO	[illegible]	29.11	[illegible]	[illegible] 26	1928	[illegible] 38	1923	3.[illegible]	700	0.26	22/0345-22/1940		

+ [illegible] Standard Time
* [illegible] speed
' [illegible]

# Tide, above mean low water
¢ Altimeter setting
' First of two or more occurrences

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS

TOTAL NUMBER OF TROPICAL CYCLONES, LOSS OF LIFE AND DAMAGE

	Total Number Tropical Cyclones*		Total Number Hurricanes		Loss of Life		Damage by Categories**	
Year	All Areas	Reaching U.S. Coast	All Areas	Reaching U.S. Coast	Total All Areas	United States	Total All Areas	United States
1931	9	2	2	0		0		#
1932	11	5	6	2		0		#
1933	21	7	9	5		63		7
1934	11	5	6	3		17		6
1935	6	2	5	2		414		7
	58	21	28	12				
1936	16	7	7	3		9		6
1937	9	4	3	0		0		4
1938	8	4	3	2		600		8
1939	5	3	3	1		3		3
1940	8	3	4	2		51		6
	46	21	20	8				
1941	6	4	4	2		10		7
1942	10	3	4	2	17	8	7	7
1943	10	4	5	1	19	16	7	7
1944	11	4	7	3	1,076	64	8	8
1945	11	5	5	3	29	7	8	8
	48	20	25	11				
1946	6	4	3	1	5	0	7	7
1947	9	7	5	3	72	53	8	8
1948	9	4	6	3	24	3	7	7
1949	13	3	7	2	4	4	8	8
1950	13	4	11	3	27	19	7	7
	50	22	32	12				
1951	10	1	8	0	244	0	7	6
1952	7	2	6	1	16	3	6	6
1953	14	6	6	2	3	2	7	7
1954	11	4	8	3	720+	193	9	9
1955	12	5	9	3	1,518+	218	9	9
	54	18	37	9				
1956	8	2	4	1	76	21	8	7
1957	8	5	3	1	475	395	8	8
1958	10	1	7	0	49	2	7	7
1959	11	7	7	3	57	24	7	7
1960	7	5	4	2	185	65	8	8
	44	20	25	7				
1961	11	3	8	1	345	46	8	8
1962	5	1	3	0	4	4	6	6
1963	9	1	7	1	7,218+	11	9	7
1964	12	6	6	4	266	49	9	9
1965	6	2	4	1	76	75	9	9
	43	13	28	7				
1966	11	2	7	2	1,040	54	8	7
1967	8	2	6	1	68	18	8	8
1968	7	3	4	1	11	9	7	7
1969	13	3	10	2	364	256	9	9
1970	7	4	3	1	74	11	9	8
	46	14	30	7				
1971	12	5	5	3	44	8	8	8
1972	4	3	3	1	128	121	9	9
Total	405	157	233	77				
Mean	9.6	3.7	5.6	1.8				

**The Environmental Data Service has for some time recognized that, without detailed expert appraisal of damage, all figures published are merely approximations. Since errors in dollar estimates vary in proportion of the total damage, storms are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

*Including hurricanes
# Not reported in literature, believed minor.
+Additional deaths for which figures are not available.

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS—CONT'D

Frequency of Tropical Cyclones (Including Hurricanes) by Months and Years

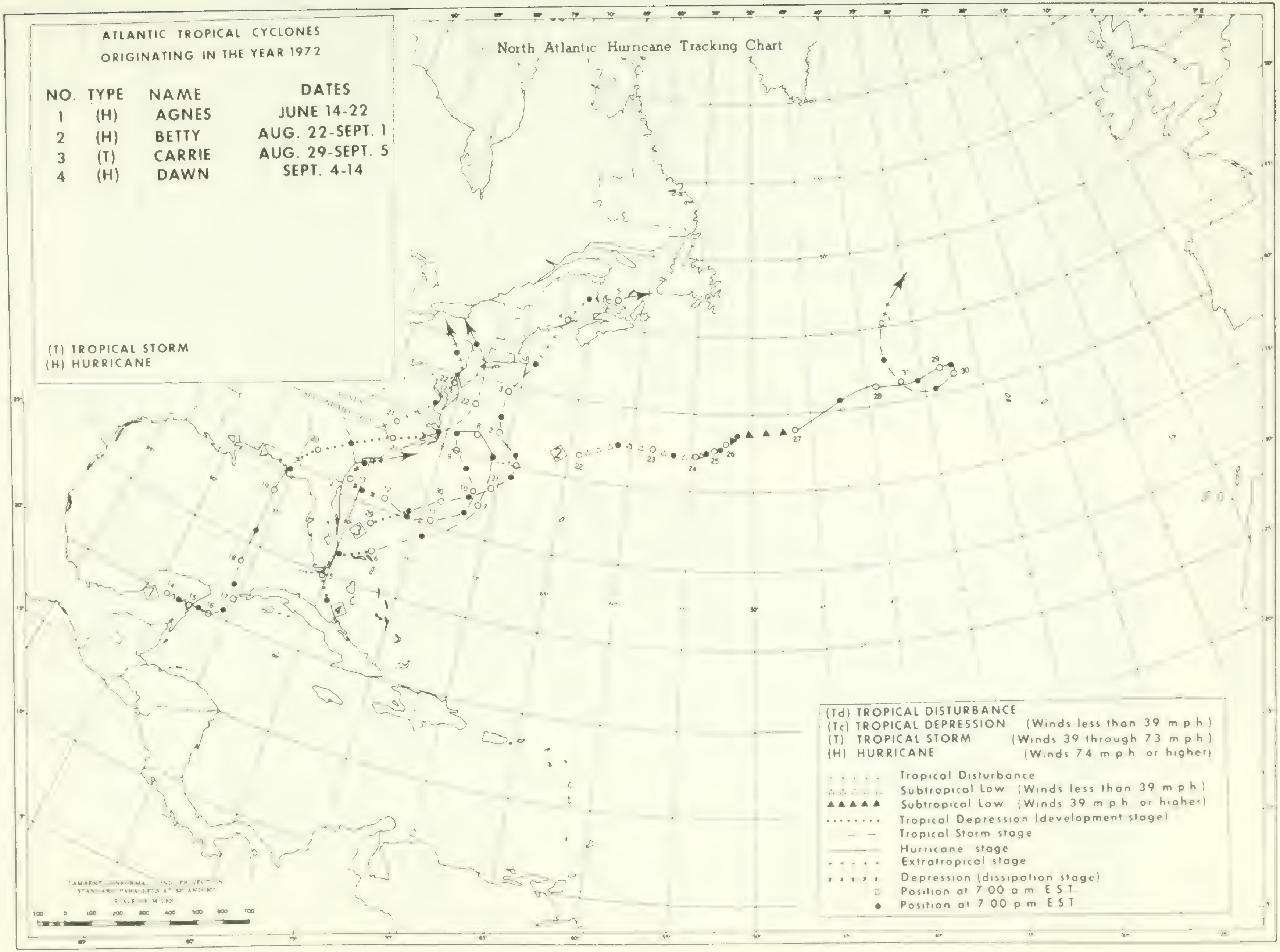
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1931			1	1	2	3	1	1		9
1932		1			3	3	3	1		11
1933		1	1	3	7	5	3	1		21
1934		1	1	1	2	2	3	1		11
1935					3	1	2			6
1936			3	2	6	4	1			16
1937				1	2	6				9
1938					3	1	3	1		8
1939			1		1	1	2			5
1940		1			3	2	2			8
1941						4	2			6
1942					3	3	3	1		10
1943				1	2	4	3			10
1944				3	2	4	2			11
1945			1	1	4	3	2			11
1946			1	1	1	1	2			6
1947				1	2	3	3			9
1948		1		1	2	3	1	1		9
1949					3	7	2	1		13
1950					4	3	6			13
1951		1			3	4	2			10
1952	(Feb.) 1				2	2	2			7
1953		1			3	4	4	1	1	14
1954			1	1	2	4	1	1	1	11
1955				1	4	5	2			12
1956			1	1	1	4	1			8
1957			2		1	4	1			8
1958			1		4	4	1			10
1959		1	2	2	1	3	2			11
1960			1	2	1	3				7
1961				1		6	2	2		11
1962					2	2	1			5
1963				1	1	5	2			9
1964			1	1	4	4	1	1		12
1965			1		2	2	1			6
1966			1	4	1	4		1		11
1967					1	4	3			8
1968			3		1	2	1			7
1969				1	6	2	3	1		13
1970		1		2	1	3				7
1971				1	3	6	1	1		12
1972			1		2	1				4
	Feb.									
Totals	1	9	24	34	101	141	77	16	2	405

Frequency of Tropical Cyclones Reaching Hurricane Intensity by Months and Years

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1931					2				2
1932				3	1	1	1		6
1933		1	1	3	3	1			9
1934		1	1	1	1	1	1		6
1935				2	1	2			5
1936		1	1	3	2				7
1937					3				3
1938				2	1				3
1939				1		2			3
1940				3	1				4
1941					3	1			4
1942				3			1		4
1943			1	1	2	1			5
1944			2	1	3	1			7
1945		1		1	1	2			5
1946			1		1	1			3
1947				2	1	2			5
1948				1	3	1	1		6
1949				2	4	1			7
1950				4	3	4			11
1951	1			2	3	2			8
1952				2	2	2			6
1953				2	3	1			6
1954		1		2	3	1		1	8
1955				3	5	1			9
1956			1	1	1	1			4
1957		1			2				3
1958				3	3	1			7
1959		1	2		3	1			7
1960			1	1	2				4
1961			1		5	1	1		8
1962				1	1	1			3
1963			1	1	4	1			7
1964				2	3	1			6
1965				2	1	1			4
1966		1	3	1	1		1		7
1967				1	3	2			6
1968		2		1		1			4
1969				5	2	2	1		10
1970	1		1		1				3
1971				1	4				5
1972		1		1	1				3
	2	11	17	65	89	41	7	1	233

Table 1.--Summary North Atlantic Tropical Cyclones, 1972

Storm name	Intensity	Date	Coast lines crossed	Highest sustained wind (kt)	Lowest pressure (mb)	U.S. damage	Deaths
1. Agnes	Hurricane	June 14-22	Florida, New York	75	977	3.097 billion	U.S.-117, Cuba-7
2. Betty	Hurricane	August 22-September 1		90	976		
3. Carrie	Tropical storm	August 29-September 5	Maine	60	992	1.78 million	U.S.-4
4. Dawn	Hurricane	September 4-14	Georgia	70	997		



North Atlantic Hurricane Tracking Chart
(Td) TROPICAL DISTURBANCE
(Tc) TROPICAL DEPRESSION (Winds less than 39 m p h)
(T) TROPICAL STORM (Winds 39 through 73 m p h)
(H) HURRICANE (Winds 74 m p h or higher)
. . . . . Tropical Disturbance
△△△△△ Subtropical Low (Winds less than 39 m p h)
▲▲▲▲▲ Subtropical Low (Winds 39 m p h or higher)
. . . . Tropical Depression (development stage)
— — Tropical Storm stage
—— Hurricane stage
+ + + + + Extratropical stage
x x x x x Depression (dissipation stage)
○ Position at 7 00 a m E S T
● Position at 7 00 p m E S T
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF MILES
100 0 100 200 300 400 500 600 700

ATLANTIC TROPICAL CYCLONES
ORIGINATING IN THE YEAR 1972

NO.	TYPE	NAME	DATES
1	(H)	AGNES	JUNE 14-22
2	(H)	BETTY	AUG. 22-SEPT. 1
3	(T)	CARRIE	AUG. 29-SEPT. 5
4	(H)	DAWN	SEPT. 4-14

(T) TROPICAL STORM
(H) HURRICANE

TROPICAL CYCLONES IN THE EASTERN NORTH PACIFIC, 1972

Eastern and Central Pacific Hurricane Centers
San Francisco, Calif., and Honolulu, Hawaii

The 1972 tropical cyclone season began in the eastern North Pacific Ocean on May 31 and continued through November 15. Twelve named tropical cyclones developed, of which four reached tropical storm intensity (39 m.p.h.)and eight reached hurricane strength (74 m.p.h.) A comparison with recent years' storm frequency is shown in tables 2 and 3. A total of eight hurricanes is near normal, but a total of four tropical storms is less than usual. This may be partly due to improved satellite investigation of the storm intensity and strong support from the 55th Weather Reconnaissance Wing, McClellan Air Force Base, Sacramento, Calif. Undoubtedly, a number of similar appearing depressions would have been upgraded to tropical storm intensity in earlier years when a closer surveillance of the storm was not possible.

Satellite coverage of the storm area was superior to that of previous years. The ESSA-8 gave a morning picture of the storm area, and ESSA-9, an afternoon picture. The latter was not received locally until the facsimile transmission in the late afternoon. Realtime ATS-1 and ATS-3 pictures became available routinely through the National Environmental Satellite Service (NESS) on August 2. ATS-1 became inoperative on October 17, 1972, after most of the season's activity was over. There was only a slight delay for photographic processing between picture exposure and viewing. Two exposures were made at, roughly, 20-minute intervals about 1500 from ATS-3, and two from ATS-1 about 2200. Due to various limitations, only one satellite can be interrogated at a time. Because of greater emphasis being placed on Atlantic storms than on Pacific storms, and the limited satellite image processing capability of the Eastern Pacific Hurricane Center, fewer than the desirable number of pictures from ATS-1 were received. The ATS-1 pictures covered the western part and ATS-3 the eastern part of the area, in excellent detail.

Forty-six reconnaissance flights were flown by the 55th Weather Reconnaissance Wing with an average of 15 observations per flight. The flights usually reported the center position, after traversing the eye in several directions, when aircraft capability permitted. Flights remaining overnight at Acapulco or Honolulu allowed extended range observations of Celeste, Diana, and Fernanda. This is the second year that California-based aircraft have used Acapulco to fly reconnaissance on a storm one day, and then fly back to the home base via the storm the next day. Direction and speed of movement were observed and reported on Fernanda, Gwen, and Hyacinth due to the greater time available to remain in the storm area. This became increasingly important as Gwen and Hyacinth moved into northern waters and threatened southern California.

Few surface observations were received from ships near the storms. One vessel, a 117-ft. square-rigged sailing vessel, the REGINA MARIS, with 53 persons on board was damaged and needed assistance as a result of Celeste. USAF reconnaissance aircraft found the vessel some distance from its estimated position and guided a rescue aircraft with gasoline, pumps, and supplies to the distressed ship. The reconnaissance aircraft then continued on its mission to monitor Celeste.

Fifty to sixty fishing craft, in a 300-mile-long lane along 10°N from 127° W westward, were threatened by Joanne before she altered her course northwesterly and northly on October 3. The vessels were north of a very active Intertropical Convergence Zone and west of the hurricane, which was moving a little faster than the vessels' capability to outrun the storm. They elected to enter the Intertropical Convergence Zone rather than risk the storm. As the storm moved northwestward, the Zone weakened, ending the threat.

A number of vessels altered their courses to elude storms. One in particular during August zig-zagged through the field on a trip from Honolulu to the Canal Zone. Forty-five degree course changes were made where sea room allowed. Near the Mexican coast, where shipping is the heaviest, less freedom of movement is available and speed changes were used in an attempt to evade the storms.

The highest synoptic wind speed reported by surface vessels during the season was 69 m.p.h. by the POLARIS SEAL off Cedros Island and the J.V. CLYNE during Joanne. A fishing vessel report during the early stages of Celeste, gave an estimate of 90- to 100-m.p.h. winds. The strongest wind estimate from reconnaissance aircraft was reported by the aircraft that flew into Gwen on August 26--144 m.p.h.

Considerable concern for Southern California beach areas was generated by hurricane Gwen. High seas and surf and a storm tide were forecast. The seas and surf verified, the storm tide did not. Hurricane Hyacinth moved into Southern California September 6, but had all but dissipated prior to reaching the coast. Hurricane Joanne moved across Lower California near Laguna Chapala and then to the mainland near Puerto Pensaco and caused considerable local flooding in northern Baja California, Sonora, and Arizona.

Some of the more important ship reports are mentioned in the summaries of individual tropical cyclones which follow. Cyclone tracks are shown in figures 1 and 2, and cyclone highlights are summarized in table 4. All times are GMT unless otherwise stated.

HURRICANE ANNETTE, MAY 31 TO JUNE 7

A tropical disturbance appeared for several days on the Intertropical Convergence Zone prior to the 31st. The veteran tropical storm reporter, INGER, passed to the northeast of an area of squally weather and veering winds during the early morning hours of the 31st. The disturbance reached storm intensity, and was named Annette on the 31st when the WORLD NAUTILUS reported 40-m.p.h. winds in a worded message, and also indicated 2- to 3-mile visibility in rain and 12- to 15-ft. seas.

Ship routing apparently cleared ships from the storm area and few surface reports were received, although the BUCKEYE STATE, LAPLAND, TACOMA MARU, VITIM, and the DNTE helped locate the storm with peripheral reports near 13° N, 107° W from May 31 through June 3.

Air Force reconnaissance and satellite pictures indicated the storm drifted and developed hurricane intensity on the 4th; it weakened and accelerated north and northeastward on the 5th. Winds near her center were 86 m.p.h., gusting to 98 m.p.h. and gales extended out more than 100 miles in all directions on the 4th. On the 6th, it reached a point 300 miles southwest of Manzanillo. Forty-six-m.p.h. southerly winds and 15-ft. swells laced the BUCKEYE STATE at 1800 on the 6th some 250 miles south of Manzanillo. Annette reached the coast about 60 miles southeast of Manzanillo at about 1800 on the 7th.

No damage to shipping or cargo has been reported because of the storm, and no accounts of property damage has been received in the Manzanillo area despite several days of rainy weather.

TROPICAL STORM BONNY, JULY 27 TO 30

Unlike Annette, the eastern North Pacific's first tropical storm of the past season, Bonny did not become a hurricane. July-born Bonny popped up suddenly near 19.0°N, 109.5° W, late on the 27th. The storm adopted a west-northwesterly course, passing north of the Islas de Revillagigedo Bonny achieved her greatest intensity (52-m.p.h. winds near her center with gusts to 81 m.p.h.) near 21° N, 114° W, about 24 hours after she was first detected. She turned westward and decelerated during the 29th, and her top winds dropped to 40 m.p.h. with gusts to 52 m.p.h. Bonny was downgraded to a depression at the close of the 29th; she dissipated near 22°N, 120° W, early on the 31st.

HURRICANE CELESTE, AUGUST 6 TO 22

A tropical disturbance near 450 miles south of La Paz, Mexico, on the 2d moved westward and stalled near 15° N, 120° W, on the 4th. It developed slowly into a tropical storm by the 6th, near 15° N, 120° W; it then moved slowly westward. No ships reported in the area until 0000 on the 7th when a vessel (WGBC) about 90 miles south of the center indicated westerly winds of 23 m.p.h. and a pressure of 1006.4 mb. Ships remained clear of Celeste except for the SANTA ISABEL MARU, which passed 150 miles southwest of the center at 1800 on the 8th.

A radio telephone call from the STAR TRACK estimated 90- to 100-m.p.h. winds near 16° N, 123° W, at 0054 on the 9th. During the rapid development, a three-masted square-rigged vessel, the REGINA MARIS, became involved in the storm and was damaged by high winds and rough seas. It began taking on 2,000 gallons of water an hour and issued a distress call. Two injured persons were treated on board. The Air Force reconnaissance aircraft on a mission to observe the hurricane was alerted to the distressed vessel. That aircraft found it some distance from its estimated position, and guided a rescue aircraft to the REGINA MARIS. The rescue aircraft dropped pumps, gasoline, and supplies to the damaged vessel. The reconnaissance aircraft then continued on its mission. The VISHEA TRITH reached the sailing vessel and took it in tow until the USCGC MELLON took over late on the 13th. Rescue and towing operations were complicated by the aftereffects of Celeste and the effect of hurricane Diana, which followed 1,000 miles and 4 days after Celeste.

Hurricane Celeste crossed 140° W at 14° N about 0900 on the 12th. For the next 2 days, she moved west-southwestward at about 12 m.p.h. The storm passed south of the Hawaiian Islands on the 15th. The closest point of approach was near 0600 on the 16th, at a point 320 miles south-southwest of South Point on the Island of Hawaii. At this time, Celeste had turned gradually to a west-northwesterly course and headed for Johnston Island, a small coral island 700 miles southwest of Honolulu. Early (72-hr.) forecasts provided ample opportunity for precautionary measures to be taken at Johnston. Later, the forecast for close passage of Celeste to Johnston caused the Air Force to evacuate all personnel from the island; this was accomplished the day before she struck. Celeste passed approximately 20 miles northeast of Johnston Island at about 0100 on the 20th. Damage reports from Johnston Island indicated only relatively light damage because the storm center passed north of the island and extensive reefs protect Johnston on the north side. Intensive preparation for the storm undoubtedly reduced damage potential. The hurricane undertook a northward turn just prior to passing Johnston and began to weaken. Nevertheless, at 0600 on the 21st, the AMERICAN LANCER, only approximately 20 miles to the north, was pounded by 63-m.p.h.

gales, heavy rain which reduced the visibility to 0.5 miles, and seas of 10 feet, together with 24-ft. swells. She was downgraded to a tropical storm by 1200 on the 22d near 21° N, 172° W, and rapidly dissipated thereafter.

Celeste was of considerable meteorological interest. The central Pacific sees relatively few tropical storms each year. Much rarer is a hurricane that forms off Mexico and moves west across the central Pacific while maintaining hurricane intensity. Also interesting was the fact that Celeste moved with few sudden changes of direction, intensity, or shape. The storm-generated swell was felt on the south shores of the Hawaiian Islands. Swell estimated at 6 to 9 feet high in deep water caused occasional surf to 15 feet on exposed shores. The southerly swells from Celeste were observed in the Hawaiian Islands during the period of August 15-17.

HURRICANE DIANA, AUGUST 10 TO 20

Diana developed in the wake of Celeste on the 8th. A circulation was first indicated in satellite pictures on the 10th near 9° N, 144° W, at 1800. Squalls and showers extended out 300 miles from the center. Winds of 23 m.p.h. or less were reported 200 to 500 miles from the center by the SANTA ISABEL MARU, CONON FOREST, and the STEEL ADVOCATE. The CONON FOREST, north of and converging with the storm, altered her course on the night of the 10th. She then sailed parallel to and at nearly the same speed as the storm, which increased to hurricane intensity on the night of the 12th near 13° N, 124° W, remaining in the vicinity of the storm until the 18th. The VISHEA TRITH, towing the disabled 117-ft. square-rigged sailing vessel, the REGINA MARIS, with 53 passengers, was headed northeast ahead of the storm in 35- to 45-m.p.h. winds to rendezvous with the USCGC MELLON near 17° N, 126° W, on the night of the 12th; the hurricane center was about 120 miles to the south. The tow was transferred in strong winds and high seas, and the MELLON, bucking winds of 40 to 58 m.p.h., headed northeast and east away from the storm.

A reconnaissance on the 14th showed no change in either central pressure or maximum wind. On the 15th, the Air Force reconnaissance reported Diana had weakened somewhat. The central surface pressure had risen to 982 mb. and maximum surface winds had diminished to 63 m.p.h. Shortly after this reconnaissance report was received, Diana was downgraded to a tropical storm. At this point, Diana also changed course to the west and increased speed to 20 m.p.h. The next three reconnaissance observations on the 17th and 18th gave no reports on minimum surface pressure, but all reported maximum surface winds of 50 to 60 m.p.h. with no changes in storm characteristics. Until 1800, Diana moved on a steady westerly course at an average speed of 20 m.p.h. At this time the center was 300 miles east of the Island of Hawaii and the storm center was forecast to pass very near the southernmost point of the Island on the 18th. Early on the 18th, Air Force reconnaissance located the center north of the predicted path and a sharp change in both course and speed of Diana was in progress. A tropical storm warning advisory was then issued stating the storm would pass to the north. Reconnaissance on the 19th indicated further slowing and curvature toward the north. The central pressure of the storm was measured at 987 mb. with maximum surface winds of 45 m.p.h. indicating further weakening had occurred.

On the morning of the 20th, the Air Force reconnaissance plane located the center of Diana 30 miles north of the Island of Maui with a minimum surface pressure of 1005 mb. and maximum surface winds of 29 m.p.h. Diana's career was over. She did manage to cause some damage, however. On the morning of the 18th, surf estimated at greater than 25 feet began pounding the southeast coast of Hawaii. At Kapoho Beach, damage to four homes was estimated at $70,000, excluding furnishings. Although rains did not produce floods, rainfall was large over most of the eastern side of Hawaii with pockets of very large rainfall occurring. Ten inches fell in a small area northeast of Hilo, and 8 inches fell in the Punaluu area southwest of Hilo. From rainfall data of the other islands, it appears only Maui received rainfall in any large amounts that were directly a result of proximity to Diana. One area along the northeast coast received up to 6 inches of rain during Diana's pass by the island.

HURRICANE ESTELLE, AUGUST 15 TO 23

After Celeste and Diana broke away and moved into higher latitudes, squalls and thunderstorms continued along the Intertropical Convergence Zone and Estelle was born. On the 13th, satellite pictures showed signs of another circulation developing in the vicinity of Clipperton Island, 10°N, 115°W. By early morning on the 15th, a depression was located 650 miles southwest of Manzanillo moving westward at 8 to 10 m.p.h. No ships were in the vicinity of the LOW, but several were within 300 to 500 miles of the center. These included the SETUN MARU, NORBEGA, COLUMBIA, and the GRIESHEIM. Satellite pictures taken on the 15th indicated continued organization and intensification of the depression, and late afternoon pictures suggested the system had become a tropical storm moving northwestward at 12 m.p.h.

with maximum winds of 45 m.p.h. near the center. The deepening of the storm was accompanied by a slower northwestward movement. The only reported gale wind of the storm was by the LLKJ, about 150 miles from the center at 1800 on the 17th. The SAN JUAN EXPORTER, on a northwesterly course, was closing on the storm late on the 18th. With winds and seas increasing, she elected to alter her course and pass to the south of the storm. Had she continued her speed and course, she would have passed through the center on the morning of the 19th, with 70-m.p.h. winds gusting to 90 m.p.h.

Gradual intensification to hurricane strength continued. By late on the 19th, winds were estimated at 86 m.p.h. The hurricane continued moving northwestward at 8 to 10 m.p.h., began weakening, and was downgraded to a tropical storm late on the 20th about 1,300 miles west of Puerto Vallarta. Estelle continued on a northwesterly course at 10 to 12 m.p.h. until the morning of the 22d, when the circulation weakened with maximum winds of 35 m.p.h. She then entered more westerly flow around the equatorial side of the Pacific high pressure area and dissipated near 27°N, 137°W, on the 23d.

HURRICANE FERNANDA, AUGUST 19 TO 31

An area of cloudiness about 500 miles south of Manzanillo, Mexico, on the 18th, developed rapidly into tropical storm Fernanda on the 19th. The FERNFIELD, 200 miles east of the center reported a southerly 29-m.p.h. wind, but the long swells reported were also from the south, indicating a recent development of the LOW. As the FERNFIELD sailed northwestward, she encountered heavy rains as the wind backed to southeast. The GREENWAVE and ILYA ULYANOV were ahead of and outrunning the storm, but the FILEFJELL, heading southeastward, altered her course to the north with winds increasing to 46 m.p.h., 180 miles northeast of the center, by 1800 on the 21st, near 12°N, 110°W. After sailing south of Diana on the night of the 16th, the WONOSARI continued on an easterly course to the Panama Canal. She crossed 250 miles south of Estelle during the night of the 19th and headed for an intercept with Fernanda in a little over 2 days. She altered course to the southeast late on the 21st, as Fernanda continued to intensify. The WONOSARI passed within 150 miles of Fernanda as the storm intensified to a hurricane, but reported only 23 m.p.h. winds at 0000 on the 22d. Passing beyond Fernanda, she went through the southern part of tropical storm Gwen during the night of the 22d and then into thunderstorms and squalls that were organizing to form a depression south of Guatemala on the night of the 24th.

Meanwhile, Fernanda continued as a hurricane on a west-northwesterly course developing 104-m.p.h. winds late on the 23d and 115-m.p.h winds that night. The HOSELSTEIN, 200 miles southwest of the center, reported 52-m.p.h. winds and the BOGOTA, STEEL APPRENTICE, MOHAWK, THOR I, BANASOL, HONGKONG BEAR, and BRADFORD ISLAND were all in the vicinity of the hurricane, between the 23d and 24th. The strongest wind reported was 60 m.p.h. by the EASTERN GLORY on the 24th, 125 miles west-northwest of the hurricane, then centered near 18°N, 127°W. Fernanda was downgraded to a tropical storm on the morning of the 26th and crossed 140°W near 20°N during the afternoon of the 27th. She then moved westward and a little north, passing 150 miles north of the main Hawaiian Islands, Hawaii on the 30th and Kawai on the 1st. She continued to weaken and was last seen on the weather maps near 31°N, 157°W, on September 3.

HURRICANE GWEN, AUGUST 21 TO 31

A tropical disturbance near 9°N, 90°W, on the 20th, moved westward to 400 miles east-southeast of Acapulco and developed into tropical storm Gwen during the night of the 21st. Forty-six-m.p.h. winds were reported by the CONTINENTAL MERCHANT and the SCOTSTOUN. The RICE QUEEN, about 75 miles offshore near Point San Telmo, reported 40-m.p.h. winds as the storm passed south of them. On the 22d, the course of the storm changed to northwesterly and the speed increased to about 18 m.p.h. The strongest winds increased slowly to hurricane intensity on the 24th, and the center was located on satellite pictures near 16°N, 107°W, 400 miles southwest of Zihuatanejo. The hurricane continued northwestward, followed by Air Force reconnaissance aircraft, and in satellite pictures, reaching its greatest intensity 100 miles southeast of Socorro Island with estimated winds of 144 m.p.h. near the center. The hurricane passed over Socorro Island during the night of the 26th, a small but intense storm. The BANASOL, after passing north of Fernanda, passed south of Gwen on the 27th. The URRW outran the storm to the north. Numerous ships reported from the periphery of the storm: the AMERICAN LANCER, BUM WOO, FRESNO CITY, GRISCHUNA, NORTH BREEZE, SHELDON LYKES, TEXAS, and unlisted ships, JBVY, JHOY, AND JPSI. On the 29th, the hurricane decreased to tropical storm intensity near 25°N, 117°W. It continued northwestward, weakening further and becoming a tropical depression about 250 miles southwest of San Diego, where it dissipated late on the 30th. A weak surface LOW continued in the general area through September 1.

HURRICANE HYACINTH, AUGUST 28 TO SEPTEMBER 6

A circulation was indicated on satellite pictures 300 miles south of the Gulf of Tehuantepec on the 27th, and a tropical disturbance bulletin followed reports by the

ACHILLE LAURO, CHEVRON ARNHEM, MOHAWK, and ALMIRANTE. The disturbance maintained its intensity and moved westward through 1800 on the 29th, when it developed into tropical storm Hyacinth and moved west-northwestward. The BANASOL reported 40-m.p.h. winds 150 miles to the northeast, and the THOMAS M reported 35-m.p.h. winds 100 miles north of the center at 0000, and 52-m.p.h. gales, at 0600 on the 30th. The EASTERN GLORY also measured 44-m.p.h. gales, slightly farther north. Air Force reconnaissance observed the storm at 1800 on the 30th, finding a central pressure of 984 mb. and estimating winds of 92 m.p.h. near the center. The hurricane was moving west-northwestward at 14 m.p.h. On the 31st, the Air Force found a central pressure of 972 mb. and estimated winds of 127 m.p.h. No flight was made on September 1, but on the 2d the lowest pressure of 962 mb. was found near 19°N, 120°W. Such a central pressure could easily have developed winds in excess of 115 m.p.h.

The storm weakened on the 3d and at 1800 the Air Force estimated winds of 80 m.p.h. At 0000 on the 4th, it was downgraded to tropical storm intensity. The storm continued to weaken as it passed over cooler water and took a more northerly and northeasterly direction, reaching its westernmost point on the 4th near 27°N, 125°W. Thirty-five m.p.h. winds were reported by the CHOKO MARU and two ships which were unlisted in the AMVER Bulletin--the GAUG and 4YQT. Thirty-five-m.p.h. winds were reported by GAUG, 60 miles northwest of the center, by the PECAN, 100 miles southwest of the center, and by the CHOKO MARU and 4YQT, 60 miles west of the center, late on the 4th.

Further weakening continued as the storm reached the coast. It went inland between San Diego and Los Angeles with only 25 m.p.h.

TROPICAL STORM IVA, SEPTEMBER 13 TO 22

Several areas of squalls and thunderstorms, which were active between 5°N and the Central American coast westward to 100°W on the 11th, slowly organized into a tropical disturbance about 300 miles south of Salina Cruz, Mexico. On the 12th, the disturbance moved to near 12°N, 94°W. A 250-mile diameter cloud area showed on satellite pictures on the 13th with the center located about 300 miles south of Acapulco. The ARISTOCRATIS reported 29-m.p.h. winds and occasional heavy rain 150 miles northeast of the depression. A northwestward movement of 14 m.p.h. was measured on the 14th, but on the 15th it slowed and intensified, becoming tropical storm Iva near 16°N, 108°W, at 1800. Iva continued moving northwestward but covered a distance of only 120 miles in 60 hours between 0000 on the 16th and 1200 on the 18th. During this period, maximum winds of 52 m.p.h. were estimated. After 0000 on the 19th, the storm curved westward; by 1800, it had weakened to depression stage moving westward in the trade winds. It was still visible in satellite pictures for several days, but reports from the FRANCE MARU, OWARI MARU, STATE OF PUNJAB, and GWDS indicated no abnormal winds or seas near the cloud mass after 1800 on the 22d.

HURRICANE JOANNE, SEPTEMBER 29 TO OCTOBER 6

Hurricane Joanne started as a tropical disturbance 250 miles south of the Guatemala coast on September 26. Satellite pictures and reports from the LEUVE LLOYD and the VIET THONG TIN I indicated squally weather. The disturbance moved westward at about 17 m.p.h. on the 27th and 28th to 11°N, 99°W, as it slowly developed a homogeneous cloud pattern. By the 29th, a closed circulation had developed near 12°N, 104°W, with 35 m.p.h. squally weather reported by the STEEL DESIGNER about 100 miles northeast of the center. Squalls extended to the coast in the northeast quadrant. Further development continued in the following 24 hours. The VIET THONG TIN I reported 46-m.p.h. winds about 60 miles from the center, which was located near 13°N, 106°W, early on the 30th.

Joanne moved west-northwestward at about 12 m.p.h. developing hurricane intensity on October 1. Winds were estimated at 74 m.p.h. by Air Force reconnaissance near 15°N, 112°W. No ships were near the center, but the SUGAR EXPORTER, VIET THONG TIN I, STEEL VOYAGER, KASUGASAN MARU, and AMERICAN CORSAIR reported from the periphery of the storm. None of the ships experienced winds of more than 30 m.p.h. A more northerly direction began after the 1st, and many ships 200 to 500 miles from the center, excellent satellite pictures, and daily Air Force reconnaissance flights kept the storm well located. Fifty to sixty fishing vessels, near 10°N between 121° and 127°W, were caught in heavy weather under a band of clouds that fed moisture to the hurricane located to the east-northeast. A westward movement of the hurricane was anticipated at the time, and the fishing vessels moved off southward through the squalls to quieter waters. A more northerly course was taken by Joanne between the 2d and 3d, and recurving started with the center reaching 22°N, 117°W, on the 4th. The AMERICAN LARK, PENDRECHT, SANTA MARIA, TAMPA, and WIELDRECHT were among the vessels between 100 and 500 miles from the center. None reported more than 35-m.p.h. winds at a time when the maximum near the center was estimated at 92 m.p.h.

The hurricane weakened to a tropical storm during the night of the 4th near 25°N, 116°W, with 58-m.p.h. and 69-m.p.h. winds reported by the VARICELLA 75 miles northeast of the center. Joanne crossed into Sebastian Vizcaino Bay late on the 5th with numerous ships reporting 35- to 65-m.p.h.

winds. The J.V. CLYNE, running dead slow to allow the storm to pass to the north, encountered 69-m.p.h. winds and very rough seas near the center of the storm during the night of the 5th. The POLARIS SEAL, anchored off the west side of Cedros Island reported a pressure of 982 mb. and winds of 69 m.p.h. early on the 6th. The storm crossed Baja California at that time. Winds at Point Penasco were 52 m.p.h. early on the 6th, and by that night a 1004-mb. LOW was centered over Sonora, Mexico, and Pacific winds returned to normal.

TROPICAL STORM KATHLEEN, OCTOBER 17 TO 19

Tropical storm Kathleen developed in the convergence zone 300 miles southwest of Manzanillo, Mexico, on the 17th. She was one of a number of vortices that developed along the Intertropical Convergence Zone in October. Kathleen was identified and tracked primarily by satellite pictures from ESSA 8 and 9. The storm was followed as a disturbance near 10°N, 95°W, on the 15th, to 15.2°N, 109.5°W, at 0000 on the 18th when she reached tropical storm intensity. At that time, she was moving west-northwestward at 12 m.p.h. with an estimated maximum wind speed of 45 m.p.h. By 1200 that day, satellite pictures indicated she had weakened and moved northward. She was then downgraded to a tropical depression. During the night, the direction of movement changed to the northeast, and, on the 19th, Kathleen approached the Mexican coast with showers and light winds.

TROPICAL STORM LIZA, NOVEMBER 13 TO 15

Rare November eastern Pacific tropical cyclones usually form close to the coast, recurve quickly, and are often potent. Tropical storm Liza, the last storm of the year, developed in the right vicinity, near 11°N, 97°W, on the 13th, but neither recurved nor became potent. Early on the 14th, the BENSTAC reported a pressure of 1007 mb. near the storm. She moved westerly and reached tropical storm strength on the 14th near 11°N, 99°W. Maximum winds were estimated at 58 m.p.h. with gusts to 80 m.p.h. Air Force reconnaissance on the 15th indicated only an area of cloudiness with no cyclonic circulation at the surface. Liza was then classified as an easterly wave and dissipated before crossing the 105th meridian.

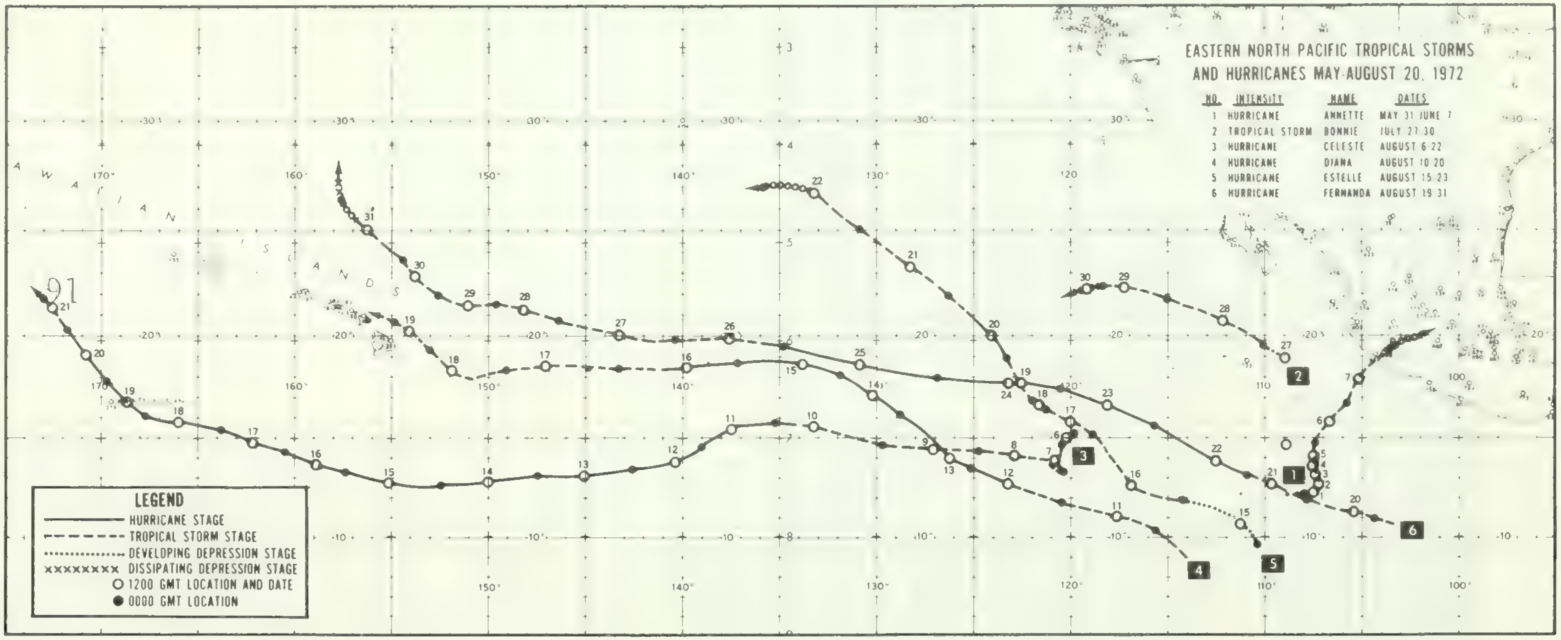

EASTERN NORTH PACIFIC TROPICAL STORMS
AND HURRICANES MAY-AUGUST 20, 1972
NO. INTENSITY NAME DATES
1 HURRICANE ANNETTE MAY 31 JUNE 7
2 TROPICAL STORM BONNIE JULY 27 30
3 HURRICANE CELESTE AUGUST 6 22
4 HURRICANE DIANA AUGUST 10 20
5 HURRICANE ESTELLE AUGUST 15 23
6 HURRICANE FERNANDA AUGUST 19 31
LEGEND
HURRICANE STAGE
TROPICAL STORM STAGE
DEVELOPING DEPRESSION STAGE
DISSIPATING DEPRESSION STAGE
1200 GMT LOCATION AND DATE
0000 GMT LOCATION
HAWAIIAN ISLANDS
170°
160°
150°
140°
130°
120°
110°
100°
30°
20°
10°

Figure 1.--Tracks of eastern North Pacific tropical storms and hurricanes.

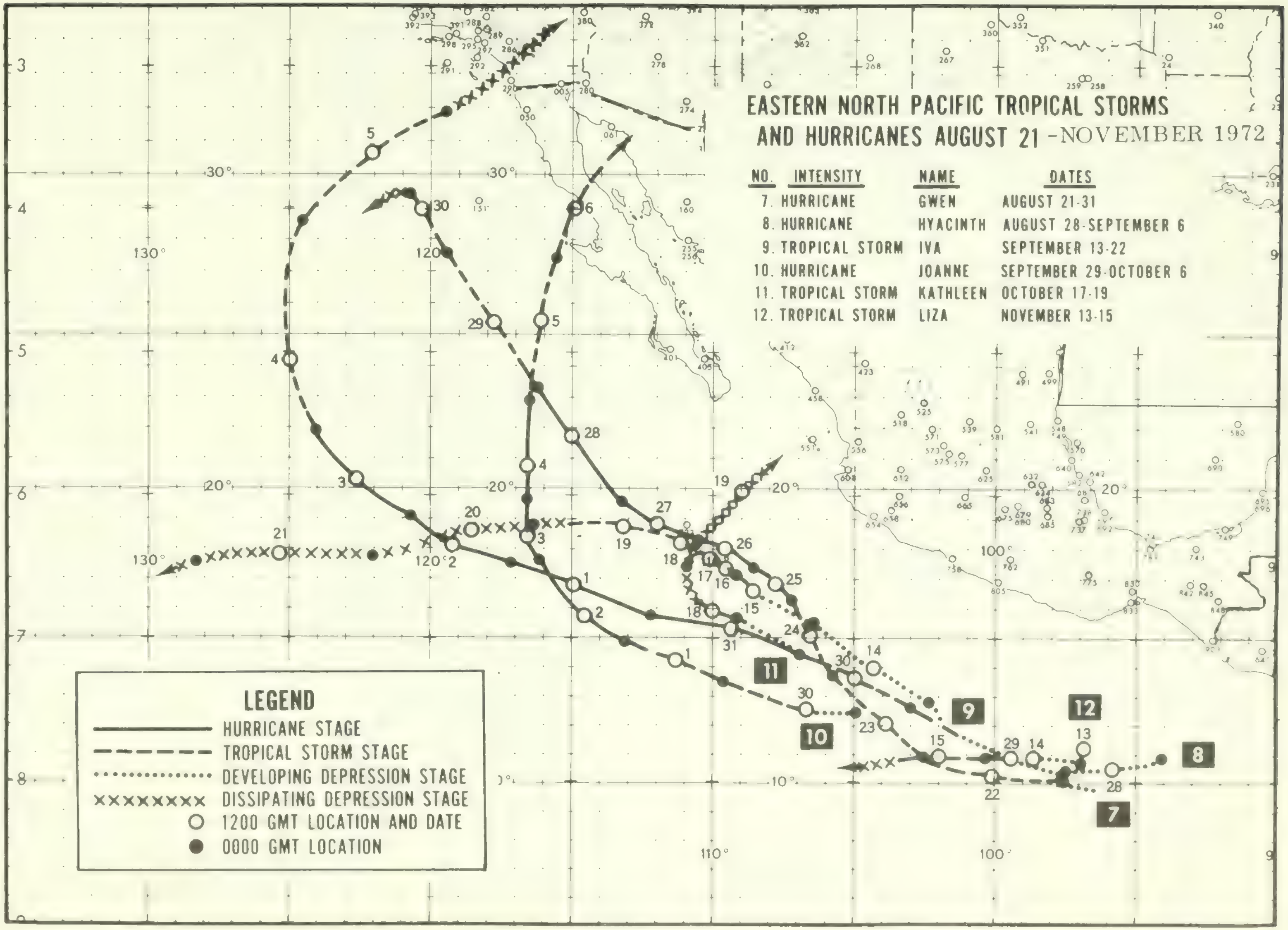

EASTERN NORTH PACIFIC TROPICAL STORMS AND HURRICANES AUGUST 21 -NOVEMBER 1972
NO. INTENSITY NAME DATES
7. HURRICANE GWEN AUGUST 21-31
8. HURRICANE HYACINTH AUGUST 28-SEPTEMBER 6
9. TROPICAL STORM IVA SEPTEMBER 13-22
10. HURRICANE JOANNE SEPTEMBER 29-OCTOBER 6
11. TROPICAL STORM KATHLEEN OCTOBER 17-19
12. TROPICAL STORM LIZA NOVEMBER 13-15
LEGEND
HURRICANE STAGE
TROPICAL STORM STAGE
DEVELOPING DEPRESSION STAGE
DISSIPATING DEPRESSION STAGE
1200 GMT LOCATION AND DATE
0000 GMT LOCATION
130°
120°
110°
100°
30°
20°
10°

Figure 2.--Tracks of eastern North Pacific tropical storms and hurricanes.

Table 1.--Monthly distribution of tropical storms and hurricanes, 1972

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Tropical storms*	0	0	1	0	1	1	1	4
Hurricanes*	1	0	0	6	1	0	0	8
Total	1	0	1	6	2	1	1	12

* Tropical cyclones are counted for the month in which they formed.

Table 2.--Frequency of tropical storms and hurricanes combined by months and years

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1966	0	1	0	4	6	2	0	13
1967	0	3	4	4	3	3	0	17
1968	0	1	4	8	3	3	0	19
1969	0	0	3	2	4	1	0	10
1970	1	3	6	4	1	2	1	18
1971	1	1	7	4	2	2	1	18
1972	1	0	1	6	2	1	1	12
Totals	3	9	25	32	21	14	3	107
Average	0.4	1.3	3.6	4.6	3.0	2.0	0.4	15.3

Note: Tropical storms have not developed before May nor after November since full operational satellite coverage began in 1966. Only those storms which had their origins east of 140°W are included in this table.

Table 3.--Frequency of tropical storms reaching hurricane intensity by months and years

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1966	0	1	0	4	2	0	0	7
1967	0	1	0	2	1	2	0	6
1968	0	0	0	3	2	1	0	6
1969	0	0	1	1	1	1	0	4
1970	1	0	1	1	0	1	0	4
1971	1	1	5	2	2	1	0	12
1972	1	0	0	6	1	0	0	8
Total	3	3	7	19	9	6	0	47
Average	0.4	0.4	1.0	2.7	1.3	0.9	0	6.7

Table 4. --Summary of Eastern North Pacific tropical cyclones, 1972

Name and intensity	Lifespan	Origin (°N, °W)	Dissipation (°N, °W)	Highest reported wind speed (kt)	Estimated maximum wind speed (kt)	Lowest reported pressure (mb)	Coasts affected	Remarks
Hurricane Annette	May 31 - June 7	13, 107	18, 103	40 Ship unknown	67 Satellite	993 USAF recon	Mexico, southeast of Manzanillo	No damage or property loss reported
Tropical storm Bonny	July 27-30	19, 109	22, 118	20	45 USAF recon	993 USAF recon	None	None
Hurricane Celeste	August 6-22	15, 120	22, 173	55 WJZB	100 USAF recon	996 USAF recon	Johnston Island	REGINA MARIS damaged, required aid; two injured.
Hurricane Diana	August 10-20	9, 114	21, 157	50 USCGC MELLON	100 Satellite	968 USAF recon	Hawaii, Maui	Hampered the rescue of REGINA MARIS.
Hurricane Estelle	August 15-23	9, 111	27, 136	35 COLUMBIA	75 Satellite	1004 SAN JUAN EXPORTER	None	None
Hurricane Fernanda	August 19-31	11, 104	26, 136	52 EASTERN GLORY	100 USAF recon	953 HOSFLSTEIN	None	None
Hurricane Gwen	August 22-31	9, 96	29, 121	40 SCOTSTOWN	125 USAF recon	941 USAF recon	None	Passed over Socorro Island night of the 26th.
Hurricane Hyacinth	August 28-September 6	11, 94	23, 118	45 SHEAF TYNE	110 USAF recon	962 USAF recon	Clarion Island, 75 mi north of center at 0101	None
Tropical storm Iva	September 13-22	12, 102	17, 128	40 FRANCE MARU	45 USAF recon	999 USAF recon	None	None
Hurricane Joanne	September 29-October 6	12, 105	31, 113	60 POLARIS SEAL J. V. CLYNE	80 USAF recon	971 USAF recon	Crossed Baja California early on 6th. Moved over Point Penasco with maximum winds of 45 kt. Locally heavy rain occurred the night of the 5th to 6th.	None
Tropical storm Kathleen	October 17-19	15, 109	21, 108	None	40 Satellite		Mexican coast, south of Mazatlan	None
Tropical storm Liza	November 13-15	11, 97	11, 105	25 WORLD UNION	50 Satellite	1007 BENSTAC	None	None

TYPHOONS OF THE WESTERN NORTH PACIFIC, 1972

Capt. Charles R. Holliday, USAF
Fleet Weather Central/Joint Typhoon Warning Center
Guam, Mariana Islands

Thirty named tropical cyclones, of which 22 attained typhoon intensity, developed over western North Pacific waters during 1972. Typhoons Olga and Ruby had their origin east of 180°, in the central Pacific. Tropical storm June developed and dissipated in the central Pacific between 160° and 175° W and is not counted in the above statistics. Elsie and Flossie retained their identity, while crossing the Indochina Peninsula, and regenerated into tropical cyclones of typhoon strength over the Bay of Bengal. Tables 1 and 2 contain the statistics on storms since 1945.

The 1972 typhoon frequency was higher than the yearly average of 18, since 1945. During this period, only 1962, 1964, and 1971 experienced more typhoons (table 2). Typhoon days numbered 121, which is 21 more than average. This figure surpasses all years since 1959, indicating the several multiple-storm situations and longer track lifetimes of 1972 storms.

Multiple-storm activity was quite pronounced in July. Four tropical cyclones, Phyllis, Rita, Susan, and Tess, signaled the greatest simultaneous outbreak in Joint Typhoon Warning Center (JTWC) records, in over a decade. The record for multiple storms was August 1960, when five appeared on synoptic charts, during the same day. However, in July 1972 four named tropical cyclones co-existed for 7 consecutive days, producing a longevity record. Typhoon days for July exceeded the high for any month since 1959 as a record 222 warnings were issued.

The equatorial trough was quite pronounced in the central Pacific during the summer and fall. This gave rise to an unusual number of tropical cyclones (nine) forming east of 160°E. Of these, Lola and Olga each developed as members of a cyclone pair with southern Hemisphere tropical cyclones. The persistence of the trough also acted to prolong the typhoon season. This was evidenced by tropical storm Violet's presence in the Marshall Island area during mid-December.

Only Rita and Betty reached supertyphoon intensity (130 kt.). This equals 1960 and 1969 for the lowest annual frequency of supertyphoons. The 14-yr. (1959-1972) average for supertyphoons is six.

Rita established a new longevity record--22 days--for a tropical cyclone in the western North Pacific.[1] She dominated the synoptic circulation features of the East China and Philippine Seas for most of the period. Typhoons Phyllis, Susan, and Tess developed and dissipated during Rita's lifetime. Tess traveled over 3,100 miles from the vicinity of the Marshall Islands, engaged in a Fujiwhara[2] interaction with Rita, and dissipated over the Sea of Japan. All of this occurred while Rita maintained typhoon intensity.

Several typhoons dealt destruction to the Far East during 1972. The Republic of the Philippines was especially hard hit as Kit, Ora, Rita, and Therese brought a combined death toll of approximately 660 to the archipelago. Rita, although never crossing the coastline, had a critical impact on the economy of the country by enhancing the southwest monsoonal flow. This resulted in torrential rains of record proportions that caused widespread destruction and flooding throughout Luzon.

Helen inflicted the heaviest damage on Japan in several years as she moved through the Ise Bay area grounding many ships, causing numerous landslides inland, and capsizing several fishing vessels. Loss of life totaled 73.

The individual 1972 typhoons are described in the following narratives. Local time is used in the narratives, except where specified, rather than GMT, which is used in the tables and figures. Tropical storm summaries can be found in the appropriate Smooth Log of the Mariners Weather Log.

The statistics for 1972 storms are contained in table 3. The storm tracks and maximum winds are based on post-storm analysis. The dates given include when the storm was first identifiable, no matter what the stage, until it dissipated or became extratropical.

KIT

The season's first typhoon developed from a disturbance in the eastern Carolines. The system moved west-northwestward for the first 4 days with a surface circulation becoming apparent on January 4 in the western Carolines. The depression passed just south of Yap and Ulithi Islands on the evening of the 4th with Ulithi reporting 35-kt. winds for a short period and a surface pressure of 1001 mb.

On the 6th, reconnaissance aircraft located tropical storm Kit with 50-kt. winds and a central pressure of 992 mb. During a 14-hr. period, from the night of the 6th to midday on the 7th, Kit deepened 44 mb. (3.1 mb/hr) to an unseasonably low 933-mb. and contained winds of 120 kt.

January typhoons are unusual. Since 1945 only seven other January tropical cyclones have reached typhoon intensity, the latest being Phyllis in 1969.

As Kit moved toward the central Philippines, she turned to the west-southwest as the pressure began to build to the north over eastern China. Subsequent to moving over Leyte Gulf, Kit decelerated and weakened crossing the mountainous terrain of the Visayan Island group on the 8th. Kit further weakened to tropical storm strength by the time she reached Panay Island on the morning of the 9th. As the westerlies eroded the ridge over eastern China Kit drifted northward. During the next several days, she followed an unusual track by doubling back over the Philippine Sea and dissipating.

In her wake, Kit left a death toll of 204 persons and property damage of approximately $23 million. Torrential rains caused rampaging floodwaters which washed away bridges, devastated crops, and heavily damaged property. Newspapers indicate floodwaters of up to 9 feet occurred in the towns of Abuyog and Bay-bay on Leyte.

Kit being an unexpected event for January, played havoc with shipping. Early on the 7th, a British vessel, HALCYON DAYS, passed through the eye, experiencing winds of force 11 and recording a minimum pressure of 964 mb. A tug, the USS SIOUX, pulling a large tow was caught in the southern part of the eye that night. She encountered winds estimated in excess of 75 kt. and recorded a minimum pressure of 952 mb.

LOLA

Lola developed as part of a cyclone pair that formed on opposite sides of the equator near 165°E. The tendency for such development is greater during late fall and early spring when tropical cyclone activity is shifting into the oncoming summer hemisphere.

The beginning of Lola appeared in satellite pictures on May 28. The system, destined to become Lola, drifted slowly westward through the eastern Carolinas, attaining tropical storm intensity the next day, about 150 miles northeast of Ponape. Shifting to a more northerly track, Lola reached typhoon strength on the afternoon of the 31st.

During Lola's passage north of Ponape, the maximum sustained wind was 30 kt. with gusts to 50 kt. at 1600 GMT on the 30th. Lola's slow forward motion brought high winds and seas to Ponape and nearby atolls for a prolonged period and extensive damage resulted. Two fishermen were reported missing and estimates of damage to public buildings and crops exceeded $18,000. Wave action destroyed most of the water system creating a serious fresh water shortage. Reports from Pingelap and Mokil atolls stated that high seas had inundated inland areas destroying over 60 houses.

As Lola was developing to typhoon intensity, a block formed in the westerlies in the central North Pacific with ridging extending northeastward to the Aleutian chain. With this distortion of the subtropical ridge, a trough developed west-southwestward from a 500-mb. LOW near Midway. By the evening of June 1, Lola responded to this weakness and shifted to a north-northeasterly course at 10 kt.

Lola attained her peak intensity on the 2d as reconnaissance aircraft reported a central pressure of 956 mb. and maximum surface winds near 100 kt. The USNS ASTERION, located 90 miles north-northwest of Lola's center at 0000 GMT on the 2d, observed 65-kt. winds and a pressure of 987.8 mb.

Lola continued on a north-northeasterly heading for the next 3 days at an average speed of 14 kt., weakening to tropical storm force on the afternoon of the 4th. By the 5th, Lola had swung to a more northeasterly heading and became extratropical.

ORA

The beginning stages of Ora can be traced to a closed cyclonic circulation in the equatorial trough south of Guam on June 20. During the next 4 days the system moved westward at 14 to 17 kt. across the Philippine Sea with little development.

Reconnaissance aircraft, on the afternoon of the 23d, observed a 40-mile calm area with a central pressure of 1006 mb., 330 miles east of Leyte Gulf. Ora was poorly organized at this time, having maximum winds of 35 kt. in the northern periphery.

Ora slowed and intensified rapidly during the next 18 hours, reaching typhoon force before skirting the northern coast of Samar. She later moved ashore on the Bicol Peninsula near Legaspi.

Prior to landfall a mid-tropospheric high cell had begun to build south of the Ryukyu chain causing Ora to accelerate and veer to a more northerly track. She crossed southern Luzon at speeds of 16 to 20 kt. on the 25th emerging over the South China Sea that evening.

Legaspi City observed a minimum pressure of 970.7 mb. in the eye of Ora and a gust of 110 kt. from the south--1703 GMT on the 24th--after passage of the center. A 24-hr. total of 9.3 inches of rain was measured at Legaspi during Ora's transit. Eye passage was recorded near Clark Air Base that afternoon at 0510 GMT on the 25th. Maximum winds at Clark were estimated at 39 kt. with a peak gust of 56 kt. and the minimum sea level pressure was 973.5 mb. As Ora passed north of Manila, the Weather Bureau Office in Quezon City measured gusts of 65 kt.

Manila was particularly hard hit by Ora as torrential rains caused waist-deep floodwaters in many parts of the city. Electrical power to most parts of the city was interrupted and water service was cut. Several ocean-going vessels anchored in Manila Bay were blown ashore along Roxas Boulevard. These vessels included the Singapore freighter SHUN HING, the Philippine flagship PHIL-ASIA ORANI, the ENCANTADA MANILA, and the PMI COLLEGE.

Ora left a death toll of 131 persons with an additional 385,000 people homeless. Property damage was estimated near $15 million. One maritime casualty, occurring outside the Manila area, was the capsizing of the passenger ferry VARTE, sailing from Legaspi City to Rapu-Rapu Island in the

Bicol region. One passenger drowned, three were reported missing, and eight survived.

After leaving Luzon, Ora continued her northwesterly track at 20 kt. while crossing the South China Sea. Climatologically, this is an unusually high speed for June. As Ora approached Hainan Island on the evening of the 26th, she began to slow and turn to a more northerly course.

The West German ship HAVELSTEIN BOELWERFT, located 55 miles south-southeast of the center, experienced 65-kt. winds and a minimum sea level pressure of 995.8 mb., late on the 26th. Early on the 27th, Ora weakened to tropical storm force and, that afternoon, crossed the South China coast east of the Luichow Peninsula. Ora degenerated rapidly into an area of low pressure as she moved inland.

PHYLLIS

Generating in the eastern Carolines, Phyllis passed 30 miles northeast of Ponape on a northwesterly heading, strengthening to tropical storm force on July 6. During the next 72 hours, Phyllis slowly intensified, reaching typhoon force on the 9th. She then stalled and drifted northward, 500 miles east of the Marianas as the subtropical ridge receded to the north producing a weak steering current.

By the 11th, the subtropical ridge began to build causing Phyllis to accelerate and shift to a northwesterly track. Reconnaissance aircraft reported a central pressure 944 mb. and 110-kt. surface winds, on the afternoon of the 11th, as Phyllis reached her maximum intensity.

Located in the convergent flow between a strengthening ridge to the northeast and the circulation of typhoon Rita to the west, Phyllis accelerated to 20 kt. She passed 40 miles southeast of Chichi Jima, on the morning of the 14th, with a recorded sea-level pressure of 994.7 mb. at 2100 GMT.

As Phyllis approached Japan, she assumed a more northerly track approximately 300 miles south of Tokyo late on the 14th. She struck the coastline just east of Ise Bay. A minimum pressure of 985.5 mb. was recorded at Irako at 1010 GMT on the 15th. Maximum sustained winds reported during landfall were 57 kt. with gusts to 71 kt. at Irozaki. Phyllis then weakened and accelerated toward central Honshu where she merged with a low pressure system, becoming extra-tropical late on the 15th.

Inland, Phyllis caused heavy rains in the Kanto, Chubu and Kinki regions resulting in flooded streams and over 300 landslides. Rainfall of 14.9 inches was recorded at Oshima in the mountainous terrain of the Chubu region. Three deaths were attributed to Phyllis and over 6,600 homes and 1,600 hectares of land were flooded.

RITA

Rita had her genesis southeast of Guam in an equatorial trough that spawned a simultaneous set of four tropical cyclones. Before Rita dissipated, she brought her influence to bear on almost every country of the Far East, with the exception of Indochina. She persisted for 22 days, marking a record for tropical cyclone longevity in the western North Pacific. Typhoon Rita surpassed the previous record holder, typhoon Opal in 1967 for total warnings issued. In all, 79 warnings were issued on Rita.

Tracking south of Guam on July 6-7, Rita attained typhoon strength about 120 miles northeast of Ulithi Atoll, on the afternoon of the 8th. Earlier that day, an Air Force B-52 crashed into the ocean southwest of Guam, less than 150 miles in advance of Rita. Of the six-man crew, five were rescued from the typhoon's heavy seas.

During a 24-hr. period on the 8th and 9th, Rita's winds steadily strengthened and her central pressure plummeted 35 mb. Advancing northwestward on the morning of the 10th, Rita reached supertyphoon force. By the 11th, her central pressure had deepened to 911 mb. and the maximum winds concentrated around her circular, 20-mile diameter eye reached 145 kt.

Rita slowed and weakened as Phyllis began to accelerate northwestward. From the 12th to the 16th, Rita described an erratic track, marked with two stalls, as Phyllis swung around her circulation and struck Japan.

During this period Rita's circulation expanded to cover a large portion of the Philippine Sea. By the 18th, gale-force winds stretched out approximately 350 miles except in the western quadrant. The location of Rita and tropical storm Susan's presence in the northern South China Sea combined to intensify the southwest monsoon flow over Luzon. This resulted in a prolonged period of torrential rains and the most disastrous flooding in the history of the area. In the 24-hr. period of July 17, Baguio City recorded 18.86 inches of rain. Damages ran over $150 million and flooding left an estimated death toll of 214 persons in its aftermath.

Rita began to slowly track northward late on the 16th. In response to a building high cell over the Sea of Japan, Rita made a bend to the west, skirting just north of Amami-o-Shima in the Ryukyus, on the evening of the 20th. The lowest minimum pressure recorded there was 968.9 mb. at 1100 GMT on the 20th. Gaja Shima, 80 miles north of the center, recorded sustained winds of 65 kt.

During her passage south of Kyushu, more than 23 inches of rain were recorded in 2 days on Mt. Yabitsu, Kyushu, and 9.68 inches fell on Kumamoto Prefecture in 24 hours.

As Rita entered the East China Sea, the prevailing midtropospheric flow weakened due to the presence of a LOW situated in central Manchuria. Rita was thus located in a col region and her forward progress slowed, on the afternoon of the 21st. Typhoon Tess, at that time, had just passed north of the Bonin Islands and was located some 800 miles east of Rita. A Fujiwhara interaction took place, forcing Rita southwestward, describing a loop in the vicinity of the Ryukyu Island chain for the next 3-1/2 days. During this loop, Rita's center passed just north of Miyako Jima and brushed the western coast of Okinawa.

The lowest pressure registered in the islands during Rita's loop was at the Futema MCAS on Okinawa with 955.6 mb. at 0730 GMT on the 24th. A maximum sustained wind of 72 kt. was recorded at Okinoerabu Shima and gusts to 96 kt. at Kume Shima.

Heavy rains of up to 9.6 inches in some mountain stations fell on Taiwan. Several villages were flooded, rendering over 700 persons homeless, while a train between Kaohsiung and Fangliao was derailed due to floods. Reports indicated three persons dead or missing.

Heaviest rains in the Ryukyu's occurred at Okinoerabu Shima, which recorded 31.87 inches in the 5-day period it was under Rita's influence. Damage on Okinawa was primarily to farm crops. Sugarcane and pineapple crops averaged 30 to 35 percent destroyed, while the vegetable crops were also hard hit. In addition, many small boats were sunk and several highways blocked by landslides. A total of three persons were reported killed in the Ryukyus.

Completing the loop, Rita moved northward on the 25th. She began to accelerate as she entered a confluent zone created by a trough over Manchuria, and a building ridge over the Sea of Japan. Rita passed just west of Cheju Do on the morning of the 26th, and then brushed southwestern Korea. Minimum pressure of 975.5 mb. was recorded there early on the 26th with maximum sustained winds of 50 kt. Eight persons were reported killed on the southwestern tip of Korea and more than 200 buildings and 50 small boats were destroyed.

Rita accelerated to 30 kt. in the Yellow Sea. She then took a more westerly track, passing just south of Lu-Shunn, on the evening of the 26th, and weakened to a tropical storm. Entering the Gulf of Chihli, Rita moved ashore near Tientsin, China and dissipated rapidly inland south of Peking on the 27th.

SUSAN

Susan led the procession of developing tropical cyclones in the equatorial trough during early July. She was detected in the synoptic data, on July 4, east of southern Leyte. As a weak depression she crossed the Philippine Archipelago on a northwesterly track. Susan emerged west of Luzon on the afternoon of the 7th, in the region of the Lingayen Gulf.

Susan intensified into a tropical storm as she moved over the South China Sea. She slowed on the 8th and began to move northward, as a weak trough extending southwestward from the Sea of Japan influenced her motion.

By the 9th, the trough filled partially and a col region formed in the general flow off the southeastern coast of China. Due to the weak steering currents, Susan moved erratically for the next 4 days. During this time the British ship MEMNON passed some 60 miles south of the center, at 0000 GMT on the 10th, reporting 55-kt. winds and 16-ft. seas.

With Susan stalled in the South China Sea and Rita meandering in the central Philippine Sea, the circulations of these tropical cyclones again intensified the southeast monsoon over the northern Philippines. High seas were built up over the South China Sea by the persistent, strong southwesterly flow. Inundation from high tides and high waves occurred along the western coast of Luzon. In Manila some sections of the seawall were ripped away by wave action.

Heavy rains brought disastrous floods in many provinces of central Luzon during the several weeks that this strong flow persisted. As Rita was largely responsible for these prolonged conditions, the damage and death toll of the floods are listed in the discussion of that typhoon.

Reconnaissance aircraft revealed that Susan attained typhoon intensity for an 18-hour period on the 11th. Minimum central pressure during this time was 983 mb. Like Ora, Susan generated typhoon winds during a period in which she lacked a wall cloud. Satellite data at this time depicted the surface center delineated by low clouds as the cirrus overcast was sheared off the southwest.

During the 14th, Susan began to move northward through the Taiwan Straits. She crossed the east coast of China near Hui An, on the morning of the 15th, and rapidly degenerated into an area of low pressure near Fooshow by that evening.

The maximum rainfall recorded on Taiwan during Susan's meandering path in the South China Sea was 10.4 inches. Four people were reported killed on the island due to the torrential rains. Also during the period, maximum winds of 39 kt. occurred at the Hong Kong Airport and 37 kt. at the Royal Observatory. Since records began at the Royal Observatory, no other tropical cyclone remained within 200 miles of Hong Kong for as long a duration as Susan.

TESS

Tess was first observed in satellite pictures on July 6, west of the international dateline near 9°N. She was positioned at the end of a chain of developing tropical cyclones stretching to the Philippines. She was tracked by satellite for the next 6 days while passing north of the Marshall Islands. Intensity estimates based on satellite imagery indicated Tess probably reached tropical storm force on the 7th. Late on the 12th, reconnaissance aircraft indicated Tess had reached typhoon intensity.

Due to a building high cell north of Wake Island, Tess began to move southwestward on the 13th. Steadily gaining strength, Tess described a gradual bend back to the northwest late on the 14th as she rounded the southern extension of the ridge. Her central pressure reached a minimum on the afternoon of the 15th as dropsonde measurements recorded 940 mb. Tess achieved her maximum intensity at this time with winds of 125 kt. occurring near her center.

Continuing on a northwesterly course for the next 5 days, Tess gradually lessened in intensity as she paralleled the southwest side of a high cell 500 miles northeast of Minami Tori Shima.

By the 20th, the influence of a high cell over northern Honshu caused Tess to shift to a westerly course. Now a minimal typhoon, Tess began to increase in forward speed on the 21st as she approached the Nampo Shoto, south of Japan. With the slowdown of Rita in the East China Sea, the circulation of Tess began to interact with that of Rita about 800 miles distant.

As a Fujiwhara effect began to take place, the path of Tess was dictated by both Rita's circulation and a high cell over Honshu. These two factors caused a 14- to 15-kt. movement and landfall occurred on northeastern Kyushu the evening of the 23d. Emerging into the Sea of Japan as a tropical storm, Tess moved rapidly northward, and weakened to a tropical depression. She finally merged with a front south of Vladivostok, late on the 24th.

Torrential rains from Tess occurred over much of Shikoku--18.94 inches at Tsurugisan Weather Station--and the Kanto, Chubu, and Kinki regions of Honshu. Resultant flooding caused inundation of over 3,000 homes and over 1,600 hectares of land. Newspaper reports indicated 29 persons were killed and 20 missing in the aftermath of Tess. The majority of these were swimmers lost in the 6- to 12-ft. surf which battered the central Japanese coastline prior to Tess' arrival.

The center passed over Oita, Kyushu, which recorded the minimum pressure in the region of 979.4 mb. Maximum sustained winds of 72 kt. and a peak gust of 96 kt. were recorded on Shikoku at Murotomisaki and Sukumo, respectively.

Although not a recordbreaker, Tess paralleled Rita in terms of longevity as she narrowly missed matching typhoon Opal's 1967 performance. A total of 66 warnings were issued on Tess, three less than during Opal's lifetime.

ALICE

Except for a brush with Honshu of the Japanese Islands, Alice spent her 12-day existence at sea. Forming in the equatorial trough, Alice was initially detected by satellite on July 29.

Moving northward as a depression, Alice reached tropical storm force 125 miles west of Eniwetok. The synoptic situation depicted a general weakness in the midtropospheric subtropical ridge at the longitude of the storm. This was due to a trough extending southward from the Kamchatka Peninsula. Alice continued her northerly movement but shifted to a more westward track by August 1. The western edge of a high cell, northeast of Minami Tori Shima began to build north of Alice during the next 5 days, guiding her on a track toward Japan.

On the 4th, Alice passed 80 miles southwest of Minami Tori Shima. The Japanese meteorological station on the island registered maximum winds of 53 kt. and peak gusts of 74 kt. The minimum pressure recorded was 990.0 mb. on the 4th. A Japanese ship, the NIPPON MARU, passed close to Alice's center on the 5th, observing 70-kt. winds and a minimum pressure of 984.7 mb. at 0000 GMT on the 5th.

Alice began to decelerate as she approached the Boso Peninsula of Honshu, Japan, and recurved after she crossed the 35th parallel. Accelerating to speeds of 19 kt., Alice passed south of Hokkaido, on the 8th, and acquired extratropical characteristics later that day.

The center of Alice passed 40 miles east of the Boso Peninsula during the afternoon of the 7th. No winds in excess of 25 kt. were reported along the coast during the passage of the weaker semicircle of Alice. A minimum pressure of 988.7 mb. was measured at Choshi while rainfall amounts of 4.02 inches were totaled at Katsuura. In Iwaki, Fukushima Prefecture, some 300 houses were flooded when typhoon-generated waves caused the river in the city's Kunohama section to overflow.

BETTY

Betty, destined to become the second supertyphoon of the season, was first detected by satellite on August 7 north of the eastern Carolinas. After reaching tropical storm intensity 200 miles southeast of Guam, Betty passed 50 miles north of Saipan. Westerly winds of 30 kt. with gusts to 50 kt. and some local flooding were experienced there during the afternoon and evening of the 10th.

Betty attained typhoon strength after passing through the Mariannas, and shifted to a more westerly course as the subtropical ridge began to build northeast of Iwo Jima. The central sea-level pressure dropped steadily during her 5-day journey toward the southern Ryukyus. A minimum pressure of 910 mb. and maximum sustained winds of 135 kt. were observed by reconnaissance aircraft, on the 15th.

At that time, gale-force winds reached 450 miles from the center in the eastern semicircle, and 300 miles elsewhere. The extent of typhoon-force winds was also exceptional. A Japanese ship, TAKAMATSU MARA, reported 65-kt. winds 200 miles southeast of the eye, at 0600 GMT on the 16th.

Betty's track during August 15-16 appeared to be influenced by a col over the northern East China Sea. This weakness in the ridge to the north resulted in a more northerly track. The center thus passed through the southern Ryukyus during the morning and afternoon of the 16th. The eye crossed the northern tip of Ishigaki Shima where the barograph recorded 942.5 mb. Maximum sustained winds of Miyako Shima, 60 miles from the center, were 61 kt. from the south-southeast. A maximum gust of 96 kt. was recorded at Kume Jima, located 165 miles northeast of the center.

During her advance toward the southern Ryukyus, Betty's circulation intensified the southwest monsoonal flow over Luzon bringing torrential rains. The resulting floods caused seven deaths in the northern province of Ilocos Sur. A light aircraft with four persons aboard was also reported missing.

Betty passed 40 miles north of Taiwan on the 16th-17th. A minimum sea level pressure of 940.9 mb. was registered at Pengchia Hsu Island at 1745 GMT on the 16th as the eye passed overhead. Maximum sustained winds of 101 kt. and a gust of 108 kt. were reported at that station.

Heavy rains (32.42 inches) were recorded at Alishan, resulting in considerable flooding in Taiwan. An estimated 300,000 people were stranded by floodwaters in Sanchung City and the two adjacent townships of Luichow and Wuku, west of Taipei. Many highways were made impassable and rail service was interrupted by landslides in northern and central Taiwan. Eighteen storm-related deaths were reported in Taiwan while over 220 homes were totally destroyed and over 130 badly damaged.

Betty made landfall the evening of the 17th on the China Coast near 27°N and lost strength rapidly as she moved inland.

CORA

First signs of a disturbance east of Luzon were indicated by satellite and ship data on August 21. The developing depression moved across the southern Luzon Straits, early on the 23d, and entered the South China Sea as tropical storm Cora. Cora was guided on a slow westerly course by the flow from a high cell over eastern China. She developed to a minimal typhoon on the 27th, less than 24 hours from landfall.

Cora crossed Hainan Island on the 28th and transited the northern Tonkin Gulf that evening. Making landfall as a tropical storm near Haiphong, she quickly dissipated.

Cora was only the fourth tropical storm to reach typhoon intensity in August in the South China Sea since 1945. The most recent was Shirley 1968.

ELSIE

The fourth typhoon of the month, Elsie, was first spotted by satellite as a disturbance east of Leyte Gulf on August 29. After crossing the central Philippines as a depression, Elsie entered the South China Sea west of Mindoro, on the 31st. By September 1, Elsie began to slow, apparently due to a slow-moving trough over China. Late on the 2d, the USS KITTYHAWK's radar fixed the center about 100 miles northwest of its position.

Elsie reached typhoon force near the Paracel Islands, then shifted to a southwesterly track as the pressure began to build in southern China. Moving slowly across the South China Sea toward the Vietnam coast, Elsie required 2 days to travel 160 miles as her center passed Quang Ngai, a minimum sea-level pressure of 991 mb. was registered and peak gusts of 60 kt. were reported.

Elsie weakened rapidly as she moved into Thailand but maintained her identity across the Indochina Peninsula, redeveloping to typhoon strength in the Bay of Bengal. Elsie was only the second tropical cyclone to reach severe storm intensity (> 47 kt.) during September, in the Bay of Bengal since 1943. During her passage over Thailand, Elsie caused 3 days of heavy rains, flooding many parts of the country.

FLOSSIE

On September 6, as Elsie was crossing Thailand, a weak circulation was noted on satellite pictures in the southern Marianas. The ill-defined system crossed the Philippine Sea and developed into tropical storm Flossie prior to landfall in the Lamon Bay region of Luzon.

A trough extending south-southwestward from the Kuril Islands weakened the subtropical ridge over southern China. The resulting weak steering flow caused Flossie to move slowly westward across the South China Sea during the 11th to the 14th. Reaching minimal typhoon strength south of the Paracel Islands, Flossie shifted to a more southerly track. She moved ashore between Qui Nhon and Quang Ngai, South Vietnam, in the early morning of the 16th.

After weakening to a tropical depression, Flossie closely paralleled Elsie's track across Thailand, causing heavy rains on the 18th and 19th. Three provinces, north of Bangkok, were under floodwaters of up to 2-1/2 feet. Flossie, like Elsie, retained her identity across the Indochina Peninsula and regenerated to typhoon force in the Bay of Bengal. As tropical cyclone 25-72, she became the second tropical cyclone to achieve typhoon intensity in the Bay of Bengal during September. Since 1884, there had never been more than one tropical cyclone reaching severe storm force (> 47 kt.) in the Bay of Bengal during September.

HELEN

While Flossie moved slowly across the South China Sea and tropical storm Grace stalled east of Luzon, a third circulation appeared in the equatorial trough west of Guam. This tropical cyclone would be the most destructive to strike Japan in 1972.

Reconnaissance aircraft on the afternoon of September 13 indicated the presence of a tropical storm near 16°N, 136°E. Moderate feeder band activity was detected and flight level winds (700 mb.) of 58 kt. were measured in the eastern quadrant. Minimum central pressure as determined by extrapolation from 700 mb., was 987 mb.

Taking a northwesterly course around a high cell centered between Minami Tori Shima and Chichi Jima, Helen attained typhoon intensity on the afternoon of the 14th. She then veered to a more northerly course due to a deepening trough in the East China Sea. This trough and an intense high-pressure cell east of Chichi Jima combined to produce strong south-southwesterly flow south of Japan. Helen reacted by accelerating to 20 kt. late on the 15th, and to 29 kt. the following afternoon. Reconnaissance aircraft observed flight level winds of 100 kt. in the right semicircle during this period.

Helen moved ashore near Cape Kushimoto during the evening of the 16th, crossing Honshu just west of Ise Bay. She passed between Osaka and Nagoya and moved into the Sea of Japan near Toyama 12 hours later. See Mariners Weather Log, Vol. 17, No. 1 for MV SONETTE's account of Helen on page 22.

The lowest recorded pressure was 956.9 mb. at 0940 GMT on the 16th and maximum sustained winds of 70 kt. from the north were observed at Shionomisaki west of Helen's track. A peak gust of 98 kt. was registered at Sumoto located near Osaka Bay, 60 miles west of the track.

Heavy rains disrupted land, sea, and air transportation in central and eastern Japan. There were 38 deaths and 158 injuries reported, most of which were attributed to landslides and flooding. Over 360 houses were destroyed or badly damaged by landslides and over 77,000 homes were inundated by floodwaters. Losses from damage to roads and river embankments were estimated near $102 million while crop losses exceeded $138 million. Helen also generated a tornado near Higashi Matsuyama north of Tokyo, destroying eight homes.

Nine cargo ships ran aground in Ise Bay, including the 6,244-ton Indian ship, STATE OF TRAJAN COCHIN, and the 9,031-ton Philippine freighter, MARIA ROSELLO. Two fishing boats were sunk near Hachijo Jima. Of a combined crew of 30, only six fishermen were rescued.

After weakening to tropical storm force in the Sea of Japan, Helen slowed near Hokkaido late on the 17th, and merged with an upper level low the following day. Rains up to 31 inches fell on Hokkaido with flash floods and landslides accounting for eight dead and two missing. High tides generated by Helen, while west of Hokkaido, accounted for at least two deaths along the east coast of Korea.

IDA

On September 14-15, surface and upper air reports in the eastern Carolines depicted a weak circulation in the equatorial trough north of Truk. Satellite pictures for the next few days showed this disturbance drifting northward and gaining a more organized appearance.

On the 18th, reconnaissance aircraft indicated the disturbance had become a tropical storm midway between the Mariannas and Wake Island.

Ida tracked to the southeast, apparently under the influence of a midtropospheric trough extending from the Kamchatka Peninsula to the vicinity of Wake Island. As the pressure heights began to increase west of the trough, Ida reversed course, moved westward, and intensified. She reached typhoon intensity the afternoon of September 20.

Approaching the northern Marianas at 16 to 18 kt., Ida took a more northerly track on the 21st. Pagan Island reported northwesterly winds of 30 kt. with gusts to 50 kt. and a minimum sea-level pressure of 988.6 mb. as the center passed 60 miles to the northeast of the island.

Ida's central pressure dropped to 932 mb. prior to passing 35 miles east of Iwo Jima early on the 23d. Iwo Jima experienced maximum sustained winds of 56 kt. with gusts to 83 kt. before equipment failure. Later that afternoon, Ida passed 25 miles west of Chichi Jima where a minimum sea-level pressure of 972 mb. was recorded.

By the 23d, a strong southwesterly flow was established over Japan because of the increased pressure gradient between a LOW over

Manchuria and a ridge north of Marcus Island. In response, Ida began to recurve and accelerated to 20 kt. north of the Bonin Islands.

Moving at 24 kt., east of Honshu on the 24th, Ida brought typhoon-force winds to several ships including the Norwegian ship NEGO ANNE, which experienced 80-kt. winds, 50 miles east of the center.

The next day, Ida became an extratropical system as she merged with a frontal zone east of Hokkaido.

LORNA

Lorna, like Cora and Elsie, developed from a depression in the Philippine Sea and crossed the Philippine Archipelago.

After transiting Luzon, Lorna moved across the South China Sea at 12 to 15 kt. as ridging dominated southern China.

Satellite pictures on September 30 indicated the disturbance was rather small but of tropical storm intensity. The British ship MARON, 70 miles north of the center, reported 45-kt. winds from the southeast at 0000 GMT on October 1. Reconnaissance aircraft found winds of 60 kt. just northeast of the center a few hours later.

Lorna transited south of Hainan Island, on the 2d, as her 15-mile diameter eye was tracked closely by aircraft and ship radar. Although the radar presentations depicted Lorna as a well-developed cyclone, her circulation was quite small. Gale-force winds were limited to a radius of 75 miles from the center in the northern semicircle.

Early on the 3d, Lorna moved ashore on the North Vietnam coast north of Dong Hot and degenerated into a low-pressure system after crossing central Laos. She dissipated in Thailand late that night.

MARIE

Marie began as a broad circulation in the equatorial trough north of the Marshall Islands on October 3 while tropical storm Kathy was passing north of the Marianas. On the 5th, she achieved tropical storm intensity, becoming a typhoon 2 days later as she passed 200 miles north of Eniwetok.

Marie's circulation was quite extensive, covering an area over 700 miles in diameter. Strong westerlies up to 20 kt. were experienced in the eastern Caroline and Marshall Islands. Eniwetok, about 180 miles south of the center, recorded 40-kt. sustained winds from the west with gusts to 52 kt. the evening of October 6. Squalls with gusts of up to 50 kt. occurred in the Ponape District felling coconut trees, one of which killed one person on Kusaie.

Marie moved along the southern extent of the subtropical ridge which was centered north of Minami Tori Shima, at 15 to 19 kt. during October 6-8. As she approached the northern Marianas, Marie began to slow. Her maximum winds reached 115 kt. and central pressure dropped to 936 mb. Marie began a northwesterly track on the 9th, passing through the northern Marianas late in the day.

On Pagan, Agrihan, and Alamagan Islands, food crops were nearly completely destroyed. Buildings were 80 to 95 percent destroyed, however, property damage was less severe on Agrihan because of sturdier construction.

Two hundred miles south of Marie's center, Saipan experienced gusts of 45 to 55 kt. High seas in the southern Marianas were responsible for capsizing at least five motorboats and caused two drownings. By the 10th, reconnaissance aircraft reported 100-kt. winds extended 75 to 100 miles east of the center.

Passing east of the Volcano Islands on the 11th, Marie accelerated to 21 kt. The Japanese ship YAEKAWA MARU, about 170 miles east-southeast of the center, reported 60-kt. winds at 0000 GMT on the 11th.

Marie weakened as she transited the North Pacific east of Honshu at up to 34 kt. and merged with a frontal system east of Hokkaido on the 12th. Winds of up to 40 kt. and gusts to 59 kt. were experienced at Urakawa along the southeastern coast of Hokkaido. Sixteen of 18 crewmembers were lost when a 77-ton Japanese fishing boat capsized off Miyagi Prefecture.

NANCY

Nancy was the third tropical cyclone to develop north of the Marshalls in less than a month. Initially detected by satellite on October 15, Nancy reached typhoon intensity 48 hours later, 200 miles south of Wake Island.

Tracking south of the subtropical ridge, Nancy took a more northerly course late on the 17th, as a trough in the westerlies eroded the ridge near 155°E. On the 18th, reconnaissance aircraft reported a central pressure of 945 mb. as Nancy's maximum winds of 105 kt. were recorded.

Nancy began to recurve late on the 19th as she moved under upper tropospheric westerlies of 45 to 50 kt. Early on the 21st, Nancy weakened to a tropical storm and satellite data showed much of her cirrus canopy removed. Within 48 hours she degenerated into a tropical depression.

On the 22d, Nancy stalled as she failed to recurve toward a trough in the westerlies. An intensifying ridge behind the trough caused Nancy, now a tropical depression, to track west-southwestward for the next several days. Low-level cloud features were readily identifiable on satellite pictures as she moved into the Philippine Sea where the circulation finally lost its identity.

OLGA

A twin cyclone system, one developing in the northern hemisphere and another in the southern hemisphere, became apparent in satellite photographs on October 17 near 175°W. The northern system, destined to be Olga, crossed the dateline on a westerly track and attained tropical storm intensity on the 21st. Bebe, in the Southern Hemisphere, developed to hurricane force and passed over Funafuti Atoll of the Ellice Islands during the night of the 21st.

Reconnaissance aircraft, on the morning of the 22d, indicated that Olga was a strong tropical storm, 170 miles northeast of Majuro Atoll. During October 23-24, Olga showed little change in intensity as she tracked through the northern Marshall Islands. Since the strongest winds were in the northern semicircle, the maximum sustained winds reported in the islands were only 25 kt.

Olga intensified to typhoon force early on the 26th. Continuing to gain strength, Olga accelerated to 20 to 22 kt., late on the 26th, and headed for the northern Marianas. During the night of October 27-28, Olga became the second typhoon in 3 weeks to sweep through that area. The following morning her central pressure dropped to 939 mb. and generated maximum winds of 105 kt.

Since typhoon Marie had destroyed most of the agricultural crops and coconut trees in the islands, a few weeks earlier, Olga's effect was less noticeable than it might normally have been.

As a trough deepened over the East China Sea on the 28th, Olga headed northward, rounding the subtropical ridge east of the Volcano Islands late that day. Gale-force winds extended a considerable distance as the British ship CAPE YORK, 200 miles east of the center, observed winds of 50 to 55 kt. that night and the following morning.

Accelerating to 30 kt. in the strong southwesterly flow southeast of Japan, Olga tracked northeastward and merged with a front east of Honshu late on the 29th.

PAMELA

It was nearly a week after detection by satellite that Pamela reached typhoon intensity just east of Samar Island, Republic of the Philippines.

The formative stage of Pamela appeared in the eastern Carolines on October 30 as an area of enhanced convection. The system was poorly organized for the next several days until it entered the Philippine Sea. Satellite data indicated that tropical storm intensity was acquired on the afternoon of November 3 as Pamela passed 250 miles north of Yap.

Reconnaissance aircraft, in the afternoon of the following day, located Pamela near 15.0°N, 130.5°E. The storm was poorly organized with a calm area 40 miles in diameter, a central pressure of 1004 mb., and 700 -mb. level winds of 48 kt. in the eastern semicircle.

Pamela traversed the Philippine Sea at 15 to 17 kt. as she moved under the influence of a strong subtropical ridge. Satellite pictures and military aircraft radar reports indicate that Pamela developed to typhoon intensity prior to her landfall on Samar.

Making landfall on northern Samar, the morning of the 5th, Pamela crossed the center of the Republic of the Philippines and emerged 24 hours later west of Mindoro Island. Four fatalities and estimated damage to property and crops of over $700,000 were reported.

Upon entering the South China Sea on the 6th, Pamela's forward speed decreased to 10 kt. Her circulation began to expand as a ship 90 miles east of the center reported winds of 60 kt. from the south. Pamela headed west-northwestward for the first 18 hours, then northwestward on the 7th, as a trough in the midtroposphere moved across the Indochina Peninsula.

Pamela passed near the Paracel Islands on the evening of the 7th, and reconnaissance aircraft reported a central pressure of 942 mb. as she reached her peak intensity of 110 kt. As she approached Hainan Island in advance of the trough, Pamela began to recurve and skirted the eastern end of the island on the 8th.

Pamela crossed the South China coast in Kwangtun Province about 180 miles west-southwest of Hong Kong. She moved inland during the evening and degenerated into an area of low pressure by the 9th.

Pamela brought strong winds to Hong Kong as gusts of 60 kt. were recorded at the International Airport and 59 kt. at the Royal Observatory.

As Pamela approached the southern China coast during high tide, flooding occurred in many low-lying areas of Hong Kong. One person was killed and eight were injured, but only minor property damage occurred in the colony. A freighter, the VAN MINT, ran aground on the southern shore of Lei Yue Mun.

RUBY

Ruby was the first tropical cyclone to form in the central Pacific and cross the international dateline since typhoon Sarah in September 1967.

An area of enhanced convection was first evidenced in satellite pictures on November 7 south of the Hawaiian Islands near 4°N, 167°W. No organized circulation appeared until the

11th, at which time the system began to drift northward. Indication that winds had reached tropical storm strength was evidenced in satellite data on the 13th. Reconnaissance aircraft observed Ruby to have typhoon strength winds just west of the international dateline on the 14th.

With a midtropospheric anticyclone located between Midway and Wake Island, Ruby moved on a west-northwesterly course at 9 to 12 kt. for the next 3 days. She reached her peak intensity east of Taongi Atoll on the 16th as reconnaissance aircraft observed a central pressure of 944 mb. and maximum winds of 110 kt.

Although the central pressure in Ruby had rapidly risen 20 mb. to 938 mb. during the morning of the 17th, reconnaissance aircraft observed 100-kt. winds in a small band north of the center. By that afternoon, the maximum winds had weakened considerably.

Passing south of Wake Island, late on the 17th, Ruby was of minimal typhoon force as she shifted to a west-southwesterly heading. Like Nancy, Ruby moved beneath upper tropospheric westerlies while in the tropics and began to weaken significantly. On the 18th, satellite pictures showed the cirrus canopy removed from over the center, revealing the low level cloud structure of the storm. By late on the 19th, Ruby had been reduced to a tropical depression and finally dissipated east of the northern Marianas on the 21st.

SALLY

Sally was the first tropical cyclone to develop to typhoon intensity in the month of December, since Pamela in 1966. She was also the first tropical cyclone of typhoon intensity, since before 1945, to transit the Gulf of Siam.

Sally crossed the Sulu Sea on November 29 as a depression in the equatorial trough. Satellite pictures indicated increased organization as she entered the southern portion of the South China Sea. Continuing her low-latitude track Sally came under the influence of an anticyclone centered south of Hainan Island and was forced equatorward, late on the 30th.

Reconnaissance aircraft arrived in the area on the morning of December 1. A small circular eye 5 miles in diameter with a partially formed wall cloud was located. The central pressure was 989 mb. and 700-mb. flight-level winds were 55 kt. in the northeast quadrant. The Japanese ship TAGAMARU, passed 50 miles north of the center at 1200 GMT on the 1st. She observed 60-kt. winds from the south and a minimum pressure of 992.5 mb.

Attaining typhoon strength, Sally tracked westward, passing the southern tip of Vietnam, on the evening of the 2d, and reached her peak intensity of 80 kt. Sally's track across the Gulf of Siam on December 3-4 followed the periphery of an irregularly-shaped midtropospheric ridge which dominated the synoptic pattern over the Indochina Peninsula.

Late on the 3d, Sally fell below typhoon strength, continuing to weaken slowly before striking the coast of Thailand on the morning of the 5th. She moved ashore south of Chumphon and crossed the Malaya Peninsula at 10°N. Moving over the Andaman Sea that evening, Sally never regained her former intensity and slowly dissipated during the next 2 days.

Sally brought heavy rains to Thailand, flooding Chumphon and several surrounding provinces. Agricultural crops were damaged, hundreds of houses were destroyed, and thousands of coconut trees were uprooted. Twenty trawlers on Samuni and Pha-ngan Islands off the coast from Surat Thani were sunk. In the aftermath of Sally, 11 persons were reported killed and five missing.

THERESE

The season's last typhoon developed in the central Carolines from a circulation in the equatorial trough. She was first noted in satellite and synoptic data on November 30. While Sally was navigating the South China Sea south of Vietnam, Therese intensified to tropical storm strength. Taking a westerly course, Therese approached the Palau Islands late on December 1, passing near Koror the morning of the 2d. Maximum winds observed at Koror were from the north at 43 kt. gusting to 54 kt. Minimum pressure was 995.8 mb.

With the subtropical ridge located over the central Philippine Sea, Therese remained on a westerly course for the next 30 hours at 15 to 17 kt. before making landfall on Mindanao. A few hours prior to the center moving ashore, the British ship DERWENTFIELD observed 70-kt. winds from the south and a minimum pressure of 999 mb.

Therese, weakened to tropical storm intensity by terrain effects, crossed the southern Visayan Island Group the night of December 2-3. She slowed to 7 to 8 kt. over the northern Sulu Sea before passing over Vusuanga Island on the morning of the 5th. The Cuyo Weather Station reported gusts of 55 kt. as the center passed north of the island.

Considerable damage was reported in the Surigao del Sur, Misamis Oriental, and Suriago del Norte Provinces of northern Mindanao. Over 4,700 homes were destroyed and 90 percent of the agricultural crops in these regions were damaged. Total damage estimates were placed at over a million dollars. A death toll of 90 persons was reported in the aftermath of the storm. Hardest hit was Cagayan de Oro where 87 persons were drowned in flash flooding in the mountainous terrain.

It took Therese 5 days to transit the

South China Sea after leaving the Republic of the Philippines. This was, in part, due to a stationary trough off the eastern China coast which had weakened the subtropical ridge north of the storm, producing only a weak westerly steering current. Therese intensified significantly during the 24-hour period she was stalled just west of Busuanga Island, transforming from a strong tropical storm to a 95-kt. typhoon. Her central pressure gradually dropped for the next several days, and reconnaissance aircraft reported a minimum pressure of 954 mb. on the afternoon of the 8th.

The occurrence of such a well-developed typhoon, and the fact that 90- to 100-kt. maximum sustained winds persisted near her center for such a long time (4 days), is rare for the South China Sea in December.

Therese arrived ashore on the South Vietnam coast near 14°N on the morning of the 10th. Qui Nhon, 20 miles south of the center, reported gusts of 78 kt. and a minimum pressure of 999.8 mb. during the typhoon's passage. More than 1,000 homes were heavily damaged and the village of Cat Trang virtually destroyed. Extensive crop damage in the region was also reported.

Moving inland over the highlands region on the evening of the 10th, Therese weakened rapidly to a low pressure area and dissipated over eastern Thailand on the 11th.

CENTRAL NORTH PACIFIC TROPICAL CYCLONES, 1972

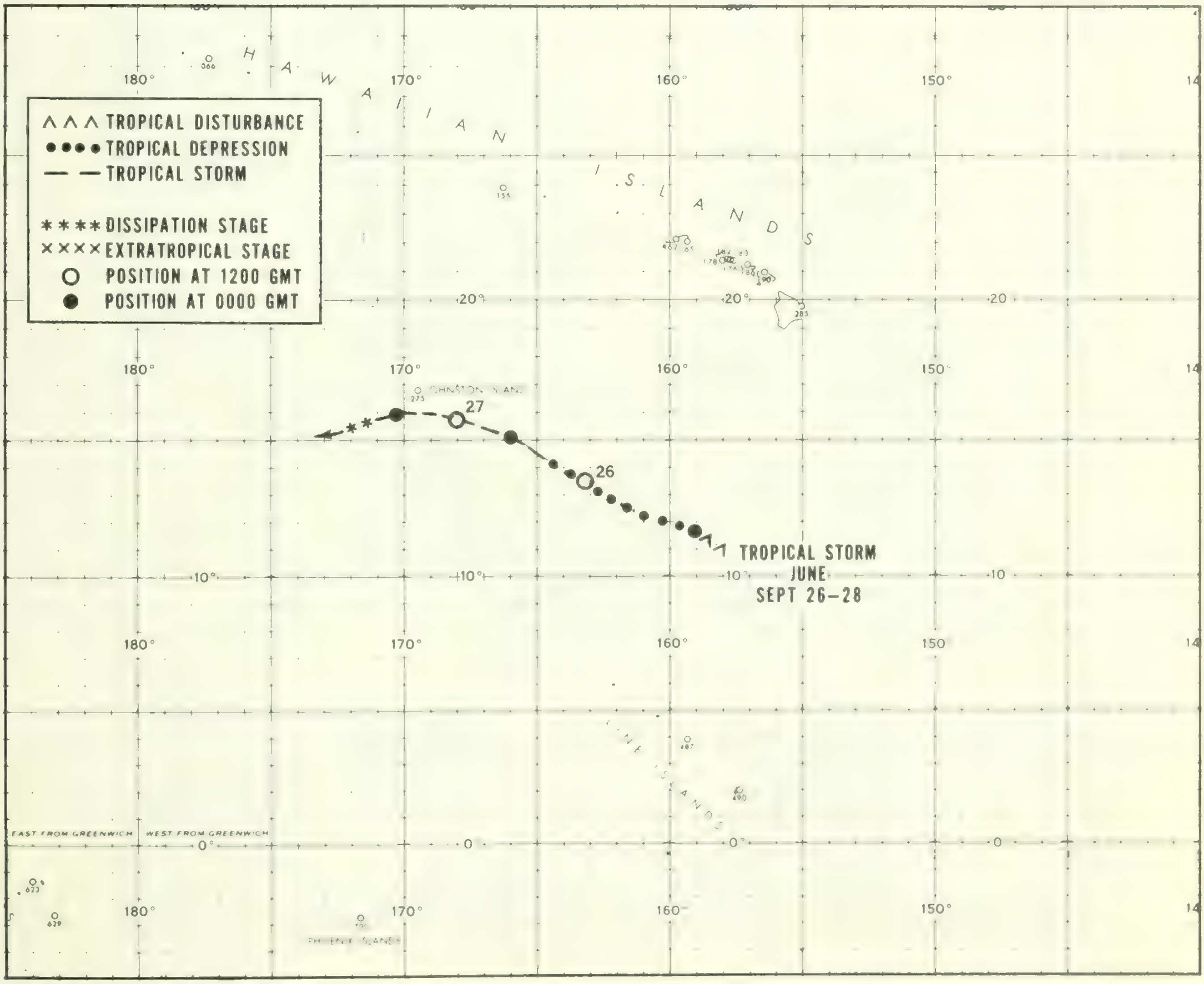
TROPICAL STORM JUNE, SEPTEMBER 26-28

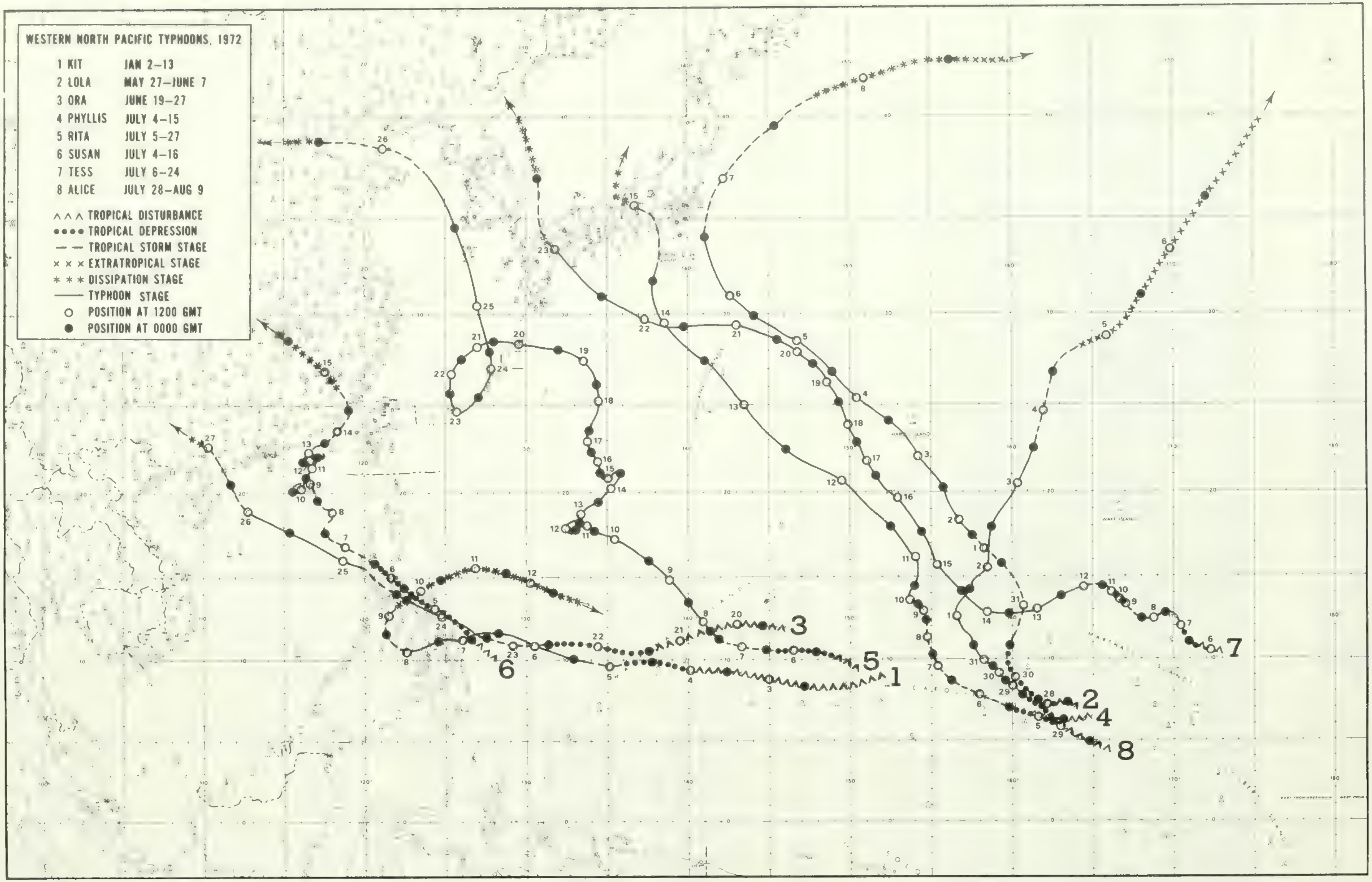
Tropical storm June was one of those exceptions that meteorology is noted for. Although June originated in the central Pacific she was given a western Pacific name. She was the seventh tropical cyclone to originate in the area between 140° and 180° and remain east of 180° in the past 17 years (table 4).

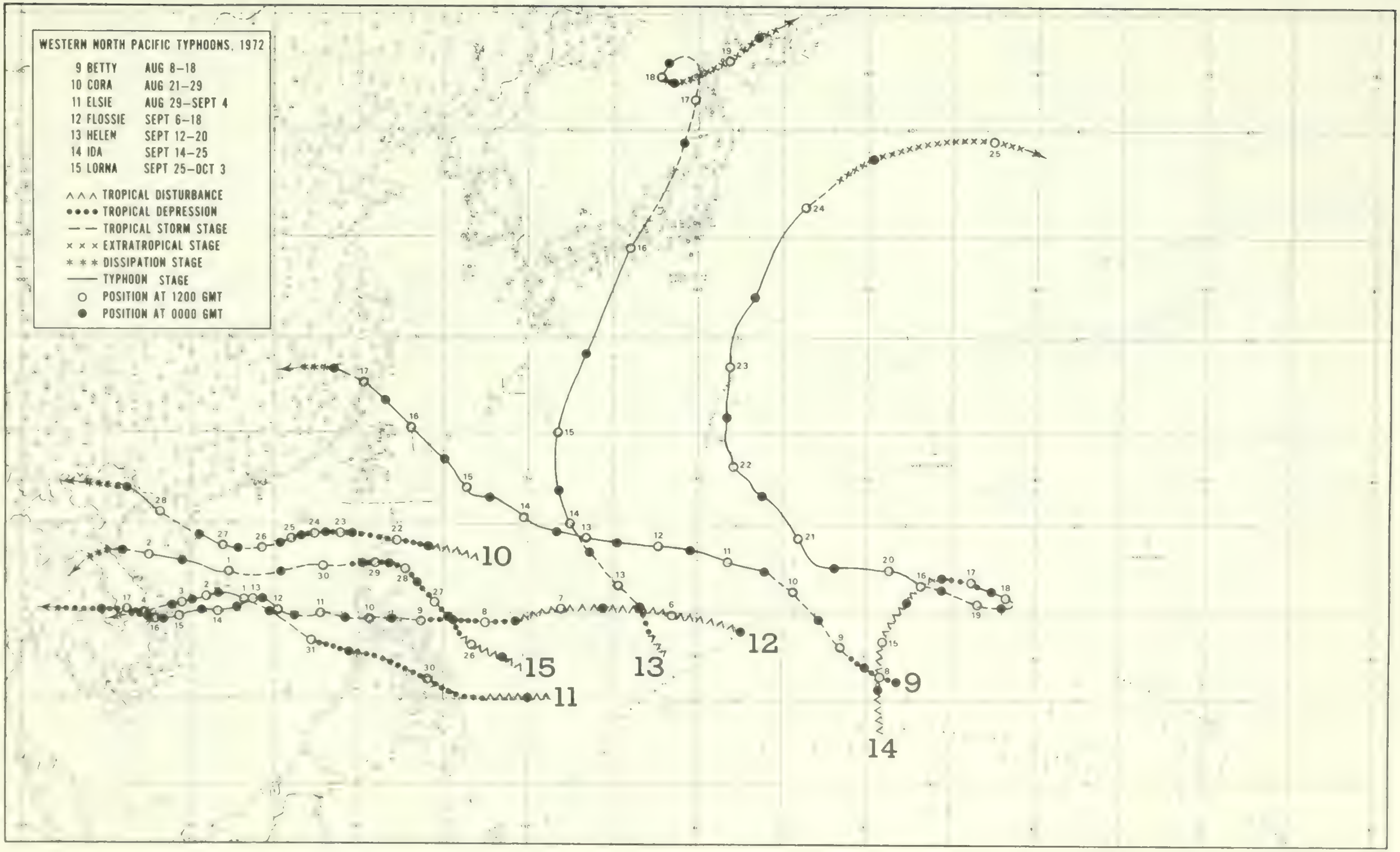
June was first located as a weak cyclone 600 miles south of the Hawaiian Islands on September 24. She moved toward the northwest and reached tropical storm intensity about 250 miles southeast of Johnston Island at 1900 on the 26th. At that time, maximum winds were estimated to be 50 kt. with gusts to 80 kt. June continued on her northwesterly course and passed 30 miles south of Johnston Island on the morning of the 27th, but caused no damage. The peak gust measured was 42 kt. At this time, June turned toward the west and dissipated on the 28th.

Table 4 -- Tropical cyclones attaining tropical storm or greater strength in the central Pacific (140°W-180°), 1956-72

Aug.	Sept.	Oct.	Nov.	Total
2	4	0	1	7




WESTERN NORTH PACIFIC TYPHOONS, 1972
1 KIT JAN 2–13
2 LOLA MAY 27–JUNE 7
3 ORA JUNE 19–27
4 PHYLLIS JULY 4–15
5 RITA JULY 5–27
6 SUSAN JULY 4–16
7 TESS JULY 6–24
8 ALICE JULY 28–AUG 9
^^^ TROPICAL DISTURBANCE
●●●● TROPICAL DEPRESSION
— — TROPICAL STORM STAGE
× × × EXTRATROPICAL STAGE
* * * DISSIPATION STAGE
—— TYPHOON STAGE
○ POSITION AT 1200 GMT
● POSITION AT 0000 GMT
1
2
3
4
5
6
7
8


WESTERN NORTH PACIFIC TYPHOONS, 1972
9 BETTY AUG 8–18
10 CORA AUG 21–29
11 ELSIE AUG 29–SEPT 4
12 FLOSSIE SEPT 6–18
13 HELEN SEPT 12–20
14 IDA SEPT 14–25
15 LORNA SEPT 25–OCT 3
^^^ TROPICAL DISTURBANCE
•••• TROPICAL DEPRESSION
— — TROPICAL STORM STAGE
× × × EXTRATROPICAL STAGE
* * * DISSIPATION STAGE
—— TYPHOON STAGE
○ POSITION AT 1200 GMT
● POSITION AT 0000 GMT
9
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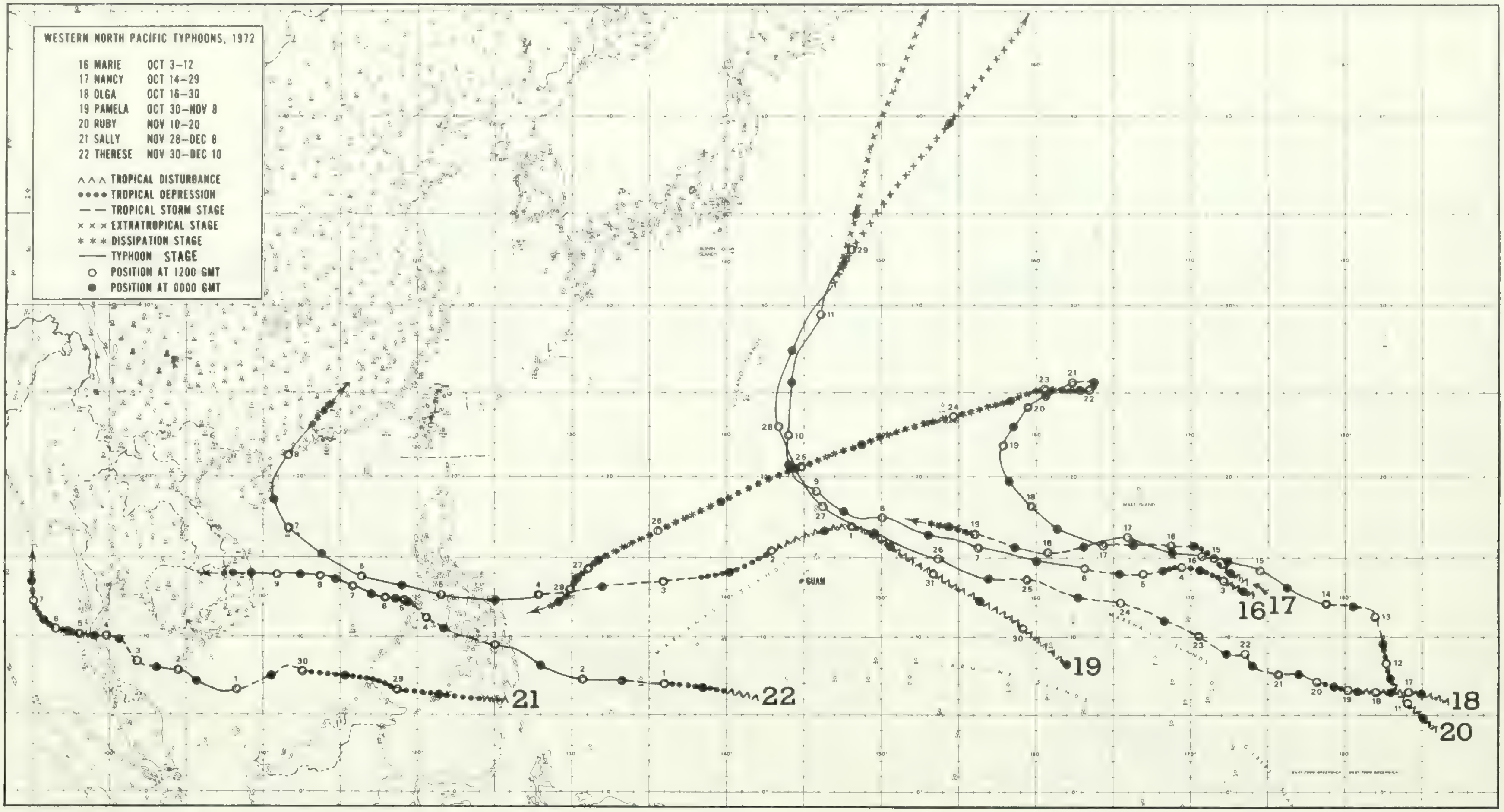
WESTERN NORTH PACIFIC TYPHOONS, 1972
16 MARIE OCT 3–12
17 NANCY OCT 14–29
18 OLGA OCT 16–30
19 PAMELA OCT 30–NOV 8
20 RUBY NOV 10–20
21 SALLY NOV 28–DEC 8
22 THERESE NOV 30–DEC 10
^^^ TROPICAL DISTURBANCE
•••• TROPICAL DEPRESSION
— — TROPICAL STORM STAGE
× × × EXTRATROPICAL STAGE
* * * DISSIPATION STAGE
—— TYPHOON STAGE
○ POSITION AT 1200 GMT
● POSITION AT 0000 GMT
GUAM
WAKE ISLAND
16
17
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19
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22

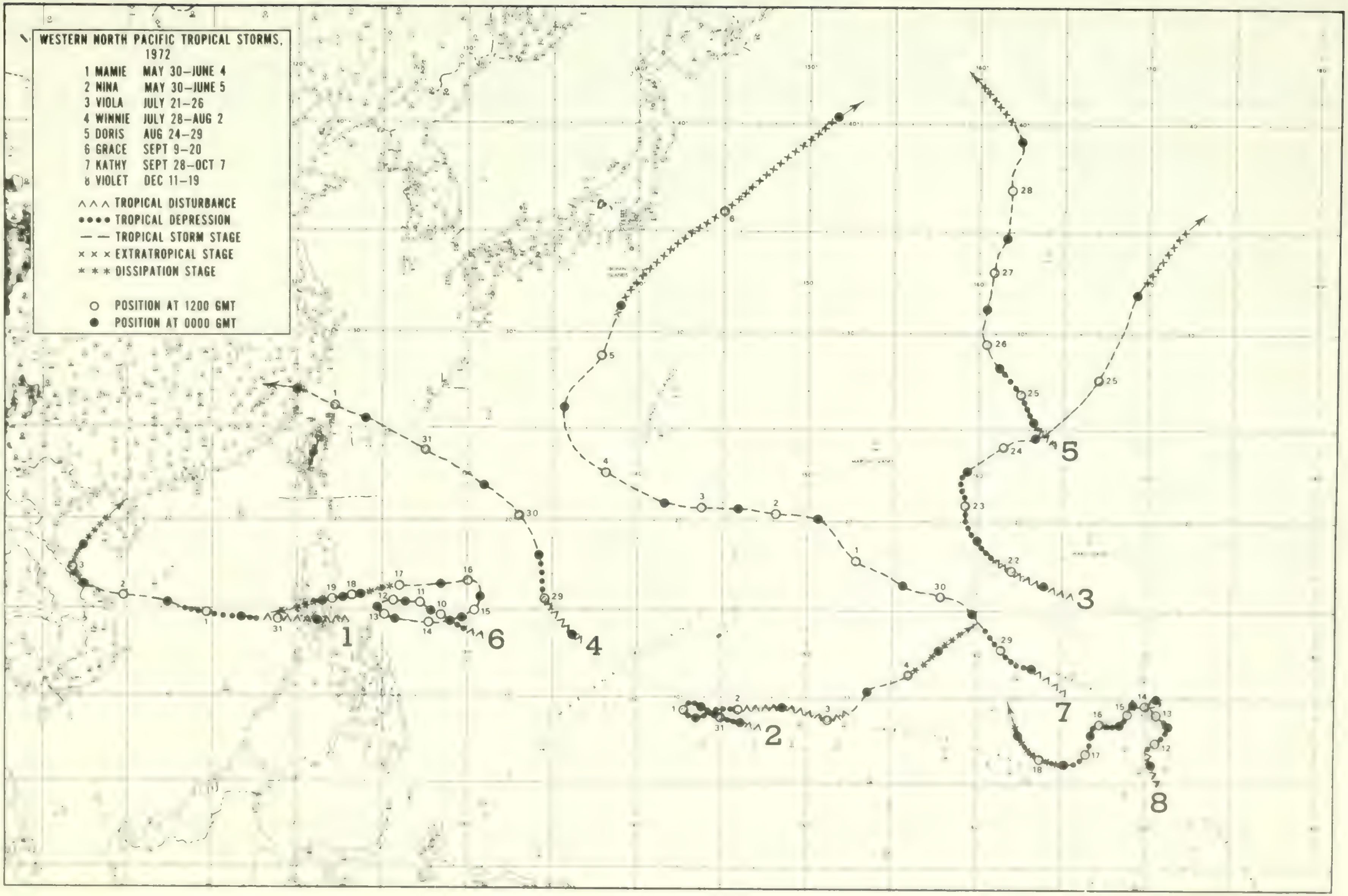
WESTERN NORTH PACIFIC TROPICAL STORMS, 1972
1 MAMIE MAY 30–JUNE 4
2 NINA MAY 30–JUNE 5
3 VIOLA JULY 21–26
4 WINNIE JULY 28–AUG 2
5 DORIS AUG 24–29
6 GRACE SEPT 9–20
7 KATHY SEPT 28–OCT 7
8 VIOLET DEC 11–19
^^^ TROPICAL DISTURBANCE
•••• TROPICAL DEPRESSION
— — TROPICAL STORM STAGE
× × × EXTRATROPICAL STAGE
* * * DISSIPATION STAGE
○ POSITION AT 1200 GMT
● POSITION AT 0000 GMT
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Table 1.--Frequency of tropical storms (including typhoons) by months and years*

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1945	0	0	0	1	1	2	5	7	6	1	3	0	26
1946	0	0	1	0	1	2	3	2	3	1	2	0	15
1947	0	0	1	0	1	1	3	3	5	6	6	1	27
1948	1	0	0	0	2	2	2	5	5	4	3	2	26
1949	1	0	0	0	0	1	5	3	6	1	3	2	22
1950	0	0	0	0	1	2	3	2	3	3	3	1	18
1951	0	0	1	2	1	1	1	2	2	4	1	2	17
1952	0	0	0	0	0	3	3	4	5	6	3	4	28
1953	0	1	0	0	1	2	2	6	3	4	3	1	23
1954	0	0	1	0	1	0	1	6	4	3	3	0	19
1955	1	0	1	1	0	1	6	3	3	4	1	1	22
1956	0	0	1	2	0	1	2	5	5	2	3	1	22
1957	2	0	0	1	1	1	1	3	5	4	3	0	21
1958	1	0	0	0	1	3	5	3	3	3	2	1	22
1959	0	1	1	1	0	0	3	6	6	4	2	2	26
1960	0	0	0	1	1	3	3	10	3	4	1	1	27
1961	1	1	1	1	3	2	5	4	6	5	1	1	31
1962	0	1	0	1	2	0	6	7	3	5	3	2	30
1963	0	0	0	1	1	3	4	3	5	5	0	3	25
1964	0	0	0	0	2	2	7	9	7	6	6	1	40
1965	2	2	1	1	2	3	5	6	7	2	2	1	34
1966	0	0	0	1	2	1	5	8	7	3	2	1	30
1967	1	0	2	1	1	1	6	8	7	4	3	1	35
1968	0	0	0	1	1	1	3	8	3	6	4	0	27
1969	1	0	1	1	0	0	3	4	3	3	2	1	19
1970	0	1	0	0	0	2	2	6	4	5	4	0	24
1971	1	0	1	3	4	2	8	4	6	4	2	0	35
1972	1	0	0	0	3	1	7	4	6	4	3	1	30
Total	13	7	13	20	33	43	109	141	131	106	74	31	721
Avg.	.46	.25	.46	.71	1.18	1.54	3.89	5.03	4.68	3.80	2.64	1.11	25.75

Table 2.--Frequency of tropical storms reaching typhoon intensity by months and years*

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1945	0	0	0	0	0	1	2	5	3	1	1	0	13
1946	0	0	1	0	1	1	3	1	3	1	2	0	13
1947	0	0	0	0	1	1	0	3	4	5	4	1	19
1948	1	0	0	0	2	0	2	2	4	1	2	1	15
1949	1	0	0	0	0	1	3	3	3	1	1	1	14
1950	0	0	0	0	1	1	1	2	1	3	2	1	12
1951	0	0	1	2	1	1	1	2	2	3	1	2	16
1952	0	0	0	0	0	3	1	3	3	4	3	2	19
1953	0	1	0	0	1	1	2	4	2	4	1	1	17
1954	0	0	0	0	1	0	1	4	4	2	3	0	15
1955	1	0	1	1	0	1	5	3	3	2	1	1	19
1956	0	0	1	1	0	0	2	4	5	1	3	1	18
1957	1	0	0	1	1	1	1	2	5	3	3	0	18
1958	1	0	0	0	1	3	4	3	3	3	1	1	20
1959	0	0	0	1	0	0	1	5	3	3	2	2	17
1960	0	0	0	1	0	2	2	8	0	4	1	1	19
1961	0	0	1	0	2	1	3	3	5	3	1	1	20
1962	0	0	0	1	2	0	5	7	2	4	3	0	21
1963	0	0	0	1	1	2	3	3	3	4	0	2	19
1964	0	0	0	0	2	2	6	3	5	3	4	1	26
1965	1	0	0	1	2	2	4	3	5	2	1	0	21
1966	0	0	0	1	2	1	3	6	4	2	0	1	20
1967	0	0	1	1	0	1	3	4	4	3	3	0	20
1968	0	0	0	1	1	1	1	4	3	5	1	0	20
1969	1	0	0	1	0	0	2	3	2	3	1	0	13
1970	0	1	0	0	0	1	0	4	2	3	1	0	12
1971	0	0	0	3	1	2	6	3	5	3	1	0	24
1972	1	0	0	0	1	1	5	3	4	4	3	0	22
Total	8	2	6	17	24	31	72	100	92	80	53	20	505
Avg.	.29	.07	.21	.61	.86	1.11	2.57	3.57	3.29	2.88	1.90	.71	18.0

*Prior to 1970, the month of occurrence may have been determined by the date the first warning was issued.

Table 3. -- 1972 Western North Pacific Tropical Storms and Typhoons

Name	Intensity	Date	Maximum surface wind (kt)	Minimum observed sea level pressure(mb)	Deaths*	Missing*	Principal areas affected
Kit	TY	Jan. 2-13	120	933	204	---	Philippines
Lola	TY	May 27-June 7	105	956	---	2	Eastern Carolines
Mamie	TS	May 30-June 4	50	989	---	---	Vietnam
Nina	TS	May 30-June 5	45	N/A	---	---	Remained over water
Ora	TY	June 19-27	80	971	134	---	Philippines, China
Phyllis	TY	July 4-15	120	944	3	---	Japan
Rita	STY	July 5-27	145	911	229	---	Philippines, Ryukyus, Taiwan, Japan, Korea, China
Susan	TY	July 4-16	65	980	4	---	Philippines, Taiwan, China
Tess	TY	July 6-24	125	940	29	20	Japan
Viola	TS	July 21-26	60	980	---	---	Remained over water
Winnie	TS	July 28-Aug. 2	60	971	---	---	Taiwan, China
Alice	TY	July 28-Aug. 9	90	964	---	---	Remained over water
Betty	STY	Aug. 8-18	135	910	25	4	Ryukyus, Taiwan, China
Cora	TY	Aug. 21-29	65	976	---	---	North Vietnam, Hainan
Doris	TS	Aug. 24-29	55	986	---	---	Remained over water
Elsie	TY	Aug. 29-Sept. 4	75	974	---	---	Philippines, Indochina , became Tropical Cyclone 24-72 on Sept. 6, and moved into Bay of Bengal on Sept. 7.
Flossie	TY	Sept. 6-18	75	975	---	---	Philippines, Indochina, became Tropical Cyclone 25-72 on Sept. 18, and moved into Bay of Bengal on Sept. 19.
Grace	TS	Sept. 9-20	50	989	---	---	Philippines
Helen	TY	Sept. 12-20	95	957	72	2	Japan
Ida	TY	Sept. 14-25	110	930	---	---	Remained over water
June	TS	Sept. 26-28	(Name given to Central Pacific Tropical Storm)+				
Kathy	TS	Sept. 28-Oct. 7	60	976	---	---	Remained over water
Lorna	TY	Sept. 25-Oct. 3	75	990	---	---	Philippines, Indochina
Marie	TY	Oct. 3-12	115	936	19	---	Marianas, Volcano, Bonin Islands
Nancy	TY	Oct. 14-29	105	945	---	---	Remained over water
Olga	TY	Oct. 16-30	105	939	---	---	Marianas, Volcano, Bonin Islands
Pamela	TY	Oct. 30-Nov. 8	110	942	4	5	Philippines, China
Ruby	TY	Nov. 10-20	110	941	---	---	Remained over water
Sally	TY	Nov. 28-Dec. 8	80	984	11	5	Thailand
Therese	TY	Nov. 30-Dec. 10	105	944	90	---	Philippines, Vietnam
Violet	TS	Dec. 11-19	55	995	---	---	Marshall Islands
					824	38	

* Statistics recorded as available

TS - Tropical Storm; TY - Typhoon; STY - Supertyphoon

+ Following this article, a brief description and track are given for June

GENERAL SUMMARY OF FLOOD LOSSES FOR 1971

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Office of Hydrology, National Weather Service

Monetary losses from floods in the United States, including Puerto Rico, during 1971, estimated at $287.5 million, were 21 percent higher than in 1970. In comparison to 1969, this year was 32 percent of the $903 million reported. Flood losses during 1971 were 64 percent of the 20-year (1951-1970) national average flood loss of $450 million (adjusted to the 1970 price index). Destructive overflows have caused property damage in some years of more than $1 billion.

Total loss of life in 1971 from floods was 74 compared to 135 in 1970 and 297 in 1969. In comparison with the national average of 83 lives lost during the last 47 years (1925-1971), this year was slightly less.

The most damaging floods during 1971 occurred in New Jersey during August, resulting from excessive rainfall accompanying tropical storm Doria. Flooding was most severe in the central portion of the State. Total damages were estimated at $138.7 million, and the number of deaths was placed at three.

The greatest loss of life in any one flood occurred in central Maryland during August, when 16 persons lost their lives. Scattered thunderstorms caused severe flash flooding in Baltimore City, Baltimore County, and Harford County in Maryland. Major East Coast highways were closed by the high water for more than 6 hours. Hundreds of residents were left homeless, and some 20,000 homes were without electricity. Property damage, both public and private was estimated at $1 million. Much of the damage and many of the casualties occurred in Baltimore City and Baltimore County in the vicinity of White Marsh, Md., and along State Route 7, U.S. 40, and Interstate 95 along Gunpowder River and its tributaries.

ANNUAL FLOOD LOSSES FOR UNITED STATES

Annual Flood Losses and Savings for years 1933 to 1947, inclusive, have been published in the Monthly Weather Review as follows:

Year	Issue	Pages
1933	Vol. 62, No. 1, Jan. 1934	25-27
1934	Vol. 62, No. 12, Dec. 1934	465-467
1935	Vol. 63, No. 12, Dec. 1935	362-365
1936	Vol. 65, No. 1, Jan. 1937	28-31
1937	Vol. 66, No. 12, Dec. 1938	426-430
1938	Vol. 68, No. 9, Sept. 1940	262-263
1939	Vol. 68, No. 11, Nov. 1940	329-330
1940	Vol. 69, No. 7, July 1941	217-218
1941	Vol. 71, No. 11, Nov. 1943	185-186
1942 & 1943	Vol. 73, No. 8, Aug. 1945	137-139
1944 & 1945	Vol. 76, No. 6, June 1948	113-116
1946	Vol. 76, No. 9, Sept. 1948	208-210
1947	Vol. 77, No. 9, Sept. 1949	262-265

Beginning with flood losses for the year 1948, annual flood loss data are published in Climatological Data National Summary as follows:

Year	Issue	Year	Issue
1948	August 1950	1960	Annual 1961
1949	Annual 1950	1961	Annual 1962
1950-1951	Annual 1951	1962	Annual 1963
1952	Annual 1952	1963	Annual 1964
1953	Annual 1953	1964	Annual 1965
1954	Annual 1955	1965	Annual 1966
1955	Annual 1956	1966	Annual 1967
1956	Annual 1957	1967	Annual 1968
1957	Annual 1958	1968	Annual 1969
1958	Annual 1959	1969	Annual 1970
1959	Annual 1960	1970	Annual 1971

Prior to 1933 Flood Losses and Savings were published monthly, as a rule, in the Monthly Weather Review.

ESTIMATED FLOOD LOSSES FOR 1971

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous *	Unclassified	Total Loss **	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
HUDSON BAY DRAINAGE																
Park Basin (N. Dak.)	A 34.0	.....	.....	.....	.....	B 38.0	.....	.....	.....	.....	5.0	.....	11.8	.....	88.8	..
Pembina Basin (N. Dak.)	A 3.5	.....	.....	.....	.....	B 773.0	.....	.....	.....	.....	89.1	.....	38.4	.....	904.0	..
Ottertail, Snake and Two Rivers (Minn.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.9	14.9	..
Total	37.5	.....	.....	.....	.....	811.0	.....	.....	.....	.....	94.1	.....	50.2	14.9	1,007.7	..
ST. LAWRENCE DRAINAGE																
Lake Erie																
Flash Flood at Arcade, N.Y.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000	1,000	..
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000	1,000	..
ATLANTIC SLOPE DRAINAGE																
Streams in New Jersey	A138,500.0	.....	.....	.....	.....	B 100.0	.....	.....	.....	.....	......	.....	100.0	.....	138,700.0	7
Flash Flood on Saucon Creek near Allentown, Pa.	.....	.....	.....	.....	200.0	.....	.....	.....	.....	.....	.....	.....	.....	100.0	300.0	1
Delaware River and tributaries (Pa)	E 4.115.0	.....	12,636.0	.....	2,259.0	.....	.....	.....	.....	.....	.....	.....	.....	150.0	19,160.0	13
Flash Flooding in Baltimore and in Baltimore County, Md.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000.0	1,000.0	16
Shenandoah Basin (Va)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000.0	1,000.0	..
Flash Flooding in Montgomery County Md.	C 2,000.0	.....	.....	.....	3,000.0	.....	.....	.....	.....	.....	2,600.0	.....	.....	.....	7,600.0	..
Flash Flooding in Alexandria, Va. and in Prince Georges County, Md.	A 100.0	.....	D 50.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150.0	2
Appomattox River (Va)	.....	.....	8.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.0	1
Flash Flooding in Brunswick, Pender, New Hanover and Bladen Counties, N.C.	.....	.....	.....	.....	2.0	.....	.....	12.5	.....	.....	50.0	.....	.....	.....	64.5	..
Pee Dee Basin (N.C. and S.C.)	8.0	2.5	2.5	.....	95.0	B 84.6	.....	.....	.....	.....	138.1	.....	54.9	251.0	636.6	..
Santee Basin (N.C. and S.C)	44.6	71.4	10.0	44.0	42.0	20.5	.....	1.0	.....	.....	215.0	10.0	0.4	.....	458.9	..
Savannah River (Ga.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45.0	45.0	..
Total	144,767.6	73.9	12,706.5	44.0	5,598.0	205.1	.....	13.5	.....	.....	3,003.1	10.0	155.3	2,546.0	169,123.0	40
EAST GULF OF MEXICO DRAINAGE																
Chattahoochee Basin (Ga.)	A 145.6	.....	.....	.....	.....	B 51.0	.....	.....	.....	.....	1.7	.....	.....	.....	198.3	..
Apalachicola River (Fla)	A 146.8	.....	.....	.....	.....	B 242.6	.....	.....	.....	.....	86.9	.....	.....	.....	476.3	..
Choctawhatchee Basin (Ala.)	.....	.....	.....	.....	.....	B 190.5	.....	.....	.....	.....	33.9	.....	.....	.....	224.4	..
Conecuh River (Ala.)	.....	.....	.....	.....	.....	B 126.5	.....	.....	.....	.....	39.7	.....	.....	.....	166.2	..
Alabama Basin (Ala.)	A 16.7	.....	.....	.....	.....	B 507.2	.....	.....	.....	.....	68.1	.....	.....	.....	592.0	..
Tombigbee Basin (Ala.-Miss.)	A 153.9	.....	.....	.....	.....	B 624.0	.....	.....	.....	.....	148.7	.....	.....	724.0	1,650.6	..
Pascagoula Basin (Miss.)	A 1,511.2	.....	.....	.....	.....	B 30.0	.....	.....	.....	.....	0.1	.....	.....	.....	1,541.3	..
Pearl Basin (Miss.)	41.8	.....	.....	.....	.....	B2,062.2	.....	.....	.....	.....	830.8	.....	.....	.....	2,934.8	..
Total	2,016.0	.....	.....	.....	.....	3,834.0	.....	.....	.....	.....	1,209.9	.....	.....	724.0	7,783.9	..
MISSISSIPPI SYSTEM																
Missouri Basin																
Madison Basin (Mont.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.0	.....	.....	.....	25.0	..
Yellowstone Basin (Mont.)	49.2	.....	.....	.....	25.0	97.0	2.5	46.0	34.0	76.0	25.0	11.0	11.0	.....	376.7	..
Bazile Creek (Knox Cty, Nebr)	.....	1.0	.....	.....	.....	.....	2.5	.....	0.6	.....	85.0	1.0	.....	.....	90.1	1
Big Sioux Basin (Iowa)	.....	.....	.....	.....	.....	.....	0.5	.....	5.0	.....	.....	.....	.....	.....	5.5	..
Perry Creek (Iowa)	0.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.0	.....	2.0	.....	12.5	..
Flash Flood in So. Sioux City, Nebr.	30.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.0	.....	.....	50.0	..
Floyd Basin (Iowa)	.....	.....	.....	.....	.....	120.0	.....	.....	19.0	.....	.....	.....	.....	.....	139.0	..
Elkhorn Basin (Nebr.) and Platte River in Dodge, Platte and Colfax Counties, Nebr.	251.8	112.2	29.2	823.0	674.5	25.0	206.3	455.0	747.0	296.5	1,110.0	110.9	343.0	.....	5,184.4	..
Kansas Basin (Nebr. & Kans.)	13.0	0.5	3.5	0.5	44.0	162.5	40.5	.....	22.5	0.7	98.5	1.5	107.0	.....	494.7	..
Marais des Cygnes Basin (Kansas)	.....	.....	.....	.....	.....	22.5	.....	.....	.....	.....	30.0	10.0	.....	.....	62.5	..
Missouri River	25.0	.....	75.0	.....	.....	1,014.2	100.0	25.0	145.0	10.0	25.0	.....	3.0	.....	1,422.2	..
Total	369.5	113.7	107.7	823.5	743.5	1,441.2	352.3	526.0	973.1	383.2	1,408.5	154.4	466.0	.....	7,862.6	1
Ohio Basin																
Streams in Fayette and Westmoreland Counties, Pa.	5.0	510.0	275.0	.....	75.0	.....	.....	.....	.....	.....	.....	.....	50.0	573.7	1,488.7	..
Flash Flooding on Wheeling Creek and at Wallace, W.Va.	4.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.0	54.0	..
Flash flooding in Pikeville, Ky. and vicinity	8.5	15.0	.....	10.0	16.0	.....	.....	.....	.....	.....	.....	3.0	.....	.....	52.5	..
Flash flooding in July in eight southwestern West Virginia counties	52.5	.....	.....	.....	117.1	1,204.0	.....	.....	79.7	7.5	53.0	35.0	.....	50.0	1,598.8	1
Big Sandy Basin (Ky.)	C 48.0	.....	2.5	16.0	84.0	16.0	.....	19.5	.....	.....	.....	4.5	11.0	.....	201.5	2
Tygarts Creek (Carter Cty., Ky)	15.0	20.0	1.5	.....	.....	7.5	2.5	.....	4.5	5.0	15.0	.....	.....	.....	71.0	..
Little Miami Basin (Ohio)	45.0	35.0	85.0	30.0	228.0	.....	.....	15.0	65.0	35.0	157.0	60.0	25.0	.....	780.0	..
Licking Basin (Ky.)	175.0	105.0	20.0	24.0	1,000.0	631.0	.....	.....	25.0	.....	1,252.0	41.0	127.7	.....	3,400.7	..
Great Miami River (Ohio)	1.0	.....	0.5	1.0	1.0	.....	.....	.....	0.5	1.0	1.5	0.5	.....	.....	7.0	..

See reference notes at end of table.

ESTIMATED FLOOD LOSSES FOR 1971 Continued

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous *	Unclassified	Total Loss **	Lives lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
Ohio Basin Con't																
Kentucky Basin (Ky.)	45.0	20.0	22.0	23.0	67.0	65.0	5.0	5.0	12.0	13.0	33.0	10.0	18.0	100.0	438.0	..
Green Basin (Ky.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	277.0	277.0	..
Wabash Basin (Ind. - Ill)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	744.0	744.0	..
Cumberland Basin (Ky.)	.....	.....	.....	.....	.....	200.0	.....	.....	.....	.....	.....	.....	.....	.....	200.0	..
Ohio River (Ind. - Ky.)	.....	.....	.....	.....	.....	1,150.0	.....	.....	.....	.....	.....	.....	.....	1,800.0	2,950.0	..
Total	399.0	705.0	406.5	104.0	1,588.1	3,273.5	7.5	39.5	186.7	61.5	1,511.5	154.0	231.7	3,594.7	12,263.2	3
White Basin																
White River and tributaries (Ark.)	8.0	.....	.....	.....	61.0	.....	2.0	9.5	.....	3.0	102.0	.....	14.5	.....	200.0	1
Total	8.0	.....	.....	.....	61.0	.....	2.0	9.5	.....	3.0	102.0	....	14.5	.....	200.0	1
Arkansas Basin																
Coon Creek (Kinsley, Kans. area)	35.0	.....	10.0	.....	45.0	8.0	.....	2.0	2.0	.....	8.0	1.0	1.5	.....	112.5	..
Red Rock Creek (Noble Cty. Okla.)	.....	.....	.....	.....	.....	300.0	.....	.....	.....	.....	.....	.....	.....	.....	300.0	..
Flash Flooding in Mannford, Okla., area	15.0	.....	.....	.....	21.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	36.0	..
Polecat Creek Basin (Okla.)	302.0	53.0	32.0	20.0	66.6	10.0	.....	6.0	1,510.0	5.0	29.0	7.5	57.0	.....	2,098.1	1
Bird Creek Basin (Okla.)	35.0	8.0	2.0	1.0	32.0	134.0	30.0	7.5	114.0	43.9	16.5	.....	14.0	.....	437.0	2
Neosho Basin (Kans.-Okla.)	60.0	10.5	11.0	12.0	100.0	973.0	15.0	8.5	79.0	35.0	293.7	32.0	98.2	.....	1,727.9	..
Poteau Basin (Okla.)	.....	.....	.....	15.0	.....	519.0	.....	60.0	75.0	20.0	10.2	.....	.....	.....	699.2	..
Arkansas River (Ark.)	2.0	20.0	5.0	5.0	215.0	32.0	5.0	36.3	13.0	20.5	193.0	21.0	2.5	.....	570.3	..
Total	449.0	81.5	60.0	53.0	479.6	1,976.0	50.0	120.3	1,793.0	123.5	550.4	61.5	173.2	.....	5,981.0	3
Red Basin																
Flash flod near Hereford, Tex.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Flash floods in Jackson, Kiowa, and Cotton Counties, Okla.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	560.0	560.0	..
Kiamichi River (Okla.)	.....	.....	.....	.....	.....	1.2	.....	0.3	3.0	.....	2.5	0.2	.....	.....	7.2	..
Rolling Fork and Cossatot Rivers Ark.	.....	.....	.....	.....	.....	205.0	25.0	160.0	30.0	50.0	1,000.0	1.5	50.0	.....	1,521.5	..
Little River (Ark.)	.....	.....	.....	.....	.....	50.0	.....	.....	30.0	.....	.....	.....	.....	.....	80.0	..
Sulphur Basin (Tex.)	.....	5.5	.....	.....	.....	1.0	.....	.....	.....	.....	3.5	.....	.....	.....	10.0	..
Ouachita Basin (Ark.)	.....	.....	.....	.....	32.0	.....	2.0	2.5	.....	5.0	10.0	5.0	6.7	.....	63.2	3
Red River and tributaries in McCurtain County, Okla.	.....	.....	.....	.....	.....	2,650.0	500.0	144.0	14,000.0	900.0	.....	100.0	.....	.....	18,294.0	..
Red River (Ark.)	.....	.....	.....	.....	.....	20.0	.....	.....	10.0	.....	.....	.....	.....	.....	30.0	..
Total	.....	5.5	.....	.....	32.0	2,927.2	527.0	306.8	14,073.0	955.0	1,016.0	106.7	56.7	560.0	20,565.9	4
Lower Mississippi Basin																
Tallahatchie Basin (Miss)	.....	.....	.....	.....	.....	B 3,788.4	.....	.....	.....	.....	3,226.3	.....	.....	.....	7,014.7	..
Big Black Basin (Miss)	.....	.....	.....	.....	.....	B 476.8	.....	.....	.....	.....	.....	.....	.....	.....	476.8	..
Mississippi River below Cape Girardeau, Mo.	0.5	.....	.....	4.0	25.0	B 183.5	.....	.....	.....	.....	18.0	.....	14.5	.....	245.5	..
Total	0.5	.....	.....	4.0	25.0	4,448.7	.....	.....	.....	.....	3,244.3	.....	14.5	.....	7,737.0	..
WEST GULF OF MEXICO DRAINAGE																
Sabine River (Tex.)	.....	.....	.....	.....	0.5	10.0	.....	.....	.....	.....	.....	.....	0.5	.....	11.0	..
Trinity Basin (Tex.)	380.5	5.7	5.2	.....	126.8	1,460.2	18.0	93.0	114.0	19.5	16.0	22.0	96.1	.....	2,357.0	5
Buffalo Creek at Cleburne, Tex.	3.2	1.2	2.0	.....	5.0	.....	.....	.....	.....	.....	3.0	2.0	3.0	.....	19.4	..
Navasota River (Tex)	.....	.....	.....	.....	.....	22.6	.....	.....	15.0	.....	.....	.....	.....	.....	37.6	..
Nueces Basin and adjacent coastal streams Medina River (Tex)	3,705.3	764.0	1,503.5	1,450.0	4,213.0	424.0	300.0	133.0	728.5	337.0	5,581.5	610.0	3,208.0	1,000.0	23,957.8	14
Flash Flood in El Paso, Tex., and vicinity	20.0	.....	.....	.....	25.0	.....	.....	.....	.....	.....	50.0	.....	.....	.....	95.0	1
Flash Flood in Laredo, Tex.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.0	30.0	..
Total	4,109.0	770.9	1,510.7	1,450.0	4,370.3	1,916.8	318.0	226.0	857.5	356.5	5,650.5	631.0	3,307.6	1,030.0	26,507.8	20
GREAT BASIN																
Bear Basin (Idaho - Utah)	27.5	.....	2.0	.....	305.0	1,457.5	.....	.....	3.8	.....	8.5	.....	.....	20.0	1,824.3	..
Flash flooding in Sevier County, Utah	2.1	.....	4.5	.....	.....	10.7	.....	.....	4.0	3.2	4.9	.....	6.5	.....	35.9	..
Total	29.6	.....	6.5	.....	305.0	1,468.2	.....	.....	7.8	3.2	13.4	.....	6.5	20.0	1,860.2	..
GULF OF CALIFORNIA DRAINAGE																
Green Basin (Wyo.-Utah)	8.0	.....	2.5	.....	5.0	383.5	.....	.....	3.5	.....	15.2	.....	.....	137.0	554.7	..
Streams in Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150.0	.....	.....	3,326.0	3,476.0	..
Total	8.0	.....	2.5	.....	5.0	383.5	.....	.....	3.5	.....	165.2	.....	.....	3,463.0	4,030.7	..

See reference notes at end of table

ESTIMATED FLOOD LOSSES FOR 1971 Continued

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous	Unclassified	Total Loss	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's bridges, Highways etc.	Public Utilities	*		**	
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
PACIFIC SLOPE DRAINAGE																
California Coastal Basins																
Streams in Montecito, Carpinteria, and Summerland areas	.....	.....	.....	.....	....	....	....	....	....	....	....	....	.....	3,500.0	3,500.0	..
Eel and Smith Basins	.....	.....	.....	.....	2.5	19.0	....	0.5	....	.....	.....	.....	.....	.....	22.0	..
Total	.....	.....	.....	.....	2.5	19.0	....	0.5	....	.....	.....	.....	.....	3,500.0	3,522.0	..
Oregon Coastal Basins																
Rogue Basin	2.0	1.0	.....	.....	25.0	0.5	.....	.....	.....	.....	.....	.....	0.2	.....	28.7	..
Coquille Basin and other smaller coastal streams	3.5	1.5	3.0	.....	15.0	100.0	.....	.....	3.0	.....	6.0	.....	155.0	.....	287.0	..
Umpqua Basin	12.3	4.8	94.0	300.1	560.0	101.9	4.6	.....	14.1	5.5	0.8	.....	28.7	.....	1,126.8	..
Nehalem Basin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43.0	43.0	..
Total	17.8	7.3	97.0	300.1	600.0	202.4	4.6	.....	17.1	5.5	6.8	.....	183.9	43.0	1,485.5	..
Columbia Basin																
Snake Basin (Idaho-Wash)	A 548.0	.....	.....	.....	.....	97.0	4.0	.....	14.0	.....	111.5	.....	.....	41.5	816.0	..
John Day Basin (Oreg)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71.7	71.7	..
Willow Creek at Heppner, Oreg	100.0	5.0	75.0	5.0	150.0	.....	.....	0.3	.....	.....	0.1	.....	.....	.....	335.4	..
Willamette Basin (Oreg)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,573.1	2,573.1	..
Total	648.0	5.0	75.0	5.0	150.0	97.0	4.0	0.3	14.0	.....	111.6	.....	.....	2,686.3	3,796.2	..
Washington Coast and Puget Sound Basins																
Chehalis Basin	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,325.0	2,325.0	..
Snohomish Basin	.....	.....	.....	.....	.....	41.0	.....	.....	.....	.....	.....	.....	.....	82.0	123.0	..
Skagit Basin	.....	.....	.....	.....	.....	50.0	.....	.....	.....	.....	.....	.....	.....	.....	50.0	..
Nooksack Basin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900.0	900.0	..
Total	.....	.....	.....	.....	.....	91.0	.....	.....	.....	.....	.....	.....	.....	3,307.0	3,398.0	..
ALASKA																
Matanuska, Copper, Susitna, Kvichak, Kuskokwim and Tanana Basins	1,506.0	F 136.0	H 520.0	.....	336.0	3.2	.....	.....	1,000.0	11.0	2,545.0	.....	131.0	2,000.0	8,188.2	..
Spring ice-jam flood (entire state)	50.0	15.0	60.0	25.0	50.0	.....	.....	.....	.....	.....	100.0	20.0	122.5	.....	442.5	..
Total	1,556.0	151.0	580.0	25.0	386.0	3.2	.....	.....	1,000.0	11.0	2,645.0	20.0	253.5	2,000.0	8,630.7	..
PUERTO RICO																
Yaques River in Mayaguez	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250.0	250.0	..
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250.0	250.0	..
HAWAII																
Flash Flooding on Maui	.....	.....	.....	.....	.....	.....	.....	.....	250.0	.....	.....	.....	.....	250.0	500.0	..
Kaluaniu Stream (Oahu)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Total	.....	.....	.....	.....	.....	.....	.....	.....	250.0	.....	.....	.....	.....	250.0	500.0	2
GRAND TOTAL	154,415.5	1,923.8	15,552.4	2,808.6	14,346.0	23,097.8	1,265.4	1,242.4	19,175.7	1,902.4	20,732.3	1,140.6	4,913.6	25,008.9	287,525.4	74

* Damage estimates under this heading usually refer to losses of income and wages due to suspension of business and costs of emergency protection, evacuation, rehabilitation and relief. ** Most figures are based on flood damage surveys conducted by the National Weather Service, or are estimates contained in reports of Corps of Engineers, U. S. Army. A. Includes all urban losses. B. Includes all agricultural losses. C. Includes all residential losses. D. Includes all commercial losses. E. Includes residential movable. F. Includes commercial movable. G. Includes $16,516,000 damage in Delaware County, Pa., along. H. Includes utilities.

LOSS OF LIFE AND PROPERTY IN THE UNITED STATES FROM FLOODS

Property Losses in Thousands of Dollars
BY DISTRICTS AND YEARS, 1925-1971

District	1925		1926		1927		1928		1929		1930		1931		1932	
	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property
Great Lakes	--	--------	---	19	48	15,750	---	--------	---	171	---	36	---	1	---	1
North Atlantic	--	50	---	137	40	29,408	3	2,105	---	245	---	--------	---	1,050	---	25
South Atlantic	---	2,999	---	--------	---	1	5	8,382	8	10,196	---	--------	---	31	---	191
East Gulf	2	615	---	37	8	255	---	2,428	5	8,746	---	466	---	74	---	615
Ohio Valley	---	33	2	5,523	94	15,639	4	10,279	34	17,050	---	7,042	---	1	---	288
* Upper Mississippi	14	3,983	1	5,435	---	19,612	---	1,173	---	3,677	---	15	---	20	---	88
Lower Mississippi	--	115	---	42	100	133,898	---	7,819	4	9,980	---	530	---	--------	---	1,840
Missouri	---	--------	6	1,434	1	4,880	2	6,714	13	2,118	---	13	---	886	---	451
Arkansas	---	224	6	8,938	132	26,183	1	4,349	12	7,516	---	213	---	6	---	2,528
Red	---	--------	1	155	---	100,908	---	153	1	100	14	3,616	---	19	---	16
West Gulf	6	1,436	---	301	---	208	---	75	---	8,124	---	924	---	2	11	3,522
Colorado	---	--------	---	447	---	12	---	100	12	175	---	--------	---	3	---	13
Pacific	14	468	---	--------	---	902	---	1,032	---	--------	---	--------	---	560	---	217
Miscellaneous east of Rockies	---	--------	---	1,000	---	--------	---	--------	---	--------	---	2,500	---	--------	---	--------
Miscellaneous west of Rockies	---	--------	---	--------	---	--------	---	--------	---	--------	---	495	---	55	---	--------
Total	36	9,923	16	23,468	423	347,656	15	44 611	89	68 098	14	15 850	---	2 808	11	10 295

District	1933		1934		1935		1936		1937		1938		1939		1940	
Great Lakes	---	14	---	--------	---	13,185	1	9	---	690	---	240	--	11	2	--------
North Atlantic	2	5,418	--	142	52	16,340	24	146,035	---	2 689	8	37 068	2	56	4	2,519
South Atlantic	---	19	---	240	---	77	2	2 391	--	989	---	455	--	454	12	5,034
East Gulf	---	444	---	13	---	719	---	1,240	---	357	---	1 655	1	6,680	---	5 497
Ohio Valley	5	7,725	2	928	5	8,536	82	122,296	65	413,936	8	4 481	80	3,773	28	8,077
* Upper Mississippi	4	1,157	12	1,023	---	1,506	---	313	3	1 127	2	3 659	---	228	---	199
Lower Mississippi	---	6,933	---	--------	17	6,631	---	55	72	6 657	--	1	---	1,448	---	--------
Missouri	2	1,391	6	1,906	125	38,959	---	109	2	1 367	71	4,333	---	610	5	1 759
Arkansas	---	776	---	18	4	8,344	6	817	---	1,557	---	2 202	---	179	2	1 332
Red	---	38	22	640	8	2,751	---	16	---	24	---	755	---	22	---	12
West Gulf	---	1 160	---	422	20	29,522	24	8,376	---	1,830	6	6,003	---	360	7	7,622
Colorado	---	--------	1	22	---	--------	---	--------	---	264	---	256	---	13	---	180
Pacific	20	11,604	45	5,008	5	557	3	892	---	9 245	85	39 990	--	--------	---	8,236
Total	33	36,679	88	10 362	236	127,127	142	282,549	142	440,738	180	101 098	83	13 834	60	40 467

District	1941		1942		1943		1944		1945		1946		1947		1948	
Great Lakes	---	--------	---	153	1	9,564	---	130	---	119	---	251	1	5,761	4	20 270
North Atlantic	---	--------	35	22,321	4	1	---	--------	3	5,729	14	8,500	---	198	4	12 467
South Atlantic	---	89	---	608	---	152	---	1,926	3	1,007	---	172	--	944	1	1 372
East Gulf	---	24	2	155	---	773	---	2,660	---	268	---	2,963	2	654	---	3 122
Ohio	---	1,122	16	16,546	44	31,416	---	806	27	52,887	---	10,914	5	7,812	16	16 871
* Upper Mississippi	---	3,018	1	5,592	16	42,097	7	27,031	---	9,288	4	8,642	27	87,937	---	2 905
Lower Mississippi	---	--------	---	475	---	829	---	1,550	--	3,601	---	4,407	1	2,555	---	5 390
Missouri	2	12,019	1	22,511	13	62,630	13	44,616	4	34,403	---	8,305	18	163,176	1	31 490
Arkansas	9	13,346	---	6,577	26	41,850	10	11,171	20	15,068	---	1,791	1	1,424	14	18 721
Red	---	1,855	---	2,205	---	44	---	1,676	6	22,209	---	1,434	---	1,446	---	220
West Gulf	34	5,458	2	12,489	---	2,589	3	8,938	4	10,987	10	15,967	---	330	1	4 604
Colorado	2	1,061	---	3	---	310	---	575	10	182	---	--------	---	3	---	1
Pacific	---	1,532	11	8,872	3	7,477	---	--------	14	9,530	---	7,367	---	88	37	111,826
Great Basin	---	--------	---	--------	---	--------	---	--------	---	520	---	100	---	--------	--	--------
Total	47	39,524	68	98,507	107	199,732	33	101,079	91	165,798	28	70,813	55	272,328	82	229,959

District	1949		1950		1951		1952		1953		1954		1955		1956	
Great Lakes	---	1,619	9	33,542	---	131	---	2,350	1	2,654	---	15,000	--	2,596	-	1 327
North Atlantic	11	9,273	2	7,149	1	916	5	1,222	1	10,637	11	7,337	211	761 303	11	1 453
South Atlantic	3	291	---	1,203	---	9	---	236	---	109	1	546	2	902	3	2 720
East Gulf	---	1,747	---	1,435	---	4,310	---	347	2	2,444	---	543	6	5,300	1	1 379
Ohio	7	4,754	50	25,195	1	4,889	14	4,940	5	778	9	18,594	15	14,645	12	17 836
* Upper Mississippi	---	406	2	11,060	6	71 799	7	22,439	2	5,602	4	24,656	---	85	---	388
Lower Mississippi	---	10,020	6	10,071	---	5,996	---	444	12	7,857	---	490	---	1 352	---	865
Missouri	6	33,503	18	35,090	31	889,872	8	181,335	14	44,255	---	11,999	1	2,753	1	6 360
Arkansas	---	6,696	---	8,294	10	44,331	---	5	2	2,020	---	296	2	5,362	---	24
Red	2	365	1	1,105	---	2,101	---	836	---	2,061	---	923	---	2,003	1	250
West Gulf	18	22,462	---	417	---	238	10	9,584	1	34,849	29	21,639	2	4 286	3	3 714
Colorado	---	155	---	--------	---	889	---	76	---	7	---	1,890	---	2,173	---	--------
Pacific	1	2,640	5	37,362	2	3,260	10	20,251	---	8,931	1	2,929	63	186,785	6	27 930
Great Basin	---	--------	---	4,127	---	--------	---	9,999	---	--------	---	--------	---	5 946	4	442
Total	48	93,931	93	176,050	51	1,028,741	54	254,064	40	122 204	55	106,842	302	995,491	42	64 688

District	1957		1958		1959		1960		1961		1962		† 1963		1964	
Great Lakes	1	1	---	10	---	12,746	2	1,942	1	216	---	--------	1	35,872	---	325
North Atlantic	---	11	---	167	---	6,952	2	15 274	---	1,168	---	8	6	1,325	---	11,342
South Atlantic	---	166	---	3,917	---	631	---	172	---	600	---	97	---	89	---	16 786
East Gulf	---	[illegible],526	---	3,434	---	241	---	13 780	3	30,386	---	5,768	---	1,726	---	10,490
Ohio	25	135,972	10	68,248	8	82,503	1	7,519	31	33 748	5	30,583	26	98,824	15	94,034
* Upper Mississippi	8	14 648	---	20,770	8	3,427	2	12,901	4	25,320	1	5,341	---	413	---	--------
Lower Mississippi	6	15,608	---	11,979	---	199	---	496	---	11,462	---	3,546	---	293	---	1,125
Missouri	15	26,057	21	45,819	3	12,162	8	28 105	7	33,990	2	10,501	3	14,705	37	41,902
Arkansas	5	50,082	---	360	2	12,886	1	3,480	1	9,173	3	1,254	2	563	1	1,607
Red	6	16,037	---	11,768	---	880	---	226	---	1,609	---	581	1	2,361	---	124
West Gulf	16	73,057	6	18,127	4	2,886	14	8,205	1	2,945	2	1,948	---	640	5	7,178
Colorado	---	741	---	240	---	100	---	--------	3	552	---	1,080	---	--------	---	55
Pacific	---	23,397	10	33,404	---	5,638	2	876	1	1,825	6	12,198	---	15,305	42	463,959
Great Basin	---	--------	---	12	---	4	---	--------	---	1 039	---	2,332	---	3,530	---	2,715
Total	82	360,303	47	218,255	25	141 255	32	92,976	52	154,033	19	75,237	39	175,646	100	651 642

District	1965		1966		1967		1968		# 1969		§ 1970		1971	
Great Lakes	---	20	--	176	1	398	---	100	6	31,364	---	3,100	--	1,000
North Atlantic	2	55	1	535	---	3,726	10	211,690	158	131,921	---	918	40	167,918
South Atlantic	---	268	1	375	-	610	-	-	-	1,962	2	2,338	--	1,205
East Gulf	---	2,665	---	6 388	---	2,614	-	1,241	--	4,888	3	14,970	-	7,784
Ohio	8	3,591	1	10 193	8	52,000	7	51,947	36	80,459	1	10,158	-	12,263
* Upper Mississippi	15	182,053	---	14 167	---	3,431	3	3,309	9	120,892	3	22,017	-	1,008
Lower Mississippi	-	811	---	1 438	---	1,046	--	5,997	1	3,838	1	14,931	---	7,737
Missouri	26	451,832	5	16 021	1	100,617	---	8,655	1	77,530	1	22,911	1	7,862
Arkansas	16	70,152	---	[illegible]	---	3,731	4	9,793	1	5,911	3	5,942	1	6,181
Red	---	852	2	2 702	-	18	-	17 268	1	1,467	---	94	1	20,566
West Gulf	33	40,039	14	27 608	12	98,239	6	24,302	10	13,132	8	4,149	2	26,528
Colorado	8	12,648	1	4 919	3	3 598	1	509	---	106	33	5,015	-	4,031
Pacific	11	18,745	4	15 525	2	5,106	---	1,149	66	426,994	21	50,654	---	12,202
Great Basin	--	4,315	---	11 712	---	475	--	939	-	190	---	356	---	1,860
Total	119	783,046	29	117 004	27	‡ 275,639	31	**336,899	294	900,654	78	157,453	72	278,145

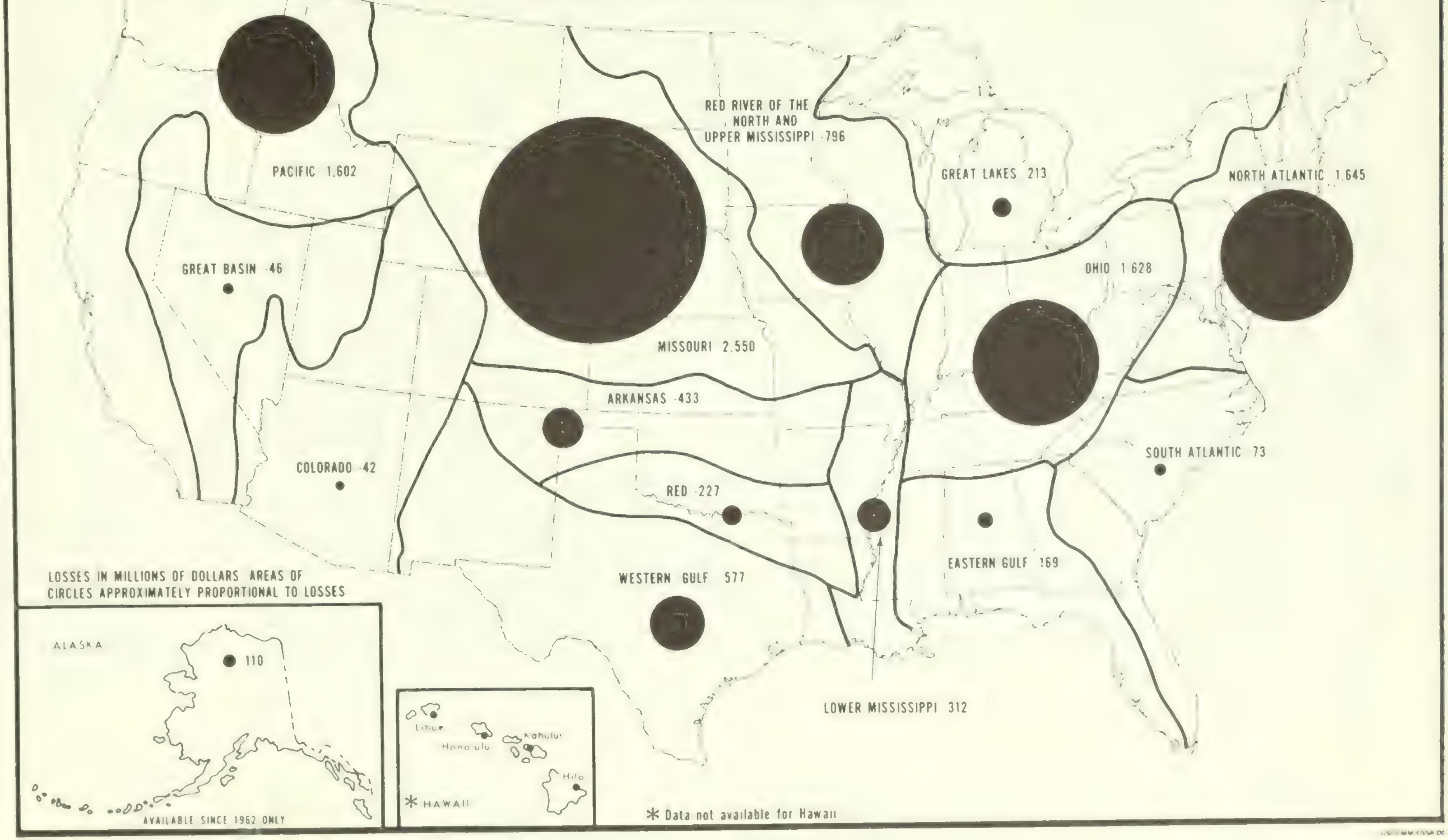
* Including Red River of the North. † Total does not include $2,300 damage in Hawaii. ‡ Total does not include $98,550 damage in Alaska and $1,029 in Hawaii. ** Total does not include $2,500 damage in Hawaii. # Totals do not include 1 lives and $2,000 damage in Puerto Rico. § Totals do not include 56 lives and $67,500 damage in Puerto Rico, and one life and $500 damage in Virgin Islands.

LOSS OF LIFE AND PROPERTY IN THE UNITED STATES FROM FLOODS

PROPERTY LOSSES IN THOUSANDS OF DOLLARS
By Months and Years, 1925-1971

	January		February		March		April		May		June		July		August		September		October		November		December		Total	
Year	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life
1925	3,614	2	141	0	74	0	-	0	65	6	3,980	14	140	0	275	0	1,171	14	380	0	83	0	-	0	9,923	36
1926	19	0	600	0	77	0	293	0	-	0	-	1	55	0	7	0	7,729	6	12,699	6	135	0	1,854	3	23,168	16
1927	2,626	8	1,867	0	407	0	283,207	232	7,566	95	1,125	0	241	0	3,460	0	-	0	1,627	0	45,093	88	437	0	347,656	423
1928	4	0	9	0	758	0	1,168	0	105	0	12,296	1	13,339	0	9,272	3	4,047	5	-	0	3,567	6	46	0	14,611	15
1929	122	0	2,964	0	21,947	47	1,937	0	15,668	5	10,268	5	4,959	32	130	0	92	0	9,379	0	556	0	76	0	68,098	89
1930	7,110	0	7	0	146	0	-	0	5,021	14	3,042	0	244	0	251	0	-	0	29	0	-	0	-	0	15,850	14
1931	-	0	30	0	572	0	-	0	8	0	13	0	1,215	0	201	0	2	0	1	0	744	0	22	0	2,808	0
1932	1,207	0	-	0	165	0	373	0	1,552	0	1,245	0	1,627	0	763	0	2,666	11	335	0	3	0	359	0	10,295	11
1933	308	0	87	0	2,008	1	2,709	4	10,785	4	2,650	4	1,117	0	6,516	4	489	0	10	0	-	0	10,000	16	36,679	33
1934	5,002	45	9	0	706	0	1,693	34	-	0	899	0	178	0	322	9	84	0	28	0	1,287	0	154	0	10,362	88
1935	297	0	1	0	2.177	4	2,698	5	16,903	40	62,702	122	29,370	52	159	5	7,551	0	2,691	0	61	0	2,517	8	127,127	236
1936	341	0	2,107	6	145,936	24	124,743	82	1,118	6	124	0	2,248	20	205	0	5,046	4	378	0	118	0	5	0	282,549	142
1937	411,481	65	7,691	75	62	0	4,524	0	2,627	0	5,429	0	124	2	760	0	140	0	256	0	97	0	7,546	0	440,738	142
1938	260	0	3,712	2	27,819	86	3,008	0	12,402	0	3,624	58	10,373	9	232	8	39,641	17	3	0	5	0	19	0	101,098	180
1939	3	0	1,657	4	738	0	1,982	0	37	0	4,271	1	1,725	78	3,408	0	13	0	-	0	-	0	-	0	13,834	83
1940	58	0	7,246	0	1,048	2	2,185	0	438	0	2,790	12	5,314	0	18,853	40	2,135	6	88	0	95	0	217	0	40,467	60
1941	3	0	516	0	820	2	1,970	4	3,081	7	12,718	12	314	0	23	0	6,247	15	10,446	7	3,361	0	25	0	39,524	47
1942	131	0	1,901	1	327	0	18,369	2	14,837	31	25,586	1	13,064	17	267	0	3,234	0	5,678	2	-	0	15,113	14	98,507	68
1943	3,579	4	69	5	7,183	8	10,161	5	130,478	57	41,771	0	2,870	3	3,651	25	-	0	-	0	-	0	-	0	199,732	107
1944	3	0	35	1	2,633	3	42,646	13	24,103	0	24,535	16	3,198	0	928	0	1,708	0	108	0	-	0	1,182	0	101,079	33
1945	146	0	5,882	0	33,202	14	54,054	36	23,530	0	28,866	8	8,280	3	2,942	13	1,059	3	1,424	3	-	0	6,413	11	165,798	91
1946	13,385	0	4,015	0	631	0	2	0	12,587	12	20,343	3	1,636	4	1,148	0	7,346	9	1,965	0	1,134	0	6,441	0	70,813	28
1947	486	3	96	0	1,458	0	56,037	2	18,032	1	193,134	48	652	1	1,431	0	455	0	248	0	5	0	304	0	272,328	55
1948	6,479	6	11,429	1	17,896	4	28,667	15	107,244	35	22,160	15	17,550	2	1,144	0	590	0	-	0	3,553	0	13,247	4	229,959	82
1949	9,772	6	5,073	2	11,676	3	9,261	2	18,195	10	32,861	17	3,762	5	568	0	618	0	1,551	2	578	1	16	0	93,931	48
1950	4,619	3	6,925	7	3,451	7	14,668	0	51,126	21	22,340	34	19,224	6	1,687	0	3,718	4	5,562	3	6,638	3	36,092	5	176,050	93
1951	884	0	5,823	2	7,264	1	18,287	2	15,166	6	5,383	8	972,458	25	2,509	7	621	0	-	0	-	0	346	0	1,028,741	51
1952	9,139	14	926	1	1,909	9	199,127	10	6,438	3	22,775	2	3,858	9	296	0	9,376	6	-	0	30	0	190	0	254,064	54
1953	8,575	1	368	0	10,675	2	-	0	41,656	5	53,572	29	3,873	1	1,926	2	887	0	42	0	300	0	330	0	122,204	40
1954	2,554	4	84	0	20	0	557	0	6,213	1	52,076	20	2,218	2	6,606	3	3,170	8	33,341	17	-	0	3	0	106,842	55
1955	-	0	1,620	4	17,372	17	2,653	4	9,231	2	3,825	1	1,071	0	712,085	193	3,471	0	52,442	18	1,168	0	190,553	63	995,491	302
1956	9,455	0	2,731	3	3,403	2	1,202	0	24,799	10	2,300	4	5,849	15	11,671	4	-	0	1,892	0	137	3	1,249	1	64,688	42
1957	61,383	15	29,750	2	-	0	106,130	18	44,182	13	101,696	32	4,669	0	722	2	335	0	2,663	0	8,610	0	163	0	360,303	82
1958	273	0	12,501	11	11,193	0	21,145	3	24,884	2	67,537	0	42,779	29	18,631	1	14,560	0	2,336	1	2,416	0	-	0	218,255	47
1959	95,601	8	2,448	0	2,031	6	427	0	7,181	8	890	0	557	0	5,550	0	1,844	0	19,602	3	4,970	0	154	0	141,255	25
1960	534	1	713	2	29,988	4	28,056	0	2,214	3	9,956	13	9,038	1	677	0	5,266	0	5,818	6	360	0	356	0	92,976	32
1961	32	0	13,870	1	14,242	3	5,053	0	67,785	6	4,324	4	5,825	25	3,974	6	26,041	7	580	0	1,161	0	10,666	0	154,033	52
1962	884	0	24,906	9	28,417	4	8,920	0	1,893	0	2,265	2	2,428	1	708	0	3,266	3	-	0	580	0	970	0	75,237	19
1963	2,343	0	16,392	0	99,429	31	2,302	0	1,573	0	14,682	3	4,261	4	36,926	1	38	0	-	0	-	0	-	0	177,946	39
1964	787	0	15	0	97,945	14	16,763	1	1,313	0	71,666	37	29	0	517	0	5,477	3	16,432	1	750	2	439,948	42	651,642	100
1965	11,084	0	2,566	2	4,158	1	180,337	16	36,328	3	495,750	66	24,705	17	193	0	9,652	0	894	0	-	0	22,379	14	788,046	119
1966	13,114	0	12,823	2	2,012	1	40,460	16	1,315	0	4,377	1	840	4	17,773	0	658	0	-	0	528	2	23,104	5	117,004	31
1967	2,213	0	-	0	42,182	4	6,453	0	3,043	1	104,097	5	1,191	4	7,877	0	101,135	11	140	0	-	2	106,887	7	375,218	34
1968	7,436	4	2,971	0	45,925	2	2,053	0	245,670	17	11,216	0	16,350	3	4,009	3	594	0	104	0	-	0	3,071	2	339,399	31
1969	302,378	64	108,781	8	4,065	1	179,999	9	8,798	4	35,403	3	118,455	33	123,524	157	4,557	0	4,931	2	2,000	3	9,763	13	902,654	297
1970	50,941	18	257	1	10,147	3	13,914	8	28,622	6	29,417	3	4,002	4	3,595	10	16,214	25	67,045	53	111	3	1,188	1	225,453	135
1971	8,347	0	12,354	1	3,343	0	2,781	0	7,354	2	6,3[illegible]6	2	6,274	5	157,450	29	50,814	22	2,630	7	1,09[illegible]	0	28,716	6	287,525	74
Total	1,059,012	271	315,9[illegible]8	153	719,638	310	1,500,664	523	1,063,166	436	1,638,345	607	1,373,730	416	1,175,792	525	353,757	181	265,778	131	91,990	113	942,121	215	10,499,961	3,881
Average	22,532	6	6,723	3	15,311	7	31,929	11	22,621	9	34,858	13	29,228	9	25,017	11	7,527	4	5,655	3	1,957	2	20,045	5	223,403	83

DISTRIBUTION OF ESTIMATED FLOOD LOSSES IN THE UNITED STATES BY MAJOR RIVER SYSTEMS, 1925-1971



LOSSES IN MILLIONS OF DOLLARS AREAS OF CIRCLES APPROXIMATELY PROPORTIONAL TO LOSSES

* Data not available for Hawaii

LOSSES IN INDIVIDUAL SEVERE FLOODS IN THE UNITED STATES SINCE JULY 1902

Property Losses in Thousands of Dollars

Date	Location	Lives #	Property
May-June 1903	Kansas, Lower Missouri, and Upper Mississippi Rivers	100	$ 40,000
July 1908	Red River	---	16,200
March 1912	Lower Mississippi River	---	70,000
March 1913	Ohio River and tributaries	467	147,000
December 1913	Texas rivers	177	9,000
June 1915	Kansas River	---	5,950
August 1916	Rivers of the Carolinas	---	21,700
June 1921	Arkansas River in State of Colorado	120	25,000
September 1921	Texas rivers	215	19,000
October 1923	Lower Arkansas, including the State of Oklahoma	---	15,000
March 1924	Potomac River	---	6,000
Spring of 1927	Mississippi Valley	313	284,118
November 1927	New England rivers	88	45,578
December 1933	Columbia River and tributaries	---	10,000
May 1935	Rivers in eastern Colorado	---	6,000
May-June 1935	Republican and Kansas Rivers	110	18,000
	Lower Missouri River	---	10,000
July 1935	Upper Susquehanna tributaries	52	26,000
December 1935	Houston, Texas area	---	2,500
March-April 1936	Rivers in eastern United States	107	270,000
Jan.-Feb. 1937	Ohio and lower Mississippi River basins	137	417,685
December 1937	Sacramento Valley	---	7,100
March 1938	Streams in southern California	79	24,500
September 1938	Rivers in New England	---	37,000
July 1939	Licking and Kentucky Rivers	78	1,715
Feb.-Mar. 1940	Sacramento Valley	---	6,700
August 1940	Rivers in southern Virginia, the Carolinas, and eastern Tennessee	40	12,000
Oct.-Nov. 1941	Arkansas River basin	---	8,500
April-June 1942	Upper Mississippi, Missouri, Arkansas, Red, and Trinity River basins	---	44,350
May 1942	Delaware & Susquehanna River basins	33	13,000
July 1942	Upper Allegheny River and Sennemahoning Creek basins	15	10,000
Nov.-Dec. 1942	Willamette River	10	6,900
Dec. 1942-Jan. 1943	Ohio River	---	10,540
Apr.-June 1943	Maumee, Wabash, upper Mississippi, Missouri, White, and Arkansas River basins	60	172,500
August 1943	Little Kanawha	23	1,300
April-June 1944	Upper Mississippi, Missouri, Arkansas, Red, lower Mississippi Basins and east Texas Streams	17	82,000
Feb.-Mar. 1945	Ohio River	18	30,000
Feb.-Apr. 1945	Trinity and Sabine Rivers	---	9,000
Mar.-July 1945	Lower Mississippi River	---	9,500
July 1945	Lake Section of Rensselaer County, N. Y.	---	3,500
December 1945	Willamette River	---	6,000
January 1946	Cumberland River	---	3,925
September 1946	San Antonio and Nueces Rivers	---	6,050
December 1946	Willamette River	---	5,525
April 1947	Allegheny	---	4,319
May-July 1947	Rivers in middle West in the lower Missouri and middle Mississippi River basins	29	235,000
June 1947	East Creek at Rutland, Vt.	---	2,000
Apr.-May 1948	Red River of North and tributaries	---	18,700
May-June 1948	[1]Columbia Basin	35	101,725
June-July 1948	Arkansas River and minor tributaries	---	14,500
December 1948	Housatonic River	---	4,200
May 1949	Trinity River	10	14,000
June 1949	Shenandoah and Potomac Rivers	11	8,850
Apr.-May 1950	[2]Red River of North	---	33,000
June 1950	Central West Virginia	31	4,020
Nov.-Dec. 1950	Central Valleys of California and western Nevada	---	23,000

LOSSES IN INDIVIDUAL SEVERE FLOODS IN THE UNITED STATES SINCE JULY 1902-Cont'd

Property Losses in Thousands of Dollars

Date	Location	Lives #	Property
April 1951	Upper Mississippi Basin	---	$ 18,622
June-July 1951	[3]Kansas-Missouri	28	923,224
April 1952	[4]Red River of the North-upper Mississippi-Missouri River basins	11	198,000
May 1952	Great Basin	---	8,373
March 1953	New England States	---	10,000
Apr.-May 1953	Louisiana-Texas	12	38,959
June 1953	Northwestern Iowa	14	32,950
June 1954	Middle Rio Grande and lower Pecos	16	19,079
October 1954	Pecos River in New Mexico	13	1,783
March 1955	Ohio Basin	15	14,396
August 1955	[5]Hurricane floods in Northeast	187	714,079
December 1955	[6]West Coast	61	154,532
May-June 1956	[7]Columbia and Kootenai Rivers	---	14,025
Jan.-Feb. 1957	[8]Streams in southeastern Kentucky, southwestern West Virginia, adjoining portions of Tennessee and Virginia	14	58,000
February 1957	Snake River and tributaries	---	20,500
Apr.-June 1957	Streams in Texas, Arkansas, Kansas, Louisiana, Missouri and Oklahoma	18	105,000
June-July 1957	Wabash River and tributaries	---	63,000
June 1958	White and Wabash Rivers	---	57,000
July 1958	Flash flood on East Nishnabotna River in Iowa	19	5,850
January 1959	Ohio River basin	---	81,921
January 1959	Lake Erie drainage in Ohio and New York	---	11,265
Mar.-Apr. 1960	[9]Snowmelt floods in the Missouri and upper Mississippi Basins	---	34,466
Feb.-Mar. 1961	East Gulf of Mexico drainage	---	13,997
July 1961	Flash flood on small streams in Charleston, W. Va.	22	3,238
September 1961	Kansas-Missouri	---	23,557
Feb.-Mar. 1962	Kentucky	---	16,067
Feb.-Mar. 1962	Southeastern Idaho	---	6,318
March 1963	Ohio River basin	26	97,600
June 1964	Montana	31	54,279
December 1964	California and Oregon	40	415,832
March 1964	Ohio River basin	13	81,602
Mar.-May 1965	[10]Upper Mississippi, Missouri, and Red of North Basins	16	181,325
May 1965	Brazos River	---	30,802
June 1965	South Platte Basin	16	415,076
June 1965	Sanderson, Texas flash flood	26	2,715
June 1965	Arkansas Basin	16	58,340
January 1966	Streams in Humboldt County, Calif.	---	6,850
Apr.-May 1966	Sabine and Trinity Basins, Texas	14	20,100
December 1966	Tulare and Buena Vista Lakes drainages in California	---	11,712
June 1967	Platte River and tributaries in Nebraska	---	35,275
September 1967	Hurricane "Beulah" floods in Texas	---	98,239
August 1967	Tanana and Chena Rivers in Alaska	---	98,550
March 1968	Rivers in New England (except Maine)	---	45,000
May 1968	Rivers in northern New Jersey	---	166,690
Jan.-Feb. 1969	Floods in California	60	399,233
March-April 1969	[11]Snowmelt Floods in upper midwest	---	151,000
July 1969	Northern Ohio	30	87,915
August 1969	[12]James River basin in Virginia	153	116,000
January 1970	Sacramento River and tributaries	18	38,120
September 1970	Arizona	23	5,000
October 1970	Puerto Rico	50	62,000
August 1971	Flooding in New Jersey (Doria rainfall)	---	138,700
September 1971	Southeastern Pennsylvania	13	19,010

#Loss of life carried only where ten or more

References

1. Monthly Weather Review, January 1949
2. Monthly Weather Review, September 1951
3. Technical Paper No. 17
4. Technical Paper No. 23
5. Technical Paper No. 26
6. Climatological Data, National Summary, December 1955
7. Climatological Data, National Summary, Annual 1956
8. Climatological Data, National Summary, January 1957
9. Technical Paper No. 45
10. Technical Paper No. WB-3
11. NOAA Technical Report No. 13
12. Climatological Data, National Summary, October 1970

FLOOD DAMAGE ESTIMATES BY STATES

1955-1971

Flood Losses in Thousands of Dollars

States	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Alabama.............	3,379	720	2,324	872	-	670	12,625	3,529	1,280	5,343	723	2,366	1,695	408	88	10,891	2,170
Alaska..............	-	*	-	-	-	-	**	***	-	-	-	-	98,550		-	-	8,631
Arizona.............	226	-	-	-	100	-	325	1,000	-	55	11,330	3,050	3,576	188	-	5,000	3,476
Arkansas............	61	255	27,938	6,202	3,090	580	3,503	91	2,500	598	143	5,055	1,497	21,099	3,411	639	2,549
California..........	165,767	8,745	13	33,063	4	516	95	2,780	11,834	229,168	11,321	24,347	1,370	-	423,296	47,798	3,522
Colorado............	2,567	5,135	2,901	240	-	-	-	80	50	-	452,293	707	-	-	66	2,040	-
Connecticut.........	379,360	-	-	-	-	750	-	-	-	-	-	-	-	100	528	-	-
Delaware............	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-		50
District of Columbia	-	51	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida.............	105	1,891	-	-	150	12,047	317	1,481	-	426	144	548	95	46	2,858	145	476
Georgia.............	1	212	1,068	323	-	392	5,236	-	445	3,641	397	1,628	23	133	79	348	243
Hawaii..............	-	-	-	400	-	-	-	-	2,300	-	-	-	1,029	2,500	-	-	500
Idaho...............	1,371	6,222	20,896	3	500	-	939	8,112	2,766	11,704	4,184	-	792	-	111	38	1,187
Illinois............	102	1,026	1,206	17,970	1,506	7,503	11,553	891	513	3,044	30,564	577	2,629	2,576	9,095	9,124	462
Indiana.............	1,003	4,021	66,748	52,302	12,958	2,649	13,306	670	8,266	12,327	20	3,098	4,618	22,463	6,672	2,300	1,690
Iowa................	35	51	1,543	7,508	128	7,612	9,389	6,778	70	240	32,462	904	4,416	1,650	6,233	977	684
Kansas..............	474	33	9,164	4,606	4,061	1,947	13,397	1,826	168	370	29,792	97	15,093	2,304	10,991	4,138	1,644
Kentucky............	6,629	568	55,233	3,817	2,480	3	12,969	16,885	36,917	35,476	1,044	1,671	17,583	6,036	8,075	707	6,099
Louisiana...........	30	-	4,147	2,842	-	112	6,074	1,908	-	30	-	250	-	2,810	251	1,000	-
Maine...............	-	-	-	-	61	-	800	-	-	-	-	528	-	-	300	-	-
Maryland............	5,450	837	-	40	-	-	-	-	-	-	53	-	125	-	200	15	8,600
Massachusetts.......	155,982	-	-	-	-	6,400	-	-	-	-	-	-	-	35,000	-	-	-
Michigan............	-	1,278	-	-	-	1,181	-	-	-	-	-	-	-	100	13	-	-
Minnesota...........	-	11	9,128	17	50	212	552	1,290	26	-	97,603	4,300	-	1,197	67,168	4,350	15
Mississippi.........	3,132	1,270	2,693	13,826	280	744	15,918	1,982	19	3,152	1,931	2,706	1,192	6,269	1,900	3,586	12,431
Missouri............	666	167	9,618	38,718	6,018	13,506	27,375	557	152	6,591	33,976	2,781	39,080	890	36,601	14,926	191
Montana.............	63	317	33	1	82	57	-	147	148	54,389	253	-	2,947	-	388	581	412
Nebraska............	1,500	865	5,983	3,064	3,753	8,884	674	2,630	13,394	5,146	1,368	11,628	40,644	6,029	1,826	-	5,941
Nevada..............	7,398	237	-	-	-	-	891	762	2,858	2,454	4	307	45	1	-	138	-
New Hampshire.......	-	-	-	-	4,500	100	-	-	-	-	-	-	-	800	400	-	-
New Jersey..........	23,102	-	-	3	-	-	-	-	-	-	-	-	1,438	166,690	580	-	138,700
New Mexico..........	1,066	-	-	-	-	-	-	-	620	1,235	4,833	1,048	-	-	-	-	-
New York............	30,072	1,089	166	42	5,667	7,229	608	-	33,102	3,275	-	-	777	-	3,383	3,953	1,000
North Carolina......	625	831	788	3,201	506	100	1,400	-	-	15,816	88	198	1,168	-	1,338	2,326	965
North Dakota........	2	-	100	-	28	136	-	-	-	-	5,192	9,700	-	-	37,436	13,832	1,266
Ohio................	753	1,056	7	4,867	54,840	191	1,217	6,512	22,359	28,039	-	1,893	6,622	20,074	87,916	2,478	782
Oklahoma............	977	-	35,665	169	8,907	2,638	2,483	792	413	798	2,508	12	3	3,021	762	5,212	23,166
Oregon..............	9,515	6,376	310	363	20	360	757	1,550	299	187,101	5,679	2,283	1,044	538	938	2,518	4,350
Pennsylvania........	141,381	7,199	1,048	3,582	21,109	3,072	612	15	5,397	16,938	-	705	7,251	421	3,310	365	20,899
Rhode Island........	28,830	-	-	-	-	-	-	-	-	-	-	-	588	9,000	-	-	-
South Carolina......	74	-	60	680	122	72	369	97	89	1,809	268	140	579	-	625	52	295
South Dakota........	11	10	3,969	-	-	3,417	1	3,030	-	-	740	470	1,125	123	31,898	19	-
Tennessee...........	977	279	5,118	128	-	226	2,263	651	6,262	156	2,472	1,608	1,090	648	1,090	13,260	86
Texas...............	5,165	3,715	78,881	18,101	2,886	8,093	2,846	1,948	20	5,435	39,395	28,001	98,259	24,267	12,878	3,150	26,538
Utah................	226	210	169	10	4	-	281	1,272	64	70	1,746	1,577	453	1,260	237	222	1,033
Vermont.............	-	-	3	-	-	-	-	-	-	692	-	-	-	100	680	-	-
Virginia............	10,695	-	139	-	28	211	231	-	5,937	-	2	-	581	-	123,552	148	1,158
Washington..........	1,165	6,472	1,664	50	4,914	-	130	-	1,013	11,817	1,012	592	1,910	611	2,722	380	3,908
West Virginia.......	5,187	3,185	11,052	1,170	709	370	3,455	5,914	17,624	4,169	49	1,868	14,235	47	5,996	297	1,653
Wisconsin...........	50	335	-	-	1,791	996	1,442	57	142	-	14,067	361	-	-	4,763	-	-
Wyoming.............	200	11	526	3	-	-	-	-	899	138	390	-	1,096	-	-	500	503
TOTAL	[illegible]95,491	64,688	360,303	218,255	141,256	92,976	154,033	75,237	177,946	651,642	788,046	117,004	375,218	339,399	900,654	157,453	287,275

*Major Flood in May 1956
**Major Flood in June 1961
***Ice Jam Flooding May 1962
***Serious Flooding June 1962

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
YEAR 1972

Elmer R. Nelson, Office of Hydrology

The most destructive floods in the nation during 1972 occurred in eastern United States, in connection with Hurricane Agnes, and southwestern South Dakota during June. At least 355 lives were lost in the two floods. Damages were estimated at over $3 billion. The flood in the eastern United States was one of the most destructive floods, in terms of property damage, to ever strike this country. The flood in southwestern South Dakota, in terms of both lives lost and damage done, ranks as the worst natural disaster in the history of that State.

This report contains a brief summary by months of the most significant flooding during 1972. A summary of flood events resulting in loss of life and/or flood damage appears in the monthly issues of this publication.

JANUARY

Major flooding occurred during January on the Willamette and Coastal Basins in Oregon and on the North Coastal Basins in Washington.

The highest flooding since December 1964 occurred along the Smith River in Del Norte County, Calif. The crest near Crescent City, Calif., was 8.4 feet above flood stage. Maxima record peaks were observed in the Oregon Coastal Basins on the Nehalem River near Foss, Oreg., and on the Wilson River near Tillamook, Oreg. Near-record stages were reached on the Trask, Nestucca, Siletz, Alsea, and Siuslaw Rivers. Major crests were observed on the uncontrolled tributaries in the Willamette Basin. Crest stages on some of the streams were greater than those likely to occur on the average of once in 50 yeers. The total flood losses were estimated at nearly $17 million. At least 6 persons lost their lives.

Major flooding occurred in the Chehalis-Skookumchuck River Basin in Washington. The flood crest on the Chehalis River at Centralia, Wash., was the highest on record. The total flood losses were estimated at $3.5 million.

FEBRUARY

A major flood disaster occurred during the latter part of February in Logan County, West Virginia, when a coal waste bank on the Middle Fork of Buffalo Creek collapsed. The level of the lake dammed up behind the huge coal-slag heap had been filled by 3 days of rain totalling as much as 5.6 inches. Some 16 mining towns in Buffalo Creek Hollow were completely or partially destroyed when millions of gallons of water were released on these communities. A wall of water, estimated 30 to 35 feet high near its source, moved down the narrow 17-mile valley at an average rate of 15 to 20 feet per second, demolishing everything in its path. Flood damages were estimated to be in excess of $10 million. At least 118 people lost their lives. All of Logan County was declared a national disaster area by the President.

MARCH

Damaging floods occurred during March along small streams in southwestern Oregon. The South Fork Coquille River at Myrtle Point, Oreg., exceeded flood stage by over 6 feet. The Corps of Engineers estimated the damage at $4.3 million.

The flow on the lower Snake River at Clarkston, Wash., was the highest since 1910. Comparable record or near-record flows occurred in the Columbia River above Pasco, Wash. Crests in the lower Columbia River at Vancouver, Wash., and in the Portland Willamette Harbor were the highest for March since 1910 and the third highest of record. Flood damage was estimated near $1 million.

APRIL

Severe flooding occurred in the Kentucky River basin in Kentucky during April. Record to near-record flooding occurred over portions of the Kentucky River. Flood damage amounted to nearly $5 million on the Kentucky River and more than $100,000 on each of the Licking and Red Rivers. At least three deaths were reported.

The flooding in the lower Ohio River during April was the greatest since March 1963. At Evansville, Ind., it was the greatest flood since 1967.

Monthly runoff for the Scioto River at Chillicothe, Ohio, was the greatest for any April since the beginning of records in 1921.

In Alaska, snowmelt caused overtopping and failure of a small manmade dam, 10 miles southeast of Anchorage. A 10-year-old boy lost his life in the water about a mile downstream.

MAY

The most damaging flood during May was the flash flood in south-central Texas. The intense rain caused the Guadalupe River to rise 2.8 feet in 2 hours. The rainfall averaged 8.3 inches over an area of 356 square miles. Severe flash flooding occurred along the Guadalupe River around the cities of New Braunfels and Sequin, the Cibblo Creek area in Bexar County, and Purgatory Creek at San Marcos, Tex. Property damage was estimated at $17.5 million. Eighteen people lost their lives. Several thousand people were evacuated.

The worst ice jam flooding in memory of long-time residents occurred on the Kuskokwim and Yukon Rivers in Alaska. The towns of Oscarville and Napaskiak were completely inundated. Anvik, Alaska, on the Yukon had its worst flooding in over 40 years. The last time the Yukon and Kuskokwim Rivers "flowed as one" was about 1890.

JUNE

Two of the worst flood disasters in the history of our country occurred during June. The first one occurred on the 9th-10th in southwestern South Dakota over the Black Hills area. The second one occurred on the 21st-24th in the eastern United States where six states were declared a disaster area.

The flood in southwestern South Dakota, in terms of both lives lost and damage done, ranks as the worst natural disaster in the history of that State. Two hundred forty-two people lost their lives in this devastating flash flood. The damages were estimated at $163 million. The greatest damage and loss of life occurred along Rapid Creek which flows through Rapid City. This flood was due to torrential rains that fell in the Black Hills Region in a short period of time - mostly between 6 p.m. and midnight on the 9th. Fifteen inches of rain was recorded at Nemo on Box Elder Creek and 14.5 inches in 5 hours near Sheridan Lake on the divide between Spring and Rapid Creeks, southwest of Rapid City. The total rainfall during this storm nearly equalled the yearly average and fell in a period of 6 hours just above and west of Rapid City. The rainfall amounts which caused this flooding are unlikely to occur more than once in several thousand years. Record floods occurred on Rapid, Box Elder, Spring, Battle, Bear Butte, Boulder Canyon, Elk, and Little Elk Creeks. More than two-thirds of the city of Keystone on Battle Creek was totally destroyed. Rivers that drained areas of less than 100 square miles rose from below bankfull to 8 to 10 feet over bankfull in less than 3 hours. A dam on Canyon Lake on the western outskirts of Rapid City failed around 10:45 p.m. on the 9th after debris clogged the spillway, causing the lake level to rise nearly 12 feet. The increase in magnitude of the flood crest due to this stored water is not known but it undoubtedly contributed significantly to the flood wave which swept through Rapid City causing such death and destruction.

The flood in the eastern United States resulted from excessive rains accompanying Hurricane Agnes. It was one of the most destructive floods, in terms of property damage, to ever strike this country. Preliminary estimates place the flood damage at approximately $3 billion and the loss of life at 113. The subsequent suffering of the survivors is incalculable. The great flood disaster commenced with the landfall of Hurricane Agnes near Panama City, Fla., on the 19th. For one full week, the Eastern Seaboard was under the continuous assault of torrential rains and floods and flash floods which became progressively worse as the week passed. Hardly a river basin north of the Carolinas and east of the Appalachians as far north as New York State was unaffected. Many of the basins experienced floods far exceeding the flood of record and others experienced disastrous floods of near-record levels. Previous record stages were exceeded by 3.4 feet on the Chemung River at Corning, N.Y. (Previous record 24.4 feet in 1946; Agnes, 27.8 feet). On the Schuylkill River at Reading, Pa., the record flood of 1850 (23 feet) was exceeded by 8.5 feet. At Wilkes-Barre, Pa., the previous record of 33.1 feet in 1936 was exceeded by 7.5 feet. River gaging stations located to accommodate all reasonable stages were overtopped and washed away. The most recent floods in the disaster area approaching this magnitude were the 1936 Pennsylvania floods and the Hurricane Camille floods in Virginia in 1969. The rainfall causing the greatest disaster in the history of our country totalled as high as 18 inches in some sections of the disaster area.

JULY

Record flooding occurred during July on small streams in central and east-central Minnesota. Torrential rains caused small streams over a large part of 11 counties to overflow to record heights. Federal disaster relief was approved by the President for the 11 counties. Damage to highways, railroad beds, fields, crops, and to residential and commercial areas was about $20 million. Three deaths were attributed to conditions resulting from the heavy rains; one was due to drowning. A new record 24-hour official rainfall of 11.18 inches was recorded at Fort Ripley, Minn.

Record flooding occurred in the Colorado Basin on the Puerco River at Gallup, N. Mex., on the 17th. It was designated a disaster area by the Governor. The damage was estimated at $4 million.

AUGUST

The most damaging floods during August were the flash floods in Minnesota, Iowa, and Texas.

Of these, the most destructive flash flood was in northeastern Minnesota in the city of Duluth. The Defense Civil Preparedness Agency estimated the damage at $18 million. The downtown area of Duluth was devastated by the flash flood and was declared a disaster area.

Extensive flash flooding occurred on the Little Maquoketa River near Dubuque, Iowa, due to heavy rains. The flood damage was estimated at approximately $1.5 million.

Excessive rains caused sharp rises and flash flooding on Deep Creek and Dry Run Creek, tributaries of the Colorado River of Texas. Water ran as high as 7 feet in Snyder, Tex. There was one death near Snyder when a car was washed off the road. Flood damage was estimated between $1.5 million and $2 million.

SEPTEMBER

Severe flash flooding occurred in the Duluth, Minn., area for the second consecutive month. The damages in southern St. Louis County in Minnesota were estimated at $22 million.

Record high stages occurred in the Nishnabotna Basin in southwestern Iowa during September. It was the heaviest flooding on the Nishnabotna and Nodway Rivers since 1947.

OCTOBER

The most damaging floods during October occurred in southeastern Arizona. Near-record floods occurred on the Gila and San Francisco Rivers from the excessive rains caused by the remnants of Hurricane Joanne. The resulting precipitation was greater than the previous highest total for the entire month of October since records began. Eight deaths and more than $18 million damage resulted from these floods. An additional $4.1 million damage was reported elsewhere in Arizona during this period. Graham and Greenlee Counties were declared disaster areas by the President.

Major flooding occurred on small streams in southeastern Oklahoma during the latter part of October and the first part of November. The area of greatest damage occurred along the tributaries of the Little River. Damage was estimated at $12 million.

NOVEMBER

Major flooding occurred on the Black, Cache, and White Rivers in the White Basin in Arkansas and on the St. Francis River in the Lower Mississippi Basin in Arkansas and Missouri. Damage to growing crops was estimated at over $5 million.

Localized flash flooding occurred in southern Missouri and central Illinois early in November. Two lives were lost when their automobiles were washed off the roads by overflowing creeks in Missouri. Numerous homes were evacuated due to the flash floods.

DECEMBER

The most damaging flooding during December occurred in the Ohio Basin. Crests along the main stem of the Ohio River ranged up to 15 feet above flood stage at Shawneetown, Ill. Although flood damage was high, it was less than might have been expected, as many crops had already been destroyed or damaged by the heavy rainfall during the harvest season.

Severe flash flooding occurred in Knoxville, Tenn. It was the worst one in the last 10 years. Damages were estimated at near $1 million.

Severe ice conditions in the Snake River necessitated the evacuation of about 125 families. At Weiser, Idaho, the crest was over 3.5 feet above flood stage. A state of emergency was declared in Malheur County of Oregon and the counties of Washington, Payette, and Bingham in Idaho.

Chart I. Departure from Normal of Annual Temperature (°F) at Surface, 1972

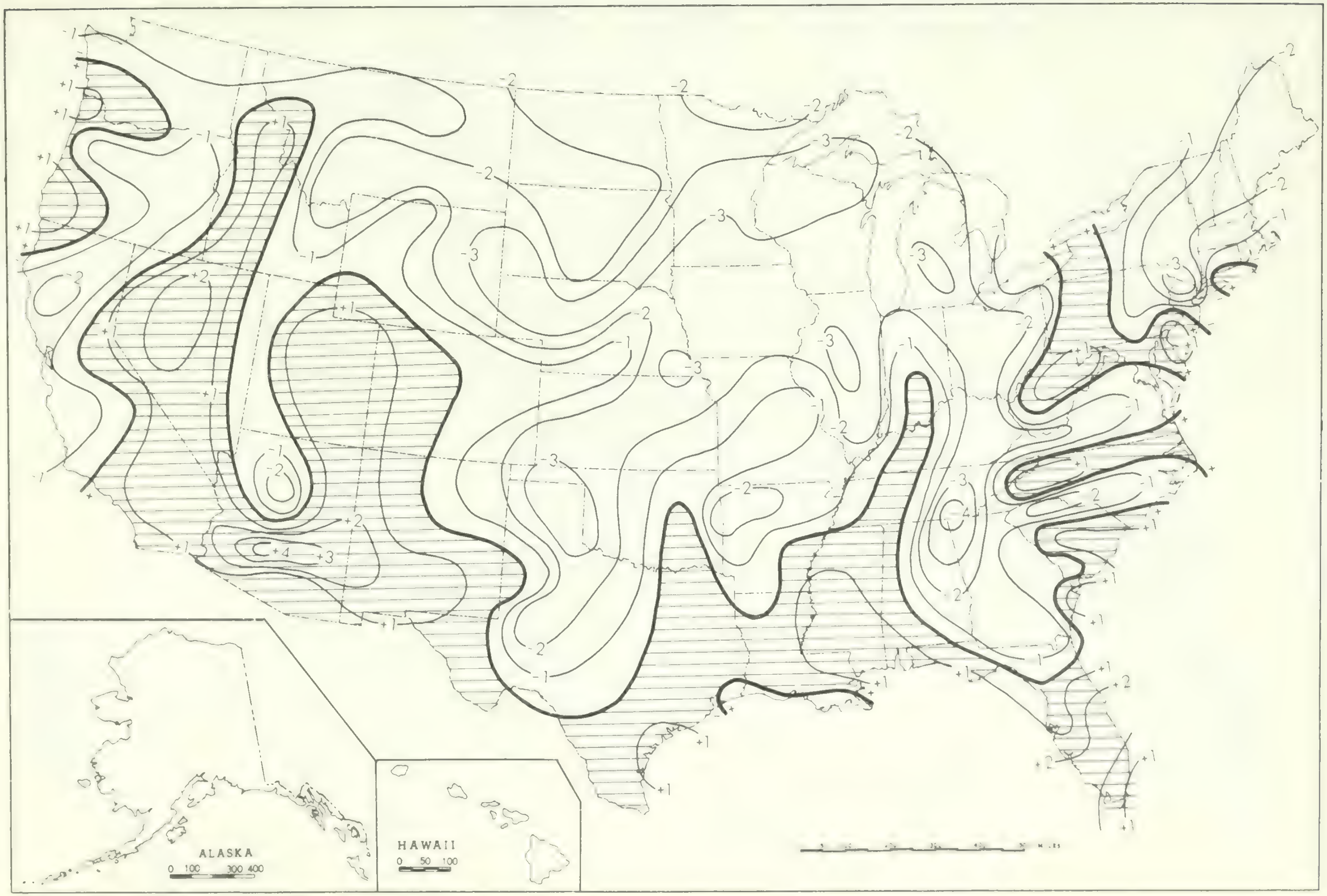


Chart II. Total Annual Precipitation (inches), 1972

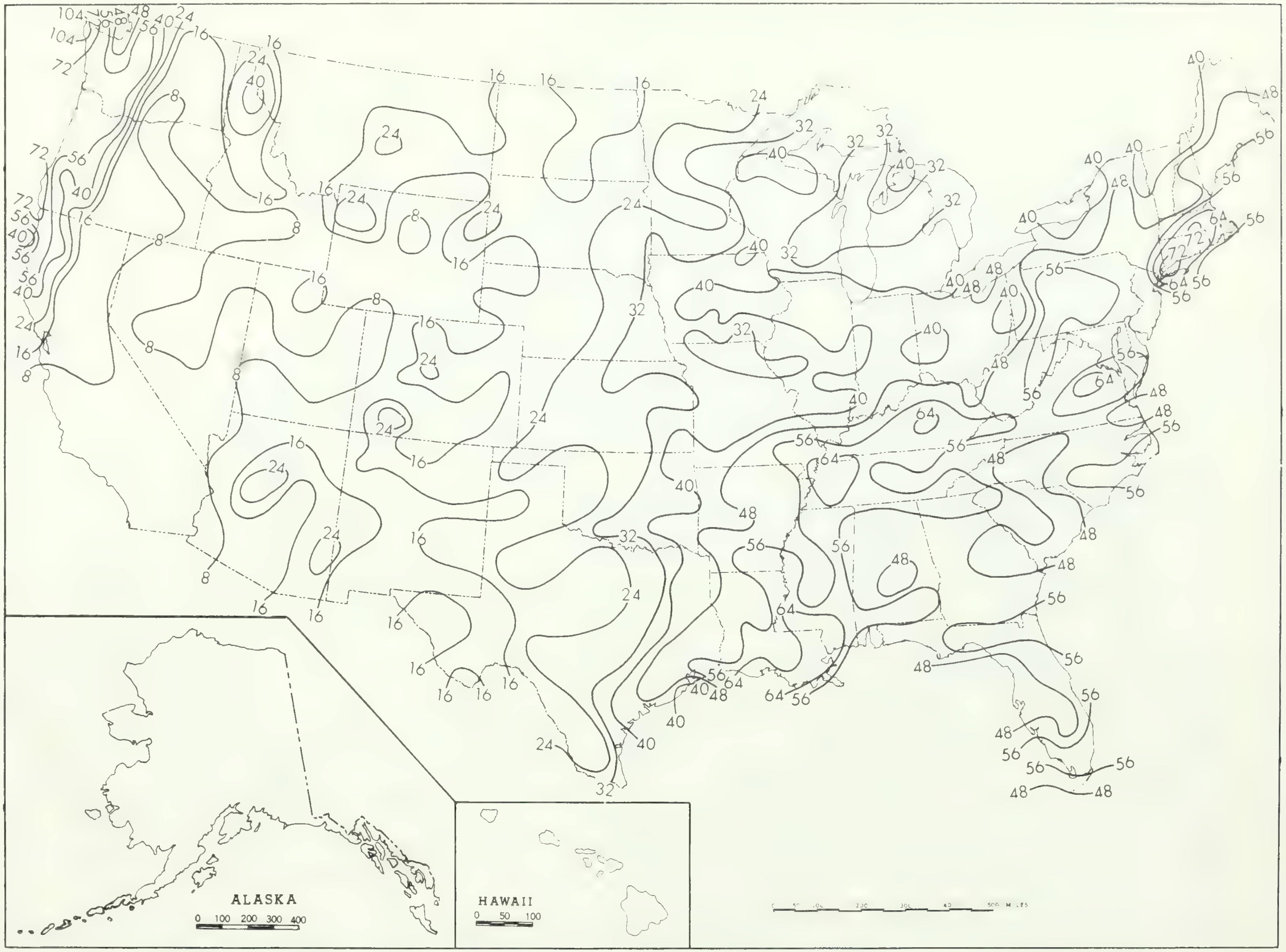
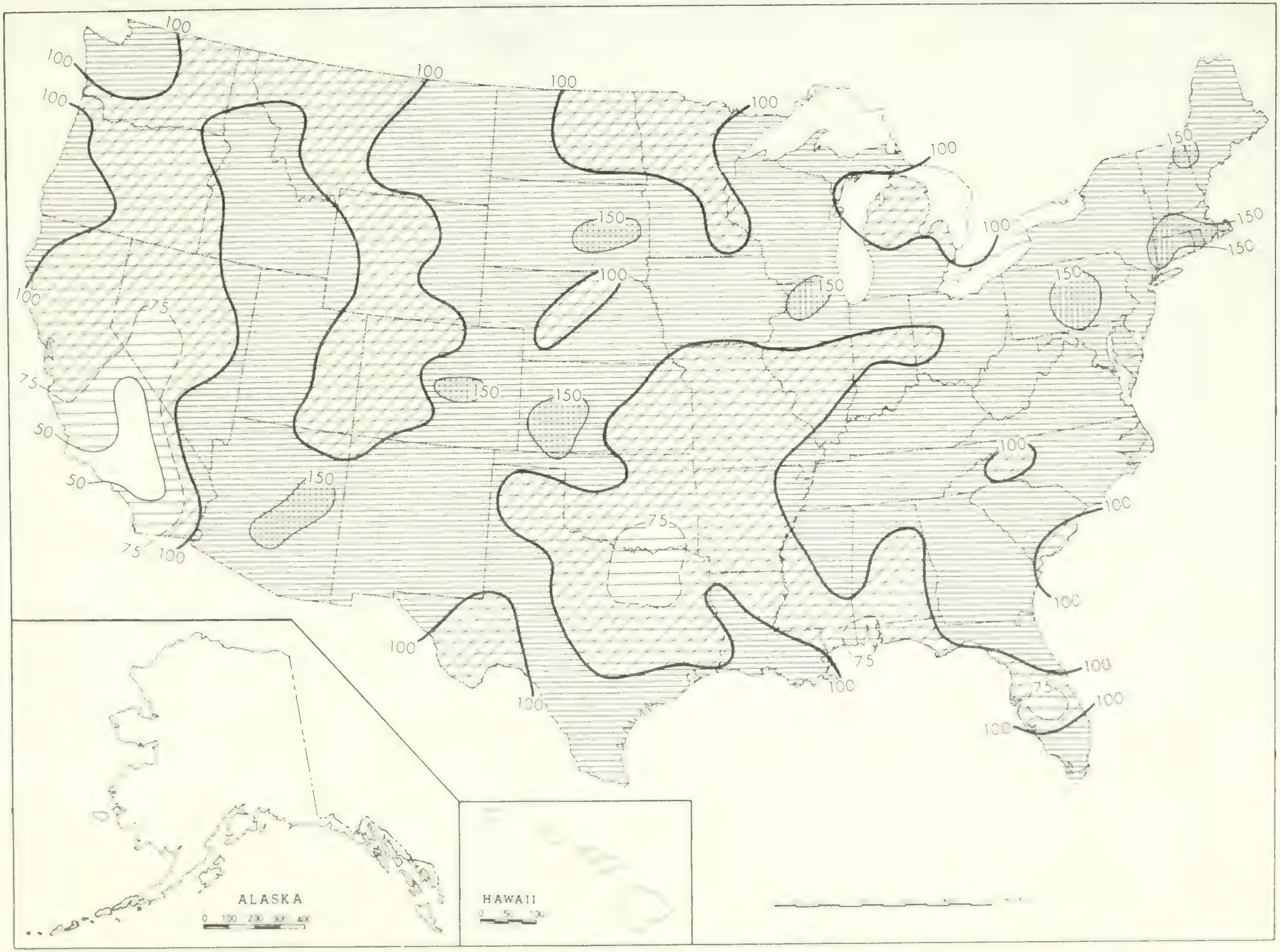


Chart III. Percentage of Normal Annual Precipitation, 1972



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